



LIFE14 NAT/FR/000669

## FINAL REPORT

Covering the project activities from 01/01/2016 to 30/06/2022

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## LIFE Baie de l'Aiguillon

### Data project

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(%) of eligible costs	100 %	

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# 1. CONTENTS

1.	CONTENTS.....	3
2.	ABBREVIATIONS .....	6
3.	SUMMARY .....	7
3.1	RESTORING MUDFLAT HABITATS (AIGUILLON INLET) .....	8
3.2	RESTORING ESTUARINE HABITATS (PRÉE MIZOTTIERE FARM, SAINTE-RADEGONDE-DES-NOYERS, VENDEE) .....	8
3.3	RESTORING DUNE HABITATS (POINTE DE L'AIGUILLON, L'AIGUILLON-LA-PRESQU'ILE, VENDEE).....	8
3.4	ANATIDAE AND WATER STUDIES .....	9
3.4.1	Study of water quality along a land-sea continuum .....	9
3.4.2	Study of the use of the Aiguillon Bay and surrounding marshland by wintering ducks .....	9
3.5	PUBLIC AWARENESS ACTIONS AND SHARING THE PROGRAMME'S RESULTS .....	9
4.	INTRODUCTION.....	10
4.1	GENERAL AND SPECIFIC OBJECTIVES.....	10
4.2	TARGET HABITATS AND SPECIES ON PROJECT SITES.....	10
4.3	THREATS AND CONSERVATION ISSUES .....	11
4.4	SOCIO-ECONOMIC CONTEXT .....	12
4.5	EXPECTED RESULTS.....	13
5.	ADMINISTRATIVE SECTION .....	14
5.1	PROJECT MANAGEMENT > MISSING AMENDMENT 3 LPO .....	14
5.2	COMMUNICATION WITH NEEMO AND CINEA .....	14
5.3	CHANGES DUE TO THE FIVE AMENDMENTS TO THE GRANT AGREEMENT .....	15
5.3.1	Amendment to Grant Agreement No. 1 (06/12/2016).....	15
5.3.2	Amendment to Grant Agreement No. 2 (23/07/2018).....	15
5.3.3	Amendment to Grant Agreement No. 3 (27/08/2018).....	15
5.3.4	Amendment to Grant Agreement No. 4 (04/06/2020).....	16
5.3.5	Amendment to Grant Agreement No. 5 (07/10/2021).....	16
6.	TECHNICAL SECTION.....	17
6.1	ACTION PROGRESS > INSERT THE AMENDED SCHEDULE FOR EACH ACTION .....	17
6.1.1	Action A1: Development of an experimental protocol for the removal of wild oyster beds from the Aiguillon Bay .....	17
6.1.2	Action A3: Preliminary ecological development works on the Prée Mizottière site .....	19
6.1.3	Action A4: Preliminary rewilding of the Pointe de l'Aiguillon.....	22
6.1.4	Action A5: Study of the use of the Aiguillon Bay and surrounding marshland by wintering Anatidae .....	24
6.1.5	Action A6: Monitoring water quality in Aiguillon Bay .....	27
6.1.6	Action A7: Formalising management guidelines.....	30
6.1.7	Action C1: Deployment of experimental work to remove wild oyster beds from Aiguillon Bay .....	31
6.1.8	Action C3: Works for ecological enhancement on the Prée Mizottière site .....	33
6.1.9	Action C4: Rewilding works on the Pointe de l'Aiguillon .....	35
6.1.10	Action D1: Monitoring areas where works have been conducted to remove wild oyster beds in the Aiguillon Bay ..	37
6.1.11	Action D3: Monitoring - biological monitoring of ecological engineering works on the Prée Mizottière site .....	40
6.1.12	Action D4: Monitoring - biological monitoring of areas subject to rewilding works on the Pointe de l'Aiguillon .....	42
6.1.13	Action D5: Assessment of the socio-economic and ecosystem impacts of the project.....	44
6.1.14	Action E1: Promoting the LIFE project's actions.....	46
6.1.15	Action E2: Conferences for discussion and presentation .....	50
6.1.16	Action E3: Website .....	53
6.1.17	Action E4: Outreach report.....	54
6.1.18	Action E5: Coordination of the network.....	55
6.1.19	Action E6: Creation of LIFE information panels.....	58
6.1.20	Action E7: Educational development of the Prée Mizottière farm.....	59
6.1.21	Action F1: Steering, coordinating and administrative and financial oversight of the LIFE programme .....	61
6.1.22	Action F2: Conducting a final external audit .....	64
6.1.23	Action F3: "Post-LIFE" Conservation Plan.....	65

6.1.24	Action F4: Indicators.....	66
6.2	MAIN DEVIATIONS, PROBLEMS, AND CORRECTIVE ACTIONS IMPLEMENTED .....	67
6.2.1	Justification for the 18-month extension of the project duration.....	67
6.2.2	Change of status of an associated beneficiary.....	68
6.2.3	Financing agreement of the Ministry of Ecological Transition and Solidarity.....	69
6.2.4	The minor impact of the Covid-19 pandemic.....	69
6.2.5	Postponement and cancellation of the LIFE Aiguillon Bay project launch day (action E2).....	69
6.2.6	Additional co-financing to continue mudflat restoration work (action C3).....	70
6.2.7	Additional co-financing for the symposium on the restoration of mudflat habitats (action E2) .....	70
6.2.8	Cancellation of the financial audit (action F2).....	70
6.2.9	Justified cancellation of action E7 .....	70
6.2.10	Consultation for mudflat restoration work (Action C1) .....	71
6.2.11	Unforeseen but absorbed expenditure from C3 action.....	72
6.2.12	Additional work on the Pointe de l'Aiguillon (Action C4) .....	72
6.2.13	Unfinished start of work at the Pointe de l'Aiguillon (action E1) .....	73
6.2.14	Continuation of Action A6 .....	73
6.2.15	Pooling between partners: "Adapting coastal marshes to climate change" conference (action E2) .....	73
6.2.16	Contribution by the LIFE Aiguillon Bay project to the hosting of a symposium in 2019 (action E2) .....	74
6.2.17	Organisation of the symposium and financial contributions for the symposium on the restoration of mudflat habitats (action E2) .....	74
6.2.18	Organisation of the project feedback conference (action E2) .....	74
6.3	EVALUATION OF THE PROJECT'S IMPLEMENTATION.....	76
6.3.1	Evaluation of the methodology applied to the project .....	76
6.3.2	Evaluation of the objectives and expected results.....	76
6.3.3	A beneficial project extension .....	84
6.4	BENEFIT ANALYSES.....	85
6.4.1	Environmental benefits .....	85
6.4.1.1	Direct and quantitative environmental benefits.....	85
6.4.1.2	Qualitative environmental benefits.....	86
6.4.2	Economic benefits.....	86
6.4.3	Social benefits.....	87
6.4.3.1	Improved safety conditions for individuals at the project.....	87
6.4.3.2	Improving awareness.....	87
6.4.3.3	Improved communication.....	88
6.4.3.4	Improved media coverage.....	89
6.4.3.5	Behaviour change of target audiences.....	89
6.4.3.6	Cooperation and social cohesion.....	89
6.4.4	Innovation and demonstration value.....	89
6.4.4.1	Innovation at sea.....	89
6.4.4.2	Innovation on land: Centre stage! .....	90
6.4.5	Replicability, transferability, cooperation .....	90
6.4.6	Policy implications.....	91
7.	KEY PROJECT-LEVEL INDICATORS.....	92
8.	COMMENTS ON THE FINANCIAL REPORT .....	93
8.1	SUMMARY OF COSTS INCURRED .....	93
8.1.1	Comments on the budget item : Staff.....	94
8.1.1.1	Clarification of staff cost calculations.....	94
8.1.1.2	Comments on the "Staff" budget item for Marais Poitevin Regional Nature Park .....	96
8.1.1.3	Comments on the LPO's "Staff" budget item.....	97
8.1.1.4	Comments on the OFB's "Staff" budget item .....	99
8.1.2	Comments on the budget item: Travel and subsistence expenses.....	101
8.1.2.1	Comments on the budget item "Travel and subsistence expenses" of the Marais Poitevin Regional Nature Park.....	101
8.1.2.2	Comments on the LPO's budget item "Travel and subsistence expenses" .....	102
8.1.2.3	Comments on the OFB's budget item "Travel and subsistence expenses" .....	102
8.1.3	Comments on the budget item: Outside assistance.....	103
8.1.3.1	Comments on the "Outside assistance" budget item for Marais Poitevin Regional Nature Park.....	103
8.1.3.2	Comments on the LPO's "Outside assistance" budget item.....	106
8.1.3.3	Comments on the OFB's "Outside assistance" budget item.....	107

8.1.4	<i>Comments on the budget item: Infrastructure of the PNR</i>	109
8.1.5	<i>Comments on the budget item: Capital goods</i>	110
8.1.5.1	Comments on the "Capital goods" budget item for Marais Poitevin Regional Nature Park	110
8.1.5.2	Comments on the LPO's "Capital goods" budget item	110
8.1.5.3	Comments on the OFB's "Capital goods" budget item	110
8.1.6	<i>Comments on the budget item: Consumables</i>	112
8.1.6.1	Comments on the "Consumables" budget item for Marais Poitevin Regional Nature Park	112
8.1.6.2	Comments on the LPO's "Consumables" budget item	112
8.1.6.3	Comments on the OFB's "Consumables" budget item	112
8.1.7	<i>Comments on the budget item: Other costs</i>	113
8.1.7.1	Comments on the "Other costs" budget item for Marais Poitevin Regional Nature Park	113
8.1.7.2	Comments on the LPO's "Other costs" budget item	115
8.1.7.3	Comments on the OFB's "Other costs" budget item	116
8.1.8	<i>Comments on the budget item: General expenses</i>	116
8.2	ACCOUNTING SYSTEM	117
8.2.1	Accounting system	117
8.2.2	Cost approval procedure	117
8.2.3	Monitoring work hours	117
8.2.4	Branding of invoices	118
8.3	PARTNERSHIP AGREEMENTS	119
8.4	CERTIFICATION OF THE FINANCIAL STATEMENT	119
8.5	ESTIMATED PERCENTAGE OF DAYS WORKED BY ACTION GROUPS	120
8.5.1	Number of days spent on group A	120
8.5.2	Number of days spent on group C	121
8.5.3	Number of days spent on group D	121
8.5.4	Number of days spent on group E	121
8.5.5	Number of days spent on group A	121
8.6	RULE OF 102%	121
9.	<b>DELIVERABLES AND MILESTONES</b>	<b>122</b>
9.1	DIRECTORY OF DELIVERABLES AND MILESTONES	122
9.2	LIST OF DELIVERABLES SENT WITH THE MID-TERM REPORT	122
9.3	LIST OF DELIVERABLES SENT WITH THE FINAL REPORT	122
10.	<b>TABLE OF ANNEXES</b>	<b>124</b>
11.	<b>LIST OF FIGURES</b>	<b>124</b>

## 2. ABBREVIATIONS

<b>AAMP</b>	Agence des Aires Marines Protégées
<b>APPB</b>	Arrêté Préfectoral de Protection de Biotope
<b>CA85</b>	Chambre d'Agriculture de Vendée
<b>CCPNM</b>	Communauté de Communes du Pays Née de la Mer
<b>CCSVL</b>	Communauté de Communes Sud Vendée Littoral
<b>CDL</b>	Conservatoire du Littoral, Conservatoire de l'espace littoral et des rivages lacustres Centre Atlantique [coastal protection agency]
<b>CRCPL</b>	Comité régional de la Conchyliculture Pays de la Loire
<b>CRCPC</b>	Comité régional de la Conchyliculture Poitou-Charentes
<b>DREAL NA</b>	Direction Régionale de l'Environnement, de l'Aménagement et du Logement de la région Nouvelle-Aquitaine
<b>DREAL PL</b>	Direction Régionale de l'Environnement, de l'Aménagement et du Logement de la région Pays de la Loire
<b>DDTM 85</b>	Direction départementale des territoires et de la mer de la Vendée
<b>DDTM 17</b>	Direction départementale des territoires et de la mer de la Charente-Maritime
<b>EPMP</b>	Marais Poitevin Public Body
<b>GAE</b>	Groupe associatif Estuaire
<b>IFREMER</b>	Institut Français de Recherche pour l'Exploitation de la Mer
<b>LPO</b>	Ligue pour la Protection des Oiseaux (League for the Protection of Birds)
<b>OFB</b>	The French Biodiversity Agency (OFB)
<b>ONCFS</b>	Office Nationale de la Chasse et de la Faune Sauvage
<b>Marine Park</b>	Natural marine park of the Gironde estuary and the Pertuis Sea
<b>PAPI</b>	Programme d'Actions de Prévention des Inondations
<b>PNR</b>	Marais Poitevin Natural Regional Park
<b>RNN</b>	The Aiguillon Bay National Nature Reserve
<b>RTE</b>	Réseau de transport d'électricité
<b>SMMPBL</b>	Syndicat Mixte du Marais Poitevin Bassin du Lay
<b>SMVSA</b>	Syndicat Mixte Vendée Sèvre Autizes

### 3. SUMMARY

The aim of the Aiguillon Bay LIFE project was to preserve, restore and enhance habitats of European interest in the Aiguillon Bay.

Its main objectives were to:

- (1) Restore disrupted habitats in the bay and the Pointe de l'Aiguillon and limit the negative impacts of coastal traffic;
- (2) Strengthen the role of coastal habitats to provide passive resistance to flooding;
- (3) Understand the interactions between the Marais Poitevin wetland and the Aiguillon Bay to inform management strategies;
- (4) To highlight the wealth of this ecological system, understand how it works and its biological and physical roles.

The project was divided into five sets of actions:



Figure n° 1 : The five action areas of the Aiguillon Bay LIFE project

### 3.1 RESTORING MUDFLAT HABITATS (AIGUILLON INLET)

The ecological improvement actions in the Aiguillon Bay aimed to restore 100 hectares of mudflat habitats, analyse the geomorphological development of the Aiguillon Bay and improve its ability to support flora and fauna.

Following the project, the sediment dynamics of Aiguillon Bay were analysed, showing an increase in the bay's sediment content. This analysis was based mainly on the comparison of two datasets obtained by a topographic LIDAR survey in 2016 and 2021.

Preliminary surveys to restore mudflat habitats have been carried out. After consulting government departments and the shellfish farming profession, experimental work to remove wild non-native oyster beds was carried out over three seasons (2019/2020, 2020/2021, 2021). These experimental works have enabled 118 hectares of mudflat habitats to be restored and have thereby improved the bay's hosting capacity, mainly for benthic macrofauna and avifauna (see actions A1, C1 and D1).

### 3.2 RESTORING ESTUARINE HABITATS (PRÉE MIZOTTIERE FARM, SAINTE-RADEGONDE-DES-NOYERS, VENDEE)

Work on the Prée Mizottière site aimed to create 10 hectares of maritime marshland, essential for the nesting of waterfowl species, and to improve water management to benefit avifauna across an area of 17 hectares.

By the end of the project, the hydraulic works carried out in 2017 led to better management of water levels on the farm's grasslands, making it easier for waterfowl to settle on around 20 hectares.

Furthermore, after two years of consultation with stakeholders (2017/2018) and two years of regulatory instructions (2019/2020), works to recede the weakened dyke within the cultivated land have created 10 hectares of marshland (see actions A3, C3 and D3).

### 3.3 RESTORING DUNE HABITATS (POINTE DE L'AIGUILLON, L'AIGUILLON-LA-PRESQU'ILE, VENDEE)

The work carried out on the Pointe de l'Aiguillon site aimed to restore dune habitats, provide public access, protect the dunes and create dune grasslands.

By the end of the project, multiple work phases restored 13.6 hectares of dunes and preserved 4.17 hectares of salt meadows at Obione. Public access and dune protection works were carried out, as well as the rewilding of a former campsite allowing the re-introduction of grey dunes. Rewilding was also achieved by removing some of the concrete blocks on the Pointe de l'Aiguillon site. Comparing the habitat mapping carried out in 2021 with the existing 2011 map shows that the site is well conserved in terms of community habitats, with the recovery of grey and shifting dunes, as well as the presence of interesting dune grasslands (33 habitats, including 20 community habitats, and 14 listed plants identified in 2021).

Lastly, public awareness notices (the benefits of closing part of the site, protecting the collared plover) have been installed on the site (see actions A4, C4 and D4).



### 3.4 ANATIDAE AND WATER STUDIES

The aim of defining the effects of water quality on the primary production of the bay and its relationship with species distribution, as well as the behaviour of anatidae populations, was to improve the habitat management methods used by the RNN's managers. The results of this work will be used in various management tools for the region following the project.

#### 3.4.1 Study of water quality along a land-sea continuum

The Aiguillon Bay and the Breton Pertuis constitute a coastal zone of great importance for the environment and the economy (shellfish farming). The area is influenced by freshwater inflows from the Poitevin wetlands.

A study carried out by the French Biodiversity Agency established an inventory of knowledge about water quality in the Aiguillon Bay. Samples, taken over two years (January 2017 to January 2019) were carried out at eight sites in the bay and at outlets of the rivers feeding it. The aim was to understand the link between freshwater supplies from the Marais Poitevin and the coastal zone and the associated risks. The results feature several themes: nutrients, carbon, particulate matter, pesticides and salinity (Coignot et al. 2020).

These more or less regular qualitative land inputs are one of the key factors in the functioning of the ecosystem, partly influencing the primary production of the bay. A study by the Etablissement Public du Marais Poitevin was also conducted to estimate the quantity of main outflows from the Marais Poitevin into the Aiguillon Bay (Deborde et al. 2021).

#### 3.4.2 Study of the use of the Aiguillon Bay and surrounding marshland by wintering ducks

The wetland of the Marais Poitevin and the Aiguillon Bay constitute an ecocomplex composed of various environments of international interest for water-bird species, especially during wintering. These environments are used independently by ducks according to their nycthemeral (day-night) rhythm.

The LIFE Aiguillon Bay conducted a three-pronged study to improve knowledge about how the ecocomplex is used by ducks focusing on 1) updating the location of the feeding/resting sites using GPS tags, 2) studying diet by analysing contents of anatidae gizzards collected during hunting around the edges of the bay and, 3) studying food resources by sampling the soil seed bank on wetlands and salt marshes.

These results confirm and expand on the previous study into the functional role of the Marais Poitevin.

### 3.5 PUBLIC AWARENESS ACTIONS AND SHARING THE PROGRAMME'S RESULTS

During the project, several tools for raising public awareness and sharing the results were produced: a brochure presenting the project, a website (over 25,000 views), a Facebook page with a large following (over 1,300 subscribers), three websites for the three conferences held during the project, various information and awareness-raising notices, a 9-minute film presenting the project's natural habitats, a travelling exhibition dedicated to the bay's biodiversity through photographs and illustrations (7,000 people), an illustrated book on the Aiguillon Bay, four animated infographics, nine video reports, photographic reports, a field notebook, nine newsletters on the project's initiatives, 15 themed posters, an experience review, three seminars, numerous conferences (local, national and international), over 200 press releases.

Moreover, the 2018 conference on adapting coastal marshes to climate change enabled innovation and the creation of a new concept: the "science show", bringing together a scientist and two artists to explain the scientific aspects of climate change. Alongside the project, the success of this seminar and the scientific show prompted the NRP to hold a second seminar in 2019, together with a new scientific show, and to co-publish two books resulting from these two scientific shows. In 2019, and again in 2022, the science shows went on tour and were performed throughout France.

## 4. INTRODUCTION

### 4.1 GENERAL AND SPECIFIC OBJECTIVES

The Poitevin marshlands are an original network of natural habitats with an exceptional biodiversity. This terrestrial and coastal wetland was formed when the Pictons Gulf was filled with sediment brought in by the ocean. Farming practices and coastal development have been gradually damaging the natural environment. Furthermore, the prospects of climate change are encouraging the region to adapt its coastal protection measures. Coastal habitats are thereby finding a new place in public policy decisions which can play a key role in developing protection measures.

The LIFE Aiguillon Bay project aimed to (i) restore damaged habitats in the bay and the Pointe de l'Aiguillon and limit the negative impacts of coastal traffic; (ii) strengthen the role of coastal habitats in passive resistance to flooding; (iii) to understand the interactions between the Marais Poitevin wetland and the Aiguillon Bay to inform management strategies; (iv) to promote the diversity of this ecosystem and understand how it works and its role from both a biological and physical point of view.

### 4.2 TARGET HABITATS AND SPECIES ON PROJECT SITES

The LIFE Aiguillon Bay project aimed to enhance the habitats and hosting capacity of fauna and flora at target sites within the 68,023 hectare Marais Poitevin Natura 2000 site.

The project was carried out at several sites:

4,900 hectares of mudflats in the Aiguillon Bay National Nature Reserve (public domain)

In the Aiguillon Bay, the work has restored mudflat habitats (Cor.14; Eur. 15: 1140). These mudflats are home to numerous molluscs and worms, which are a food source for shorebirds and certain anatidae. This measure has improved the site's capacity to accommodate migrating and wintering waders.

240 hectares on the Prée Mizottière farm site (owned by the Conservatoire du Littoral)

On the Prée Mizottière site, the work resulted in the creation of a maritime marsh, with improved water management for the benefit of birds on nearly 20 ha of sub-moist grassland (Cor. Eur. 15.52: Eur. 15: 1410, 1330) and the development of related flora conducive to the hosting of migratory and wintering Anatidae and waders.

40 hectares on the Pointe de l'Aiguillon site (public land)

On the Pointe de l'Aiguillon site, the work consisted of laying a path for visitors to the grey dunes (priority habitat, Cor. 16.22 Grey dunes) to restrict access to them and minimise damage by trampling. This work has also enabled the flora associated with the grey dune habitats to flourish and improved the ability of these areas to host the dune birds that depend on these environments.

### 4.3 THREATS AND CONSERVATION ISSUES

The sites covered by this project (Aiguillon Bay, Pointe de l'Aiguillon, Prée Mizottière) face a number of threats that are causing real problems for the conservation of the species and habitats that make up the biodiversity of these areas.

#### ***Alteration of mudflat habitats by anthropic pressure (Aiguillon Bay site)***

The mudflats are an important biological breeding ground, which is why there are so many oyster farms. After the closure or relocation of shellfish farms, these have been abandoned and support wild oyster beds. They enter into direct trophic competition with other shellfish and accelerate the accumulation of sediments that cause the bay to silt up. Wild oyster beds affect the functioning of the Aiguillon Bay: reduced trophic levels, reduced hosting and feeding capacity for waders and anatidae.

#### ***Alteration of dune habitats by anthropic pressure (Pointe de l'Aiguillon site)***

The development of tourist activity at the Pointe de l'Aiguillon is causing an increase in unregulated human traffic, resulting in the deterioration of dune habitats of community interest through trampling (code Natura 2000: 2110, 2120, 2130, 2270), their related plant life and bird breeding sites. Moreover, the current sediment build-up of the dunes does not compensate for the effects of the constant and unavoidable action of the wind and tides, leading to severe deterioration of the dune habitats.

#### ***Poor qualitative and quantitative management and lack of knowledge about the quality of the water in the Aiguillon Bay (Aiguillon Bay site)***

The quality of the water (fresh and salt water) in the Aiguillon Bay directly affects the primary sources of food for the species present in the bay and contributes to the attractiveness of the currents used by migratory fish (*Anguilla anguilla*, *Salmo salar*, etc.). To understand the distribution of species (fish, birds), the evolution of salinity and physico-chemical parameters must be analysed over several seasons.

#### ***Lack of knowledge about the movements of Anatidae between the Aiguillon Bay and the Marais Poitevin grasslands (Aiguillon Bay site, tributaries and Marais Poitevin wetlands)***

The Aiguillon Bay is a migratory hub for Anatidae, which use the mudflats as a resting area and feed by night on the natural grasslands of the Marais Poitevin. However, suggesting measures to improve grassland management is hard unless we know the movements of Anatidae and the nature of the grasslands on which they feed. To improve the hosting capacity of these areas for Anatidae, research is needed on their food resources, diet and geographical distribution.

#### ***Lack of moisture in the sub-humid grasslands of La Prée Mizottière (La Prée Mizottière site)***

The Prée Mizottière farm combines farming and biological recovery and is one of the main wintering sites for Anatidae and waders in the Marais Poitevin. Nevertheless, there are still dry areas that limit its capacity to host these species. Raising the humidity of the site will benefit the sub-moist grassland habitat currently being colonised and the nesting of Anatidae and waders.

#### ***Lack of awareness among the general public of the biological challenges of the Marais Poitevin coastline and the risk of flooding (all project sites)***

The Marais Poitevin is a major site with a combination of nature conservation issues related to the risk of marine and river flooding, but also to human activities. The general public's lack of knowledge about biological issues leads to poor awareness of their habitats and species. Raising public awareness is essential to improve natural habitats.

## 4.4 SOCIO-ECONOMIC CONTEXT

The project concerns areas that are not (or no longer) subject to commercial activities:

- The campsite on the edge of the Pointe de l'Aiguillon APPB was closed down in the wake of Storm Xynthia;
- The buildings at the tip of the Pointe de l'Aiguillon are no longer used for production activities and were removed by the government during the project;
- The oyster beds are no longer used by shellfish farmers.

Overall, the project had no negative impacts on these aspects. However, the site is still very popular. It plays a passive role in local tourism, a major and fundamental sector for L'Aiguillon-la-Presqu'île and, more widely, for the southern Vendée coastline.

The aim is to enhance the natural habitats, provide more favourable conditions for biodiversity while allowing the development of tourism.

The only way to control dispersed traffic on these sites, which is harmful to both natural habitats and biodiversity, is to provide improved access. The site's layout aims to concentrate footfall by offering far more attractive conditions for discovering the area. The quality of these facilities should make the site more attractive.

The project sought to allow for business development that was in keeping with the strategy of improving the natural habitat. In this respect, it is part of the development policy for " natural " tourism set up by the PNR and the LPO.

Finally, the project was also meant to encourage residents and visitors to get involved in the environmental and climate issues that the European Union is dealing with. Helping the population to appreciate the quality of its environment, to see its value and to understand the challenges of preserving it, were key to the initiatives. The main purpose of the visitor facilities and the actions outlined in the E sheets is to raise awareness of the issues among the target audiences (seafarers, residents, visitors, local elected representatives, etc.). The project aims to bring these issues into greater focus for both individuals and collectively.

The D5 initiative has partially assessed the socio-economic and ecosystem impacts of the project (see Deliverable D5),

## 4.5 EXPECTED RESULTS

The aims of the ecological enhancement actions in Aiguillon Bay were to restore 100 hectares of mudflat habitats, to analyse the geomorphological evolution of Aiguillon Bay and thereby improve its ability to support flora and fauna. The removal of wild non-native oyster beds to restore colonised natural mudflat habitats and reduce the sediment trap that these beds represent is experimental and will be replicated.

Work on the Prée Mizottière site aimed to create 10 hectares of maritime marshland, essential for the nesting of waterfowl species and to improve water management to benefit avifauna across around 20 hectares.

The work at Pointe de l'Aiguillon aimed to restore dune habitats (800 linear metres of protection), provide public access and protect the dunes (2,500 linear metres of protection), and create 1,500 m<sup>2</sup> of dune grassland (70 trees felled).

The purpose of analysing the effects of water quality on the primary production of the bay and its relationship with the distribution of species, as well as the behaviour of Anatidae populations (capture and tagging of 50 Anatidae; via the analysis of 1,512 soil cores and 100 Anatidae surface scats) was to inform managers on how to improve habitat management. The results of this work will be used in various management tools for the region following the Life report.

The goal of raising public awareness and communicating the results of the programme was to enable professionals, local users, tourists, institutions, schools and the general public to take part. These materials and discussions (website, exhibition, technical posters, illustrated book, discovery booklet, video reports, collection of experiences, press articles, seminars, etc.) were intended to highlight the results at European level.

## 5. ADMINISTRATIVE SECTION

### 5.1 PROJECT MANAGEMENT > MISSING AMENDMENT 3 LPO

The Marais Poitevin Natural Regional Park as coordinating beneficiary of the project, oversaw the project with associated beneficiaries and financial partners. It has managed and coordinated the project to achieve its objectives and relevant results.

To recap, the project's general coordination was based on four bodies with related roles:

- (1) The steering committee (CoPil) met every year;
- (2) The Technical Committee (CoTech) met several times a year, with the Editorial Committee (CoRed) being an integral part of said Technical Committee;
- (3) The various oversight committees (CoSui) were arranged depending on the status of the actions (monitoring of Domaine Maritime, Prée Mizottière, Pointe de l'Aiguillon, water studies, ecosystem study);
- (4) Administrative and financial meetings were held three to four times a year.

Since its launch, the project has been presented to many stakeholders in the region (professionals, technical and scientific partners, State services, financiers and local stakeholders) at nearly fifty meetings.

The PNR has signed partnership agreements with its two associated beneficiaries to define the terms of payment of the funds received by the coordinating beneficiary: the LPO, agreement signed on 11 July 2016, and the ONCFS, agreement signed on 3 May 2016 (see Mid-term report, Appendix 02). These partnership agreements were each the subject of three amendments during the project, presented in **Appendix 01**.

During the first part of the project, financing agreements were also set up with the Ministry of Ecological Transition and Solidarity, the Prefecture of the Nouvelle Aquitaine Region (DREAL Nouvelle Aquitaine), the Regional Council of Nouvelle Aquitaine, CDC Biodiversité, and Etablissement Public du Marais Poitevin. The full set of these funding agreements is presented in the mid-term report (see Mid-term report, Appendix 03).

During the second part of the project, other financing agreements were reached by the LPO with Agence de l'eau Loire-Bretagne, helping to finance mudflat restoration work and the holding of a conference on mudflat restoration, and with DREAL Nouvelle Aquitaine, also helping to finance the conference on mudflat restoration. These additional financing agreements are presented in **Appendix 02**.

### 5.2 COMMUNICATION WITH NEEMO AND CINEA

The NEEMO consultancy, responsible for monitoring the implementation of the LIFE Aiguillon Bay project, visited the project sites six times: on 18, 19 and 20 July 2016, on 24 and 25 July 2017, on 2 and 3 October 2018, on 17 and 18 October 2019, on 29 and 30 September 2020 and on 18 and 19 October 2021. These visits were documented in a letter from EASME/CINEA. The project contact point, Mathilde REDON, was always responsive and capable.

Some of the correspondence received from EASME is included in Appendix 04 of the mid-term report (cf. Mid-term report, Appendix 04):

- 22/09/2016 Letter concerning the report of the first NEEMO visit
- 09/11/2016 Letter on the mid-term evaluation (survey)
- 11/05/2017 Letter concerning the first progress report
- 01/06/2017 Survey of all LIFE projects that bought land
- 09/11/2017 Letter concerning the report of the second NEEMO visit
- 11/07/2018 Letter concerning the second progress report
- 30/10/2018 Letter concerning the report of the third NEEMO visit
- 13/11/2018 Letter about KPI results

The letters sent by EASME/CINEA since the mid-term report was submitted are listed in **Appendix 03** of this final report:

- 09/07/2019 Letter concerning the mid-term report
- 08/10/2019 Letter about the organisation of the EASME visit in 2019
- 25/11/2019 Letter regarding the EASME visit in 2019 (fourth NEEMO visit)
- 20/11/2020 Letter concerning the report of the fifth NEEMO visit
- 03/12/2021 Letter concerning the report of the sixth NEEMO visit
- 01/02/2022 Bulletin on exceptional COVID measures
- 08/06/2022 Bulletin simplifying obligations to avoid the need for paper correspondence

### 5.3 CHANGES DUE TO THE FIVE AMENDMENTS TO THE GRANT AGREEMENT

The first three amendments are included in Appendix 05 of the mid-term report (see Mid-term report, Appendix 05).

#### 5.3.1 Amendment to Grant Agreement No. 1 (06/12/2016)

Changes to articles I.9 – Audits, I.10 – Submission of reports and II.23.2 (d) first paragraph.

#### 5.3.2 Amendment to Grant Agreement No. 2 (23/07/2018)

Amendment to Article II.19.2 a) i) - Direct eligible costs - Staff costs - Natural persons: *"The individual works as instructed by the beneficiary and, unless otherwise agreed with the beneficiary, on the premises of the beneficiary;"* is replaced by *"the person works under conditions similar to those of an employee ( particularly as regards the organisation of the work, the tasks performed and the premises where they are carried out);"*

Amendment to Article II.19.2 h) - Direct eligible costs - VAT: *"Non-deductible VAT is eligible ... an explicit statement in the financial statement certificate (Annex VII)"* is replaced by *"Non-deductible VAT is eligible as expenditure, except for activities corresponding to the notion of sovereign powers of Member States"*.

Amendment to Article II.23.2 (d) - Certificate in respect of financial statements: *"For beneficiaries for whom the total contribution in the form of reimbursement of actual costs referred to in Appendix III is at least EUR 325,000, a certificate on the financial statements and underlying accounts ("certificate on the financial statements");"* is replaced by *"For beneficiaries for whom the total contribution in the form of reimbursement of actual costs referred to in Appendix III is at least EUR 750,000, a certificate on the financial statements and underlying accounts ("certificate on the financial statements")"*.

#### 5.3.3 Amendment to Grant Agreement No. 3 (27/08/2018)

Change in the name of the coordinating beneficiary: *The "Syndicat Mixte du Parc Interrégional du Marais Poitevin", as stipulated in the grant agreement, changes to "Syndicat Mixte du Parc Naturel Régional du Marais Poitevin"*. Forms A1 and A2 have been amended accordingly.

Change in project acronym: *"LIFE 14 NAT/FR/000669 - LIFE BARGE", as set out in the grant agreement, is amended to "LIFE 14 NAT/FR/000669 - LIFE Baie de l'Aiguillon"*.

#### 5.3.4 Amendment to Grant Agreement No. 4 (04/06/2020)

Extension of project duration: (i) Forms A1, C2 and C3 in Appendix II of the Grant Agreement have been modified; (ii) The duration of the project in Art. I.2.2 of the Grant Agreement is extended and runs from 01/01/2016 to 30/06/2022.

#### 5.3.5 Amendment to Grant Agreement No. 5 (07/10/2021)

The associated beneficiary ONCFS becomes OFB: (i) Forms A1, A4 (ONCFS), A5 (ONCFS) in Appendix II of the grant agreement have been amended; (ii) The associated beneficiary Office National de la Chasse et de la Faune Sauvage (ONCFS) no longer exists due to a merger and is replaced by the Office Français de la Biodiversité (OFB), 12 cours Louis Lumière 94300 Vincennes, as of 01/01/2020. Any reference to the Office National de la Chasse et de la Faune Sauvage (ONCFS) in the grant agreement shall be understood, where applicable, as a reference to the Office Français de la Biodiversité (OFB).

Amendments 4 and 5 are included in **Appendix 04** of this final report




## 6. TECHNICAL SECTION

### 6.1 ACTION PROGRESS > INSERT THE AMENDED SCHEDULE FOR EACH ACTION

#### 6.1.1 Action A1: Development of an experimental protocol for the removal of wild oyster beds from the Aiguillon Bay

##### Implementation schedule

 Nbre = 1000000		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
A1	LPO	Elaboration of an experimental protocol of wild oyster habitat removal from the Aiguillon Bay																													
	Initial																												84 397 €	75 959 €	
	Current																														

Coordinator LPO

Dates Expected start date: April 2016 Actual start date: January 2016  
Expected end date: June 2017 Actual (or expected) end date: December 2018

##### Objective recap

The aim was to carry out the preliminary research required to undertake experimental mudflat restoration work in Aiguillon Bay.

##### Recap of expected results

- Inventory of the fauna and trophic network of the Aiguillon Bay;
- Completion of regulatory instructions: Water legislation, Natura 2000 impact study, etc.;
- Defining the sectors of intervention and preliminary mapping of the works;
- Raising awareness of the shellfish industry.

##### Progress of the initiative

Initially expected in June 2017, the report on the fauna inventory and identification of food webs was submitted on 04/07/2018 (cf. Deliverable A1 - Benthic macrofauna report) and was the subject of a newsletter (*chroniques estuariennes n°5*). The delay was due to weather conditions. The Volkmar storm in February 2017 made the use of a boat for sampling in the bay impossible. These same studies were replicated at the end of the works and compared in order to assess the initial results and objectives (action D1).

Since the initiative was launched, the regulatory oversight has been conducted by the Charente-Maritime DDTM on behalf of the two DDTMs (Charente-Maritime DDTM and Vendée DDTM). Initially expected in June 2017, the impact study, the regulatory directives and the necessary authorisations, carried out by the contractor Créocéan, were received on 08/10/2018 (see Deliverable A1 - Créocéan prior declaration file). The drafting of the impact assessment took longer than expected. This was mainly due to setting out the methodologies for the work involved and considering the land-based reprocessing of shellfish.

As recommended in the regulatory study and requested by the RNN's scientific council on 21/03/2017, an assessment of possible pollutants in the sediments likely to be stirred up was carried out. This study of pollutants in the sediments, carried out by Qualyse in 2018, found the abnormal presence of dibenzo-anthracene (see Mid-term report, Appendix 06). A test on oyster larvae was also requested to ensure normal shellfish development. This test was negative, the larvae in contact with the sediment developed normally.

The termination of the last shellfish farming concessions at the Pointe de l'Aiguillon and Charron was handled by the DDTMs of Vendée and Charente-Maritime, in partnership with the Regional Shellfish Farming Committees of Pays de Loire and Poitou-Charentes. Two concessions remain operational and will be kept at the Pointe de l'Aiguillon.

In November 2018, a meeting was held to present the initiative to State representatives, regional shellfish farming committees and representatives of shellfish farming unions, in the presence of the company commissioned to carry out the work. This meeting specified the methods of intervention and the reinforcement of the REMI bacteriological analysis network, to prevent the possible influence of the work on the bacteriological quality of the water (at the request of the Vendée DDTM). On 03/12/2018, the same presentation was made to shellfish professionals in Aiguillon Bay.

Identified after a consultation by LPO in 2018, the company Bâti recyclage, a subcontractor of Trézence TP, defined the procedures for depositing and recycling part of the oyster beds exported from the mudflats at the end of the works.

The joint prefectural order for the Vendée and Charente-Maritime departments before the work began was signed on 28/12/2018 (see Mid-term report, Appendix 08). The company Trézence TP informed the LPO by letter on 17/01/2019 that the work could not start on 07/01/2019 as initially planned. This postponement was due to a delay on another of the company's sites caused by the demonstrations in France in winter 2018/2019 (the "gilets jaunes" blockade movement), which prevented the necessary equipment from being assembled (see Mid-term report, Appendix 09).

Work therefore began in September 2019, in agreement with the Regional shellfish committees. The timing of the work depended on shellfish farming and birdlife issues in the RNN; the most favourable periods identified were January and February or September and October.


A press conference to launch the work was held by the LPO on 16/09/2019.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable A1</b>	Faunal inventory and trophic network identification report	30/06/2017	30/06/2017	04/07/2018	Completed
<b>Deliverable A1</b>	Impact assessment and other regulatory procedures carried out, authorisations obtained	30/06/2017	30/06/2017	08/10/2018	Completed
<b>Milestone A1</b>	End of regulatory and technical procedures	30/06/2017	30/06/2017	08/10/2018	Completed

## 6.1.2 Action A3: Preliminary ecological development works on the Prée Mizottière site

### Implementation schedule

 LIFE - Nature		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
A3	PNR	Prefiguration of ecological enhancement works of the Prée Mizottière																												
	Initial																												83 460 €	74 057 €
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: [Jan. 2016](#) Actual start date: [Jan. 2016](#)  
Expected completion date: [Dec. 2020](#) Actual (or expected) end date: [Dec. 2020](#)

### Objective recap

This action aimed to facilitate the regulatory and technical procedures necessary to carry out ecological enhancement work on the Prée Mizottière site, namely restoring hydraulic structures to allow water to be retained in the meadow hollows that support birdlife, creating an observation post for birdlife and landscapes, and creating estuarine habitats by relocating a dyke.

### Recap of expected results

Carrying out the regulatory and technical procedures relating to the hydraulic works, the removal of the dyke and the construction of a platform.

### Course of action (see Deliverable A3)

#### A preliminary consultation phase

An initial oversight committee on the work to be carried out on the Prée Mizottière site was held on 28/04/ 2016 attended by the various stakeholders involved: the three beneficiaries of the LIFE project, the Conservatoire du Littoral (CDL), the Syndicat Mixte Vendée Sèvre Autizes (SMVSA), the Vendée Chambre d'Agriculture and the Direction Départementale du Territoire et de la Mer de Vendée (DDTM)

In the wake of storm Xynthia in February 2010, a flood prevention plan (PAPI) for the Vendée Sèvre Autizes was set up at the government's request to identify and restore a dyke system. The Syndicat Mixte Vendée Sèvre Autizes is responsible for carrying out the "PAPI" dyke restoration work in this marsh area. The Conservatoire du Littoral owns the so-called "PAPI" dykes located on the Prée Mizottière site and must therefore ensure they are maintained and managed (maintenance by sheep grazing, mowing).

Maintaining these dykes and defining the areas of land to be borrowed to restore the dykes are issues of conflict between the Conservatoire du Littoral and the Syndicat Mixte Vendée Sèvre Autizes. The technical and regulatory procedures required to move the dyke back were subject to a consensus between the two parties.

The LIFE Aiguillon Bay project therefore mediated between these different stakeholders with a view to reaching a compromise by setting up a steering committee bringing together all the abovementioned parties in the spring of 2016. Three steering committees were held on 28/04/2016, 09/10/2017 and 26/04/2018.

The meeting of 09/10/2017 helped to break the deadlock, clarify everyone's role and draw up a reverse schedule. Next, a land use overlap agreement covering Prée Mizottière was signed on 29/12/2017 by the Conservatoire du Littoral and the Syndicat Mixte Vendée Sèvre Autizes.

These consultation stages were vital to the running of the LIFE project on the site.

## Technical and regulatory phases prior to the work

The LIFE Aiguillon Bay project on the Prée Mizottière site is part of an agri-environmental project. They concerned the relocation of a dyke to the detriment of farmed areas, to restore natural habitats targeted by the project, and the restoration of hydraulic structures to improve the management of water levels in spring on the meadows to allow better hosting of avifauna.

The main regulatory steps were as follows

- May 2016: Collaboration between the PNR and DDTM de Vendée to draw up regulatory and technical instructions relating to hydraulic developments;
- June 2017: Project details are sent to DDTM Vendée, at its request, by PNR;
- 02 June 2017: Agreement signed between the Conservatoire du Littoral and the PNR to occupy La Prée Mizottière for the development and execution of works;
- 13 October 2017: Authorisation to start restoring hydraulic structures;
- July 2017: Competitive bidding, one provider selected, UNIMA;
- November 2017: Carrying out restoration work on hydraulic structures;
- January 2018: Merging the administrative resources of the PNR and the Syndicat Mixte Vendée Sèvre Autizes by means of an order pooling contract;
- Spring 2018: Competitive bidding, one provider selected: ISL Ingénierie Angers, in association with Eau-Méga (co-contractor);
- 09 July 2018: Requesting a "case-by-case examination prior to a potential environmental assessment";
- 07 August 2018: Obtaining an order exempting the project from an impact study;
- 23 October 2018: Meeting to launch the project management assignment;
- July 2018 to July 2019: Creation of an environmental authorisation request in the form of a French water law application drawn up by the consultancy firm Eau-Méga;
- 05 February 2019: Defining the level of the dike on completion of the work by the State services at 4.45 m NGF;
- December 2019: Preliminary project approved by the stakeholders (Conservatoire du Littoral, farmer, conservationists of the RNN Aiguillon Bay, PNR);
- 29 January 2020: Authorising a public enquiry to finalise the administrative procedure with a view to obtaining a decree allowing the works to be carried out;
- 09 March 2020: Appointment of an investigating commissioner by the Vendée Prefecture to conduct the public enquiry from 6 to 22 April 2020 in Sainte-Radégonde-des-Noyers;
- 16 March 2020: Lockdown period throughout this French region, delaying the start of the public enquiry.
- 8 to 23 June 2020: Carrying out the public enquiry;
- 29 June 2020: No reservations were expressed by the investigating commissioner regarding the retreat of the dyke;
- 17 July 2020: Obtaining a ruling authorising the PNR to start work on moving the dyke back.

The Covid19 health crisis that swept through Europe from February 2020 onwards could have delayed the dyke's move back by a year, due to the French government's lockdown in March, April and May 2020. However, despite the context, the PNR was able to carry out the final stage of the appraisal with a public enquiry in June 2020. All the administrative procedures and regulatory instructions (public consultation, water law dossier, Natura 2000 impact studies, public enquiry, etc.) prior to starting these works were therefore completed.

Following the various technical and regulatory procedures, restoration of the various hydraulic structures began in November 2017 and work on the dyke was able to start on 17 July 2020.

### No commitment to building an observation platform

Initially, the birdwatching platform was to be built by autumn 2019 at the latest. However, the positioning of this platform depended on the location of the borrowed areas on the Prée Mizottière site, owned by the Conservatoire du Littoral, which were required for SMVSA to repair the so-called "PAPI" dyke.

Following the consultation phase, fresh tensions and difficulties arose in the summer of 2018 between the Conservatoire du Littoral and the Syndicat Mixte Vendée Sèvre Autise regarding the maintenance of the so-called "PAPI" dykes. Consequently, the positioning of the observatory could not be decided.

After several further consultation attempts, research into the feasibility of the project and consultation with the site owner and partners, the project beneficiaries decided not to carry out this work for technical and financial reasons, in agreement with CINEA (see Action E7).

This project is therefore included and developed in the Post-Life Conservation Plan of the LIFE Aiguillon Bay project, in agreement with EASME.

### Schedule changes

The factors presented above (conflictual relations between the stakeholders involved, the essential mediation phase) account for the delay in committing to action A3 and therefore to actions C3 and D3. The changes to the timetable for the actions were approved by EASME by email on 12/05/2017 and by letter on 09/11/2017 (see Mid-term report, Appendix 13).


The finalisation of the regulatory and technical conditions to move the dyke and build a platform, initially scheduled for 30/09/2017, has therefore been postponed to December 2020.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable A3</b>	Developing facilities and regulatory guidelines (Prée Mizottière)	30/09/2017	31/12/2020	31/12/2020	Completed
<b>Milestone A3</b>	Creation of a steering committee: Prée Mizottière oversight committee	31/03/2016	31/03/2016	28/04/2016	Completed

### 6.1.3 Action A4: Preliminary rewilding of the Pointe de l'Aiguillon

#### Implementation schedule

 Région Île-de-France		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
A4	PNR	Prefiguration of renaturation works on the Aiguillon Pointe																													
	Initial																												18 689 €	9 657 €	
	Current																														

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jan. 2016** Actual start date: **Jan. 2016**  
Expected completion date: **Dec. 2016** Actual (or expected) end date: **June 2017**

#### Objective recap

This action aimed to establish a development project for the Pointe de l'Aiguillon and to present the analysis of the survey on summer tourist traffic carried out among users. These factors were a prerequisite to carrying out the ecological engineering operations begun in action C4, aimed at preserving the habitats and species present on the Pointe de l'Aiguillon site and gaining dune habitat spaces from urbanisation.

#### Recap of expected results

- Drafting a development project for the Pointe de l'Aiguillon
- Conducting a user survey (results and analysis)

#### Course of action (see the two A4 deliverables)

Organised by the PNR, three oversight committees on the work to be undertaken at Pointe de l'Aiguillon (24/03/2016 ; 17/11/2016 ; 11/12/2018) allowed this action to be taken.

#### Survey of summer tourist traffic 2016

A field survey of summer tourist traffic at Pointe de l'Aiguillon, carried out in 2016 by the PNR among 150 people, indicates that the Pointe de l'Aiguillon site is mainly visited for nature activities (hiking, wildlife observation) and angling. Most respondents were in favour of moving the car park back to allow access to the site. These conclusions show that users are very much in favour of rewilding the site, which is partially covered by the LIFE Aiguillon Bay project.

#### Mapping of developments

Initially, the project involved engaging a service provider to draw up a development project for the Pointe de l'Aiguillon, as well as a regulatory framework (obtaining authorisations, traffic on public maritime land, etc.). However, mapping was done by the PNR project managers and presented at the second follow-up committee meeting for the Pointe de l'Aiguillon. This project has been approved by all the partners.

#### Prior authorisations

The Pointe de l'Aiguillon is located on public maritime land and is subject to a Prefectural Order for the Protection of the Biotope. The work was therefore subject to various regulatory procedures.

The administrative authorisations to start the work were not granted in 2016 as initially planned. In July 2017, the PNR asked the "Mer et Littoral" department of the Vendée DDTM about the official procedure required to lay the fencing, cut down the trees and clean up the concrete blocks. In the absence of a response, the PNR contacted the "Mer et Littoral" department of the Vendée DDTM again in October 2017. The PNR was only able to carry out the survey in December 2017:

- The Natura 2000 simplified impact study, to measure the impact of the works;
- A request for an Authorisation for Temporary Occupation of the Maritime Public Land to carry out the work (laying of fences, felling of trees, removal of concrete blocks, etc.) on government property.

The Temporary Occupation Authorisation allowing the PNR to act was received on 06/03/2018 for a period of one year (March 2019). The PNR then renewed the Temporary Occupation Authorisation to work until December 2021.

#### Information and orientation notice board (see action E1)

Installing an information and orientation notice board, scheduled in action E1, was agreed in partnership with the Communauté de Communes du Pays Né de la Mer, renamed Communauté de Communes Sud Vendée Littoral in 2018. Indeed, the Communauté de Communes Sud Vendée Littoral also needed to restore an existing damaged information notice. The sign was therefore designed collaboratively in autumn 2017 and erected at the Pointe de l'Aiguillon site in February 2018.

#### Amendment to the Prefectural Protection Order for the Pointe de l'Aiguillon Biotope (excluding the LIFE project)

The launch of the project prompted the government to revise the Prefectural Protection Order for the Pointe de l'Aiguillon Biotope. It was initially planned to finalise the amendment to the Prefectural order in the autumn of 2017. However, due to a staffing problem at the DREAL (DREAL officer on long-term sick leave), it was decided at a meeting on 24/11/2017 to postpone this review. This did not result in any delay to taking the actions. The amendment to the order and its conversion into a Natural Habitats APPB is scheduled for the second half of 2022.

Moreover, the PNR's wish to integrate the LIFE Aiguillon Bay project into an overall rewilding of the Pointe de l'Aiguillon meant that the consultation process had to be broadened, which delayed action A4. Two meetings with the main stakeholders (Conservatoire du Littoral, Syndicat mixte hydraulique de la Vallée du Lay, OFB, the town of L'Aiguillon-la-Presque 'île, PNR, government departments, farmers, local users, marshland association) were organised to explain the project (01/06/2017 and 12/10/2017).


Due to the abovementioned factors, the work on action C4 initially planned for autumn 2017 has been delayed to spring 2018 (see action C3).

#### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable A4</b>	Development project for the Pointe de l'Aiguillon	31/12/2016	31/12/2016	15/12/2016	Completed
<b>Deliverable A4</b>	Summer tourism user survey	31/10/2016	31/10/2016	15/10/2016	Completed
<b>Milestone A4</b>	Delivery of the Pointe development project	31/12/2016	31/12/2016	15/12/2016	Completed

## 6.1.4 Action A5: Study of the use of the Aiguillon Bay and surrounding marshland by wintering Anatidae

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
A5	OFB	Survey on the use of the Aiguillon Bay and outlying marshes by wintering Anatidae																												
	Initial																											157 519 €	230 231 €	
	Current																													

**Coordinator** OFB

**Dates** Expected start date: July 2016 Actual start date: Jan. 2016  
Expected completion date: June 2021 Actual (or expected) end date: October 2021

### Objective recap

This action aimed to establish a better understanding of the links between feeding and rearing areas, and therefore a better grasp of the functional range of Anatidae present in the Aiguillon Bay and in the grasslands of the Marais Poitevin. Three areas to improve knowledge: (1) food source; (2) diet; (3) geographical distribution.

### Recap of expected results

- Food source: analysis of 1512 cores
- Diet: Analysis of 100 crops
- Geographical distribution: Capture and tagging of 30 ducks

### Course of action

#### (1) Food source

To evaluate the soil seed bank, 11,527 samples were taken from all the sites (Charron and Champagné salt grasslands, Prée Mizottière grassland, La Vacherie marshes and Lairoux community) during the 2016/2017, 2017/2018 and 2018/2019 seasons. These samples were then sieved and oven dried before the seeds were counted, weighed and identified with a binocular magnifying glass, at least to genus and if possible to species.

These different stages were very time-consuming and required several interns (including one for the project) and two contractual agents. The identification of seed samples from grasslands and some salt meadows was carried out by François Cavallo, initially as a service provider and later on a contractual basis.

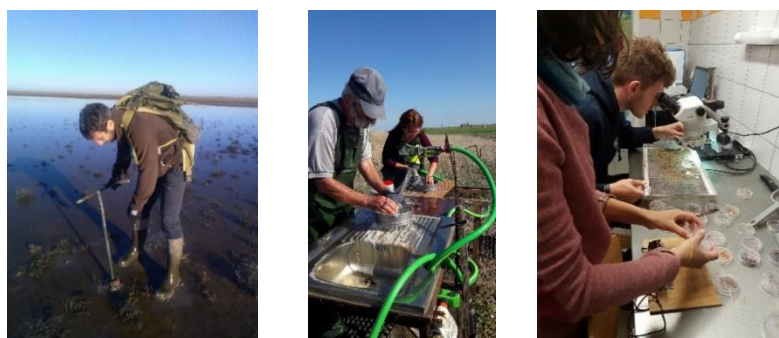


Figure n° 2 : The stages of a sampling campaign: collection, sieving and identification @ PNR



## (2) Diet

150 gizzards were analysed, 149 of which were usable and weighed and 50 of which were accompanied by the crop (collected in the Vendée): 12 pintails, 19 shovelers, 89 teal, 2 gadwall, 22 mallards and 6 wigeons. They were collected over 4 hunting seasons (the first being incomplete) from 30 August to 26 January.

An initial analysis of the data was carried out and presented to local hunters (Chasse Maritime Vendéenne on 08/04/2017 and La Sauvagine Vendéenne on 02/11/2017).



Figure n° 3 : Duck gizzard analysis @ RNN

## (3) Geographical distribution

The acquisition of transceivers was carried out in three phases:

- A first batch of 10 transmitters in December 2016, following a consultation carried out by the ONCFS (ECOTONE/GEOLINKX transmitters)
- A second batch of 20 transceivers in September 2017, following a consultation carried out by the NRP (GEOLINKX transmitters). The ONCFS national consultation for the acquisition of transceivers begun in 2017 was unsuccessful. So as not to delay the reception and therefore the fitting of the transmitters, the PNR has taken charge of this acquisition, after agreement from NEEMO on 15/06/2017 (see Mid-term report, Appendix 14).
- A third batch of 17 transceivers in September 2018 following a consultation by the ONCFS (ORNITHELIA/GEOLINKX)

To study the use of space during the wintering period, 56 GPS tags were fitted, of which 40 worked on 42 individuals (7 Ornitela, 7 Ecotone, 28 Geolink), providing approximately 75,000 locations from December 2016 to November 2020. Many of the tags purchased were defective and exchanged with suppliers, resulting in a high number of unusable tags (at least 36 Geolink and many product exchanges, 7 Ornitela, 11 Ecotone, 2 Cattrack).



Figure n° 4 : Fitting a transceiver - February 2017 @ RNN

An IT problem on the first ECOTONE transmitters occurred on 31 December 2017. This affected the transmission of data related to the movements of ducks monitored by transmitter. The company ECOTONE has replaced the transmitters that were refitted during the 2018/2019 season.

As a continuation of this study and thanks to funding acquired under the Recovery Plan (excluding LIFE), 52 new tags were purchased in the autumn of 2021. 15 teal were fitted with GPS during the winter of 2021/2022 on the Aiguillon Bay Reserve and the Marais du Communal de Saint-Denis-du-Payré Reserve in the Marais Poitevin. A new capture season will take place in the winter of 2022/2023 to fit the remaining tags. The related staff time has been included in the project.

## Presentation of results

This action was the subject of feedback meetings with hunting federations, naturalist associations (LPO Charente-Maritime, journée OPN) or during meetings with managers of natural spaces. A final feedback meeting with the hunting federations is planned for 14/09/2022.

Various specific presentations of the results at seminars were made during the project, including

- Coastal Ecology Workshop (Scotland) from 26 to 30/11/18.
- IUGB Conference (Lithuania) from 26 to 30/08/2019.
- Feedback conference for the LIFE Aiguillon Bay project (La Rochelle) on 06/04/2022.

A poster was designed for each event.

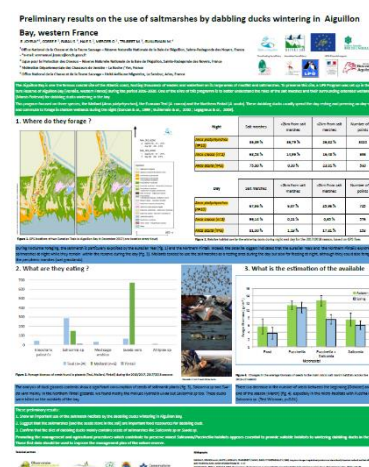


Figure n° 5 : Poster presenting the Anatidae study @ RNN

## Communication

An infographic on the study (Alternature & media) and a technical video (Delphine Berlioux) were produced in 2022. Four posters were produced (one in French and three in English) as well as a newsletter (Chroniques estuariennes n°4).

## Website

Real-time communication of duck movements on the website is technically difficult to achieve. Instead, a mapping of the ducks' movements was used. The LIFE website was updated regularly (every 10-15 days) during the monitoring period. This news was also relayed on the Facebook page of the LIFE Aiguillon Bay project.

## Bi-monthly monitoring of Anatidae


This was carried out from November 2017 to March 2019. The data is integrated with monthly census data from the Aiguillon Bay. The results of the monthly censuses have been online on the reserve's website since 2020: <https://www.reserve-baie-aiguillon.fr/telechargement/>

## Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable A5</b>	Study of the use of the Aiguillon Bay and surrounding marshland by wintering Anatidae	30/09/2019	30/06/2021	15/10/2021	Completed
<b>Milestone 04</b>	Studies to improve knowledge of Anatidae started	30/09/2016	30/09/2016	15/01/2016	Completed

## 6.1.5 Action A6: Monitoring water quality in Aiguillon Bay

### Implementation schedule

 Région Nouvelle-Aquitaine		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
A6	OFB	Implementation of water quality monitoring in the Aiguillon Bay																												
	Initial																											270 496 €	286 242 €	
	Current																													

Coordinator OFB

Dates Expected start date: [Jul. 2016](#) Actual start date: [Jan. 2016](#)  
Expected completion date: [Dec. 2020](#) Actual (or expected) end date: [October 2021](#)

### Objective recap

The aim was to better understand the hydraulic relationship between the Aiguillon Bay, the Marais Poitevin and its catchment area, based on an action plan designed to: (1) The long-term future of the IFREMER multi-parameter measuring stations; (2) Evaluation of the flows at the mouths of the various rivers in the basin feeding the bay, through a research programme associated with the LIFE project; (3) Evaluation of the primary production.

### Recap of expected results

- Setting up additional measuring stations (4),
- Drafting of a biannual water newsletter (see E1),
- Scientific publications,
- Decision-making assistance for upstream water management.

### Course of action

#### Building partnerships

As soon as the project was launched, the OFB drafted a framework agreement for qualitative and quantitative monitoring of freshwater entering the Aiguillon Bay with the various partners (IFREMER, LPO and EPMP):

- The quantitative aspect of this initiative is handled by the OFB as part of the LIFE Aiguillon Bay project, in partnership with IFREMER and the LPO;
- The quantitative component is managed by the EPMP and complements the LIFE Aiguillon Bay project.

The OFB has also worked on a draft financing agreement with IFREMER to execute the qualitative aspect of the A6 action. This draft was delayed due to an administrative difficulty: the OFB was unwilling to issue a contract for water quality analysis without the guarantee of a strong partnership with IFREMER. A solution has been reached between the two parties. Both agreements were signed on 02/11/2016 (Milestone A5 achieved, see Mid-term report, Appendix 15).

#### Course of action

Action A6 was presented to the members of the Scientific Council of the Aiguillon Bay RNN on 21/03/2017 in Luçon for approval (25 people).

A dedicated steering committee for this action was set up in 2017 and met on 05/07/2017 at the RNN's headquarters with the following members attending: PNR, LPO, OFB, IFREMER and EPMP. The report on the winter dynamics of nutrients and carbon in the outlets of the Marais Poitevin and associated terrestrial flows in Aiguillon Bay was presented at the meeting (study from January to June 2017). This steering committee helped to prepare the 2017/2018 season for this action.

A technical committee comprising IFREMER, OFB and EPMP met on 28/09/2018. The qualitative and quantitative aspects were presented by IFREMER. Detailed quantitative calculations were requested to better fulfil the objectives of the study (better reflecting the actual water intake from the basin).

A second technical committee was held on 12/17/2018 involving IFREMER and RNN managers to consider the follow-up system to be continued and/or developed at the end of the LIFE project

A progress report and outlook discussed with IFREMER and other potential partners was presented to Aiguillon Bay RNN's Scientific Council on 17/12/2018.

### **Equipment procurement and installation**

A first contract to acquire salinity gauges handled by ONFCS in July 2017 was declared unsuccessful, as the providers did not offer suitable equipment. The ONFCS therefore issued a second contract to NKE instrumentation in January 2017. The gauges were delivered in February 2017. However, this delay in delivery did not affect the progress of the project, as IFREMER agreed to temporarily lend some of its old gauges. All the targeted channels (see below) were equipped on 03/01/2017 (Milestone A6 achieved). Two probes were acquired by each site, allowing for the alternating use needed to maintain the equipment.

### **Operational implementation: Measuring the physical and chemical water quality**

Physical and chemical measurements were taken at the various outlets once a fortnight on average, using one sample per boat. The analyses were outsourced to the Laboratoire de l'Environnement et de l'Alimentation de la Vendée (LEAV). The first measurements were carried out on 16 January 2017 and continued until 22 January 2019.

Due to the high turbidity of the water, the analysis of the total flora as initially planned proved very difficult. The resources available were better suited for working on chlorophyll a concentrations.

Phytoplankton readings were carried out (without LIFE funding) by the Laboratoire Environnement et Ressources des Pertuis Charentais (LER-PC). The Marine Park has agreed to contribute to this action by paying for isotope analyses to determine the carbon flows between the basin and the bay.

### **High frequency monitoring of temperature and salinity**

The gauges have been operational since February 2017 in the Aiguillon Bay and its immediate vicinity (map 1). They were positioned in three channels and two rivers (Chenal Vieux, Canal du Curé, Canal de Luçon, Lay, Sèvre niortaise) as well as at sea ("Sèvre niortaise buoy": healthy water buoy upstream of the Sèvre niortaise, and "Lay buoy": port buoy of the Lay). A coastal station "Filière", monitored by the Conseil départemental de la Vendée, also provides data. The eight stations are tracked at 10-minute intervals. Gauges are rotated monthly to collect data, clean the gauge, and put a new one in place. The gauges are checked annually by IFREMER each autumn to ensure that the data are compliant and to request a recalibration from NKE instrumentation if necessary.

The report on high-frequency monitoring of water temperature and salinity published in March 2020 enabled a choice to be made of stations to be used for long-term monitoring of salinity, temperature and pressure in the Aiguillon Bay. Consequently, the gauges on the Chenal Vieux, the Canal de Luçon and the Canal du Curé were removed in September and October 2020.

### **Presentation of results**

The results were first presented on 27/06/2017 to the main hydraulic stakeholders (SAGE, Syndicats Mixtes, Conseil Départemental 85) to enable a critical discussion (17 people present). Action A6 was also presented to the members of the Local Water Commission of the Sèvre Niortaise Water Development and Management Scheme (CLE du SAGE Sèvre Niortaise) on 18/09/2017 in Niort.

On 30/01/2018, the first results obtained were presented at the annual Observateur du Patrimoine Naturel [Natural Heritage Observer] results day. In 2018, the results were presented again to the Scientific Council of the RNN of Aiguillon Bay (17/12/2018). A summary presentation was also made to the members of the RNN's Advisory Committee and to marine professionals (oyster and mussel farmers) during a meeting to present action A1. IFREMER presented the study at the international conference "Adapting coastal marshes to climate change" held as part of the LIFE Aiguillon Bay project in November 2018 in La Rochelle.

In 2019, the study was presented by IFREMER at the ASLO conference held from 23 February to 3 March in Puerto Rico (USA), and at the CHEERS conference in Bordeaux on 6 November.

The results were presented in September 2020 to COPIL members, in October 2020 to mussel farmers, and in November 2020 to several nature and environmental protection associations. The study was also presented by IFREMER in October 2020 at the conference "Restoring coastal environments in a shellfish farming context" organised as part of the LIFE Aiguillon Bay project in La Rochelle.

### Some technical difficulties

Gauges occasionally became silted due to the sedimentary movement of the bay, particularly in the Luçon and Curé channels. Improvements were made by changing the support system for the gauges (gauges placed in the channel bed and vertically to limit siltation).

In late spring and summer, barnacles grow and attach themselves to the supports and gauges, which can damage the sensors ("biofouling" in spring and summer). Copper mesh has been fitted to the salinity sensors since spring 2018 to limit barnacle attachment. This led to gauges in the channels becoming silted. From now on, this type of device will only be used for deep-sea gauges.

The gauges are rotated every fortnight for the sea gauges and every three weeks for those in the channels or estuaries between June and September, to limit data loss due to siltation or biofouling.

One of the gauges disappeared during storm ZEUS on 06 March 2017, despite the precautions taken to secure it. The gauge on the Lay's port buoy became detached from its support in mid-November 2020 and was found by a mussel farmer on the banks of the river. It was reactivated on 7 December 2020. The port channel buoy to which our gauge support was attached disappeared in early 2021. A search during a high tide on 9 March 2021 failed to find the buoy to which the probe was attached. The gauge at the Pont du Brault ("Sèvre niortaise river") broke in December 2020. The device was reset but the gauge could not be found.

### Communication

To enhance the value of the data and inform the region's elected representatives and professionals, an agent was recruited by the OFB for 6 months, from June to December 2020. Four posters (including one in English) and five newsletters were published under this contract. Another agent completed this assignment on a part-time basis from January to April 2022.

In total, this A6 action was the subject of several communications available on the project website:


- 5 newsletters;
- 5 technical posters;
- 1 animated infographic;
- A 7-minute video.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable A6</b>	Follow-up report on the action	31/10/2020	31/10/2020	15/10/2021	Completed
<b>Milestone A6</b>	Drafting and signing of the IFREMER / RNN managers agreement	31/03/2017	31/03/2017	30/11/2016	Completed
<b>Milestone A6</b>	Placement of additional gauges	31/03/2017	31/03/2017	15/01/2017	Completed

## 6.1.6 Action A7: Formalising management guidelines

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
A7	OFB	Formalisation of management direction																													
	Initial																												7 554 €	6 397 €	
	Current																														

Coordinator OFB

Dates Expected start date: [Jul. 2019](#) Actual start date: [January 2022](#)  
Expected completion date: [Dec. 2021](#) Actual (or expected) end date: [May 2021](#)

### Objective recap

Actions A1, C1, D1, A5 and A6 were intended to determine the functionality of the Aiguillon Bay. The conclusions of these studies were to help draft the future management plan for the RNN. These factors were therefore vital in strengthening the role of the RNN in the conservation of the natural heritage of the Marais Poitevin.

### Recap of expected results

- Production of a guide to hydraulic management
- Generating proposals for priority backshore intervention areas

### Course of action

This action was started in winter 2021 by the OFB. A person was hired on a part-time basis by the OFB from January to April 2022 to write the guide on water management. This concise, easy-to-understand document, intended for elected officials, sets out what is known about the water quality of Aiguillon Bay, with a view to better incorporating the maritime aspect of the Marais Poitevin into public policy. It was completed in early May 2022 and can be downloaded from the project website. The document was also sent to the various stakeholders in the area.


The results of all the LIFE Aiguillon Bay initiatives were used to assess the management plan and to draft the next plan for the Reserve. The person hired was also to summarise and draft the guidelines of the future management plan and its action files in relation to water quality.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
Deliverable A7	Summary report	30/11/2020	31/12/2021	10/05/2022	Completed
Deliverable A7	Water management guide	30/11/2020	31/12/2021	10/05/2022	Completed
Deliverable A7	Preparatory documents for assessing the 2013-2022 RNN management plan and drafting the 2023-2032 plan	30/11/2020	31/12/2021	27/06/2022	Completed
Milestone A7	Starting the preparatory documents and the water management guide	31/07/2020	31/07/2020	31/12/2021	Completed

## 6.1.7 Action C1: Deployment of experimental work to remove wild oyster beds from Aiguillon Bay

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
C1	LPO	Implementation of experimental works of wild oyster habitats removal from the Aiguillon Bay																												
	Initial																											401 956 €	547 779 €	
	Current																													

**Coordinator** LPO

**Dates** Expected start date: [Oct. 2017](#) Actual start date: [Oct. 2017](#)  
Expected completion date: [Dec. 2020](#) Actual (or expected) end date: [Dec. 2021](#)

### Objective recap

Upon completion of the preparatory action A1, the intention was to test a methodology for the removal of these abandoned oyster beds and shellfish structures in various areas.

### Recap of expected results

- Restoring 100 hectares of mudflats.

### Course of action

The regulatory investigation prior to the works took longer than originally expected, delaying the consultation to identify a service provider to remove the oyster beds and abandoned shellfish structures. This consultation was conducted in 2017 and led to a contractor being selected in August 2017 (Trézence TP). However, the contractor was unable to start the work from January 2019 as planned (see action A1). The work therefore started in autumn 2019. This delay partly explained why the project was extended by 18 months to enable the beneficiary to assess the operation.

The initial condition of the work areas was determined by taking an inventory of the benthic macrofauna, analysing the sediment grain size, measuring the organic matter (action A1) and a first LIDAR survey (action D1).

After consulting government departments and the shellfish farming industry, work to restore the mudflats was started in September 2019 for three seasons (Sept. 2019 to Feb. 2020, Sept. 2020 to Feb. 2021, Sept. 2021 to Nov. 2021). Additional funding requested by the LPO allowed these different phases of work to be carried out (Agence de l'eau Loire-Bretagne, stimulus plan). A hydraulic excavator combined with a crusher, mounted on a barge, was designed specifically for the work. The development of a floating barge equipped with a front-end crusher increased the efficiency of the work in the second phase.

The remainder of the budget at the end of the first phase was insufficient for the LPO to cover all of the experimental work areas initially planned, which is why the beneficiaries sought additional co-funding to extend the work period and the treatment area. The LPO responded to the Loire-Brittany Water Agency's call for projects in March 2020 to obtain additional co-financing of 150,010 euros to extend the work until 25 February 2021. The LPO also obtained funds from the stimulus plan to continue restoring the mudflats (€100,000) until November 2021. The latter are not Life project funds. The expenses incurred are not accounted for in the project.



## Main results

The three phases of work were carried out during 158 tides; 118 hectares of mudflats were restored, exceeding the initial objective of 100 hectares. In addition, 34 tonnes of tables and scrap metal were recycled and 42,000 m<sup>3</sup> of oysters were crushed. The average cost of the work was €12 per m<sup>3</sup> treated, or €5,200 per hectare.

Thirty tonnes of oyster bed samples were tested in September 2020 for co-composting with green waste and for use as fill material (via Batirecyclage). The results show that the crushed shells could be used:

- At the start of a composting process to produce an organo-calcium supplement with a minimum organic matter content of 20%;
- As 0/31.5 and 0/10 backfill material;
- As a shell stripping sand.

## Presentation of results

In 2018, the mudflat restoration work was presented at the LIFE SeResto final conference in Rome on 11/04/2018 as well as at the climate change conference on 28 and 29/10/18, held as part of the project.

The first results were presented to the South Vendée Marine Culture Commission on 04/11/2019.

In 2020, the results were presented at the conference on coastal restoration in October and at the Life Blue seminar held by video conference on 09/12/20.

There were many presentations in 2021, namely during two Marine Cultivation Commissions (20/04/2021; 10/11/2021), during the Marine Protected Areas Forum on 24/11/2021 and during the technical meetings of the regional network of managers of natural areas in Nouvelle Aquitaine by videoconference on 16/12/2021.

The results of the mudflat restoration work were presented at the LIFE Artisan conference on 15 March 2022, at the LIFE Aiguillon Bay project feedback conference on 6 and 7 April 2022, and at the Loire Bretagne Water Agency Webinar on 4 May 2022.

## Communication

In total, this C1 action was the subject of several communications available on the project website:

- 3 newsletters;
- 1 technical poster;
- 1 animated infographic;
- 1 technical video;


## Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable C1</b>	Summary report: Work & Assessment on oyster regrowth tracking	31/12/2019	31/12/2020	26/04/2022	Completed
<b>Milestone C1</b>	Start of experimental work on the removal of oyster beds	31/07/2017	31/07/2017	01/09/2019	Completed



## 6.1.8 Action C3: Works for ecological enhancement on the Prée Mizottière site

### Implementation schedule

 LIFE - Nature		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
C3	PNR	Implementation of ecological enhancement works for the Prée Mizottière site																													
	Initial																												247 559 €	286 811 €	
	Current																														

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Oct. 2017** Actual start date: **Jul. 2017**  
 Expected completion date: **Dec. 2020** Actual (or expected) end date: **Dec. 2020**

### Objective recap

This action was intended to improve the ecological quality of the Prée Mizottière site. It consists of restoring hydraulic structures to allow water to be retained in the grassland hollows, favourable to hosting avifauna, and creating estuarine habitats by moving a dyke.

### Recap of expected results

- Creation of at least 10 hectares of maritime marshland;
- Adapting water management for species on 17 hectares;
- Creation of wetland habitats for nesting waterbird species;
- Creation of a resting area for Anatidae and waders during migration.

### Course of action

#### (1) Hydraulic engineering works

Following the preliminary actions taken by the PNR (see action A3), a competitive bidding procedure was held in July 2017 to identify a service provider (UNIMA RIEM).

The hydraulic works carried out are as follows:

- Creation of an outlet to the sea through a dyke to allow the natural evacuation of rainwater by gravity and make the agricultural drainage pumps of the plots unnecessary;
- Repair of a defective culvert to improve the flooding of an ecological area of more than 20 hectares;
- Restoring a defective hydraulic structure to allow better management of water levels on the site and to facilitate the capture of ducks (action A5), particularly teal in this area. This is additional work, not initially planned, but approved by EASME by letter dated 09/11/2017 (see Mid-term report, Appendix 04).

The work began on 20/11/2017 and was completed on 04/12/2017. The installations are now up and running and managed by the RNN conservationists. The work has improved water level management on some 20 hectares of grassland.

#### (2) Dyke recession work

Preparatory action A3 continued until the summer of 2020, with the order authorising the PNR to start work on the dyke recession obtained on 17/07/2020.

The work to move the dyke, carried out by Charpentier TP according to the agreed specifications, began on 17/07/2020 and was handed over on 30/09/2020. Special attention was paid to timing to prevent flooding during the works.

This operation depoldered 10 hectares of cereal crops and converted it into 10 hectares of natural environment.

Following the work, a protocol for tracking the depoldered area was introduced to complement the monitoring of the three ecological indicators: breeding birds, amphibians, vegetation and habitats (Action D3). This work will make it possible to acquire knowledge about depoldering which is still rare in France. Scientific monitoring will be conducted to determine the impact over time of biological and sedimentary components with topographic surveying, bird counts and benthic macrofauna monitoring. In parallel, a joint project with the PEPPS2-DPM programme for depoldering small coastal marshes, led by Université de Brest Occidentale in partnership with Université de Lorient and Université de Rennes1, will track vegetation and soil, see how the restored natural habitats are developing through scientific monitoring and assess the sociological perception of local actors of the operation. A monitoring protocol was set up in 2021 through a partnership between the Aiguillon Bay National Nature Reserve and two universities in Brittany F3 (see Action F3).

### Schedule changes

The initial conflictual relations between the stakeholders involved in the Prée Mizottière site and the mediation phase that followed explains the delay of action A3 and consequently the delay of action C3. The changes to the timetable for the actions were approved by EASME by email on 12/05/2017 and by letter on 09/11/2017 (see Mid-term report, Appendix 13).


Amendment No. 4 established an 18-month extension of the project, and the A1, C2 and C3 forms in Appendix II of the grant agreement were modified.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable C3</b>	Report on the works (dyke, hydraulic structures)	31/12/2019	31/12/2020	31/12/2020	Completed
<b>Milestone C3</b>	End of the works (winnowing structure; restoring the seaward structure; depoldering)	31/12/2019	31/12/2020	08/10/2020	Completed

## 6.1.9 Action C4: Rewilding works on the Pointe de l'Aiguillon

### Implementation schedule

 LIFE - Nature		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
C4	PNR	Implementation of renaturation works on the Aiguillon Pointe																												
	Initial																											94 652 €	73 870 €	
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Dec.2016** Actual start date: **Jul. 2017**  
 Expected completion date: **Dec. 2020** Actual (or expected) end date: **September 2021**

### Objective recap

Following action A4, the aim was to carry out ecological engineering works to preserve the habitats and species on the Pointe de l'Aiguillon site and to regain areas of dune habitat.

### Recap of expected results

- Restoring dune habitats (800 linear metres of protection);
- Development of public access and dune protection (2,500 linear metres of protection);
- Creation of 1,500 m<sup>2</sup> of dune grassland (felling of 70 trees).

### Course of action

Preparatory work in the early years of the project allowed the first phases to be carried out in 2018 and 2019. Following this work, funding for these operations was still available, as indicated in progress report No. 4. During the monitoring committee meeting on the Pointe de l'Aiguillon (07/01/2020), the project beneficiaries agreed to carry out additional work in 2020 and 2021 to strengthen the protection of these dune areas. Further work was therefore carried out in 2020 and 2021.

At the end of the Pointe de l'Aiguillon, the placement of fences and smooth wires along the beach access paths (nearly one kilometre of beach access paths restored), the reduction of access to certain parts of the site by fencing, the continued removal of large concrete blocks, the closure of a fisherman's walkway using fencing and the removal of invasive plants (yucca) have restored 9.3 hectares of dunes and 4.17 hectares of salt meadows. Educational panels explaining the implementation of these works have also been installed on the site, which is very popular with anglers.

On the former campsite, the removal of construction debris (road, fence, etc.), the felling of poplars, the crushing of waste trees (May and October 2020) and the uprooting of stumps (exported to appropriate recycling channels) have helped to restore 1.4 hectares of dune habitat.

On the Sablons beach site, efforts to eliminate invasive species (Yucca, Sumac, Robinier faux-acacia), remove old fences and install wire and fencing have restored 2.9 hectares of dune habitat.

Over 13 hectares of dunes and over 4 hectares of salt marshes have been restored and/or preserved. These results exceed the initial project targets (see Deliverable C4) at a lower cost than initially planned.

These operations have contributed to a better state of conservation for the habitats at the Pointe de l'Aiguillon and the development of flora with, most particularly, the presence of 14 protected or native plants in the Pays de la Loire region. They will improve the ability of these areas to host species that depend on these environments such as the Passerine and the Kentish plover.


The restoration project at the Pointe de l'Aiguillon will continue after the LIFE programme and is to be completed by a more ambitious scheme under the initiative of the Marais Poitevin Natural Regional Park, the municipality of l'Aiguillon la Presqu'île, the Coastal Conservation Agency, the French Biodiversity Agency and the Marais Poitevin - Bassin du Lay joint public body.

#### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable C4</b>	Review of work carried out	30/06/2020	31/12/2020	31/12/2020	Completed
<b>Milestone C4</b>	Reception of the work carried out at the Pointe de l'Aiguillon	30/11/2019	30/11/2019	14/06/2022	Completed

## 6.1.10 Action D1: Monitoring areas where works have been conducted to remove wild oyster beds in the Aiguillon Bay

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
D1	LPO	Monitoring in intervention sectors of wild oyster habitat removal in the Aiguillon Bay																													
	Initial																														
	Current																														119 612 €

Coordinator LPO

Dates Expected start date: **April 2016** Actual start date: **April 2016**  
Expected completion date: **June 2022** Actual (or expected) end date: **June 2022**

### Objective recap

To assess the actions relating to the extraction of oyster beds and abandoned shellfish structures (action C1), a number of follow-up surveys were carried out between 2016 and 2022:

- An inventory of the benthic macrofauna and a granulometric analysis of the various substrates;
- Two topographic survey campaigns (2016 and 2019) and analysis of the sediment dynamics observed before and after the works.

### Recap of expected results

- Mapping treated areas, mapping potential areas of recolonisation by wild oysters,
- Geo-referenced list of benthic macrofauna species present in each sector,
- Geo-referenced grading for each sector,
- Mapping and analysis report of bathymetric surveys at bay level,
- Forecasting of morphological changes in Aiguillon Bay and the causes of these changes.
- Cost/benefit analysis of wild oyster removal methods in relation to the substrates present,
- Validation of the results with the oyster farming profession.

### Course of action

#### An inventory of the benthic macrofauna and granulometric analysis of the various substrates

An inventory of the benthic macrofauna and a granulometric analysis of the various substrates were carried out as part of action A1.

A second inventory of the benthic macrofauna and a second granulometric analysis of the various substrates were carried out as part of action D1 in 2022 at the end of the works, to assess the impact of restoring the mudflat habitats on the benthic macrofauna and the granulometry of the sediments (see deliverable D1 Report on the benthic macrofauna and granulometric monitoring of the mudflat in the treated sectors).

A protocol was set up to check annually for possible recolonisation by oysters on the remaining oyster shells and shell debris. Checks in the summer of 2020 and winter of 2021 showed no oyster larvae older than one year. Monitoring will continue in the coming years.

#### LIDAR topographic surveys and data analysis

In the autumn of 2016, a LIDAR topographic survey of the Bay of Aiguillon was carried out by a service provider (OPSIA), to establish the sediment situation of the mudflats in Aiguillon Bay before the restoration work. A digital terrain model (DTM) was also generated. This DTM allows a digital immersion (in 3D) in the mudflats.

In 2017, the LIENSs (Littoral ENvironnement Sociétés, CNRS, La Rochelle University) analysed the sedimentary dynamics of the bay. This survey found that the Aiguillon Bay is an area with very high sedimentation rates,  $1.4 \pm 0.5$  cm/year from 2000 to 2016. It is also characterised by a very rapid advance of the vegetation line, i.e.,  $6.3 \pm 0.3$  m/year since 1972.

In autumn 2021, at the end of the various campaigns to restore the mudflat habitats of Aiguillon Bay, a second LIDAR topographic survey was conducted by OPSIA, to establish the impact of the work on the sedimentary development of the Bay.

In 2022, the LIENSs (Littoral ENvironnement Sociétés, CNRS, La Rochelle University) analysed the topographical data of the project. This analysis enabled:

- Updating the inventory of existing morpho-bathymetric data on Aiguillon Bay (geo-referencing, quantification);
- A comparative analysis of existing topographic data collected by photogrammetry and aerial LIDAR in 2016 and 2021 and an assessment of the impact of mudflat habitat restoration works on sediment dynamics;
- A descriptive analysis of the morphological evolution of Aiguillon Bay;
- A descriptive analysis of the morphological evolution of Pointe de l'Aiguillon (2016 to 2021).

The study shows the geomorphological development of Aiguillon Bay using LIDAR data over 21 years. Between 2000 and 2021, the sedimentation rate in the mudflats was  $+1.59 \pm 0.52$  cm. year<sup>-1</sup>. Locally, the rate was as high as  $+7.8 \pm 1.3$  cm. year<sup>-1</sup> between 2010 and 2013 in the south-east of the bay. Comparison of these rates with those published for other bays around the world shows that Aiguillon Bay ranks among the tidal bays with the highest sedimentation rates in the world.

There are also spatial and temporal variations in the geomorphological evolution of intertidal areas. These could be due to increased sedimentation in areas colonised by wild oysters and a greater frequency of rough seas during periods of low sedimentation.

The two studies carried out by the LIENSs are the subject of deliverable D1 Studies of geomorphological changes in Aiguillon Bay.

### Cooperation programme

There was also collaboration with the BRGM (Bureau de Recherches Géologiques et Minières) to refine the hydro-morpho-sedimentary indicators of the WFD and the DCSMM (Directive Cadre Stratégie pour le Milieu Marin) on the integrity of the seabed.

### Completion report and outlook for further removal of wild oyster beds

This report, initially identified as a deliverable, also corresponds to deliverable C1 "Summary report - Work & monitoring of oyster regrowth". To avoid duplication, and with the agreement of NEEMO (email of 01/03/2022), deliverables C1 "Summary report - Work & monitoring of oyster regrowth" and D1 "Evaluation report: end of work and oyster bed prospects" have been merged to deal with all their themes.


Deliverable C1 "Summary report - Work and monitoring of oyster regrowth" therefore incorporates the elements expected from deliverable D1 "Evaluation report: end of work and oyster prospects".

## Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable D1</b>	Studies of the geomorphological evolution of Aiguillon Bay	30/06/2020	30/06/2022	17/06/2022	Completed
<b>Deliverable D1</b>	Report on the benthic macrofauna and granulometric monitoring of the mudflat in the treated sectors	31/03/2020	30/06/2022	30/06/2022	Completed
<b>Deliverable D1</b>	Completion report and outlook for further removal of wild oyster beds	31/03/2020	30/06/2022	26/04/2022	<b>See Deliverable C1</b>
<b>Milestone D1</b>	Analysis and interpretation of bathymetric data	30/06/2020	30/06/2022	30/06/2022	Completed

### 6.1.11 Action D3: Monitoring - biological monitoring of ecological engineering works on the Prée Mizottière site

#### Implementation schedule

 République Française		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
D3	PNR	Biological Monitoring on ecological engineering work in the Prée Mizottière site																												
	Initial																											19 290 €	19 035 €	
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: April 2016 Actual start date: April 2016  
Expected completion date: June 2022 Actual (or expected) end date: June 2022

#### Objective recap

Three biological indicators were studied to assess these conservation actions on the Prée Mizottière site (action C3):

- Monitoring of breeding birds from 2018 to 2020;
- Monitoring of vegetation and habitats from 2018 to 2020;
- Monitoring of amphibians from 2017 to 2020;

#### Recap of expected results

- Extending the area of maritime marshes;
- Increased numbers of bluebirds, sandpipers and associated avifauna.

#### Course of action

##### (1) Monitoring breeding birds

Breeding passerines are monitored each year at the Prée Mizottière site. This is done twice during the breeding season (April and May) at sunrise. It consists of walking through the whole of the Prée Mizottière site and using listening points to count the singing males. Different species are present in different habitats: Skylarks and Corn Buntings in open areas of crops and grassland, Reed Warblers in reedbeds, Bluethroats and Reed Buntings in salt meadows. Monitoring of passerines was initially planned to start in 2018. However, it was found useful to collect data from 2016 onwards. The cost of action D3 was unaffected.

Waterbirds are counted monthly at the Prée Mizottière site. This tracking is integrated into that of the Marais Poitevin natural heritage observatory.

The summary report on monitoring of birdlife (see Deliverable D3 "Monitoring of breeding birds on the Prée Mizottière") was finalised in June 2022.

The results show that the numbers of species and waterbirds counted on a monthly basis are higher at the site since 2019. The number of breeding passerines recorded has increased since 2017, but it is still too early to detect a trend in the depoldered area. Monitoring of breeding birds should continue in the coming years to assess the effectiveness of the work on the site's appeal.



## (2) Amphibian monitoring

Amphibians are also counted monthly at the Prée Mizottière site. The monitoring takes place across three trips during the season (March to May) at dusk. It consists of regular listening points and identifying the presence or absence of amphibians in a 100 m<sup>2</sup> square. Four amphibian species have been identified on the site: The green frog (*Pelophylax* sp), the Mediterranean tree frog (*Hyla meridionalis*), the spiny toad (*Bufo spinosus*) and the common parsley frog (*Pelodytes punctatus*). Monitoring shows an increase in the number of amphibians heard in the area since 2017 and a higher number of occupied grids since 2018, despite a slight decrease for both indicators between 2020 and 2021.

## (3) Monitoring of vegetation and habitats


An initial vegetation survey was carried out in 2019 by the LPO, enabling habitat mapping. A second survey was carried out in spring 2021 by the LPO. The corresponding report was written and finalised in March 2022 (see Deliverable D3 "Habitat Inventory Report").

### Adherence to the schedule (deliverables and milestones) and next stages

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable D3</b>	Habitat inventory report	01/09/2020	30/06/2022	15/05/2022	Completed
<b>Deliverable D3</b>	Birdlife inventory report	01/09/2020	30/06/2022	24/06/2022	Completed
<b>Deliverable D3</b>	Amphibian inventory report	01/09/2020	30/06/2022	16/05/2022	Completed
<b>Milestone D3</b>	Biological monitoring	01/09/2017	30/09/2017	15/04/2016	Completed

## 6.1.12 Action D4: Monitoring – biological monitoring of areas subject to rewilding works on the Pointe de l'Aiguillon

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
D4	PNR	Biological monitoring on the Aiguillon Pointe intervention sectors																												
	Initial																												11 545 €	10 182 €
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **April 2016** Actual start date: **April 2016**  
Expected completion date: **June 2022** Actual (or expected) end date: **June 2022**

### Objective recap

Two biological indicators were studied to assess the conservation actions of the C4 action at the Pointe de l'Aiguillon site:

- Annual monitoring of the birdlife: monitoring the reproduction of the 3 species (Red-necked Plover, Red Pipit, Bluethroat);
- Habitat mapping.

### Recap of expected results

- Increase in populations of target species

### Course of action

Breeding bird monitoring takes place each year in the spring.

#### (1) Breeding birds

From 2011 to 2017, the monitoring consisted of walking the entire area and recording the singing males heard. Since 2018, the protocol has been standardised in order to optimise the monitoring time and make the monitoring more easily reproducible by a third party. The protocol consists of listening for 5 minutes and recording all the singing males heard within a radius of 150 m.

It was thought useful to carry out an inventory of bush birds (Blackbirds, Robins, Dunnocks) and alaudidae (Skylarks, Crested Lark) This required a visit as early as April 2016. This addition will provide a more exhaustive reading of the species present on the Pointe de l'Aiguillon site. This additional monitoring provided more data but did not change the cost of action D4.

36 species of breeding birds have been recorded since the monitoring began:

- Species commonly observed in the Aiguillon Bay Reserve in salt meadow habitats (Blackbird, Skylark, Zitting Cisticola, Reed Bunting, etc.),
- Dune-dependent species (Tawny pipit, Greater Short-toed Lark)
- Species found in copses or bushy shrubs (Common Nighthawk, Nightingale, European Warbler, Whinchat, etc.).

The work undertaken supports species nesting in salt meadows and back-dune environments by reducing trampling and disturbance. The felling of poplars on the site of the former campsite with a view to restoring the grey dune will encourage the reproduction of the Tawny Pipit, which likes open environments.

## (2) Kentish plover

Monitoring of the Kentish Plover is carried out every spring. The census of breeding pairs is carried out by walking slowly along the top of the beach at high tide, in good weather

The number of breeding Kentish Plover has been stable since the beginning of the project, and the number of chicks observed has increased since 2020. A nest was observed for the first time in the area closed to the public for rewilding in 2020. The installation of notices about Plover breeding seems to have had a positive impact on the number of young birds fledging, by making walkers aware of the presence of this species on the beaches of the Pointe (71.3% of those questioned in the online questionnaire of the ecosystem study said they now pay more attention to Plover nests).

The bird monitoring summary report (Deliverable D4) was finalised in May 2022.

The mapping of habitats (Deliverable D4) was initially planned for spring 2019, then postponed to spring 2020, in view of the work scheduled for autumn 2019 at the site of the Prefectural Order for the Protection of the Biotope of the Pointe de l'Aiguillon and the Sablons beach area.

It was therefore carried out after all the work on the site had been completed. The mapping of habitats and the search for protected plants led to the identification of 14 heritage plants and 33 natural habitats, 20 of which are of community interest.


The mapping of natural habitats shows good conservation of community habitats with the return of grey and shifting dunes, as well as the presence of interesting dune meadows. The work has therefore been beneficial.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable D4</b>	Habitat Mapping	31/10/2019	30/06/2022	15/10/2021	Completed
<b>Deliverable D4</b>	Final summary report of the avifauna monitoring	31/10/2019	30/06/2022	30/06/2022	Completed
<b>Milestone D4</b>	Beginning of bird monitoring	31/03/2016	31/03/2016	31/03/2016	Completed

### 6.1.13 Action D5: Assessment of the socio-economic and ecosystem impacts of the project

#### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
D5	PNR	Survey on the socio-economic and ecosystem impacts of the project																												
	Initial																											26 450 €	23 548 €	
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jul. 2016** Actual start date: **June 2017**  
Expected completion date: **June 2022** Actual (or expected) end date: **June 2022**

#### Objective recap

This involves identifying all the benefits brought by the project to the area.

#### Recap of expected results

Analyses of the project's socio-economic and ecosystemic impacts will provide practical information on the issues and impacts of the project on the region and respond to questions from stakeholders on the relevance and merits of a project such as Life.

#### Course of action

The LPO's expertise has prompted the PNR to redirect the budget earmarked for the "external assistance" item in action D5 (€10,000 under the PNR's control) to the "LPO staff" item. This budget was accepted by EASME by letter dated 11/07/18.

The LPO started its assignment in October 2017, but it was delayed due to the agents' health problems. Indeed, a first LPO agent was identified in October 2017 but he was unable to continue his assignment due to sick leave and did not return to his post thereafter. The second LPO agent (Alice Goosens) was then found in April 2018. Subsequently, Alice Goosens also left the LPO for health reasons and was replaced by Florent BIGNON, who was assigned in July 2018 to assess the socio-economic and eco-systemic impacts of the project.

The study of ecosystem services began at the three LIFE Aiguillon Bay project sites, with particular attention to the following ecosystem services: cultural services, nature-based recreation, cultivated food, harvesting of wild produce and coastal protection. Meetings and workshops with stakeholders were held during the spring to identify expectations, list habitats, threats and ecosystem services impacted by the project. This work was approved during a monitoring committee on 29/05/18, made up of the conservationists of the Reserve, the PNR, the LPO, representatives of Rivage de France, the Tourist Offices and the shellfish farming professions.

The full assessment was also prepared, selecting the most relevant methods for acquiring the data needed for the ecosystem services assessment and the socio-economic study.

Data was collected via on-site questionnaires at the Aiguillon Bay and Pointe de l'Aiguillon sites and online questionnaires (via the project's Facebook) to obtain data on services. Individual interviews were also conducted with the project's technical and socio-economic partners.

The Baie de l'Aiguillon post project study sites are preserved, providing many basic benefits for society (=ecosystem services). The initial aim of the project's actions is to promote biodiversity, nesting and feeding sites for birdlife. They thus promote vital support required to provide the biodiversity and living conditions that are necessary for the creation of additional services. Some services have enjoyed a direct positive impact from the project's actions such as carbon storage, flood control and coastal protection through depoldering on the Prée Mizottière site. For others,

such as the the harvesting of wild produce and foodstuffs cultivated in the Baie de l'Aiguillon and the Prée Mizottière, a comparative assessment is required in the post-LIFE period when stakeholders have sufficient hindsight about the impact of the work undertaken. Some services, such as cultural services, are difficult to quantify. However, these services are essential because they are directly associated with the physical and mental well-being of the users of the site and must be taken into account within the scope of such studies.

The LIFE project has had a clear beneficial social impact for users of the site as well as for the project's partners and the general public. Concrete conservation actions have helped to improve safety for users and the general public at the Pointe de l'Aiguillon and Prée Mizottière sites. The many awareness-raising and communication tools rolled out locally and internationally have enabled the general public to learn more and have influenced their behaviour in favour of biodiversity. Numerous scientific studies have been carried out to widen knowledge of subjects that are vital to society. Networking within the framework of the project has helped to ease existing tensions between some of the project's partners. Finally, the project has helped to raise the profile of the EU's LIFE funding programme with the general public and has encouraged the project's partners to commit to, participate in, set up or finance a future LIFE project.


The project has had a positive economic impact for beneficiaries and also for the companies involved. It has also enabled beneficiaries to retain existing employees and to recruit new staff for positions fully or partially related to the project project. In addition, the LIFE project has even helped some companies increase their annual revenues and, in some cases, survive the complex period of the pandemic. Some innovative measures have also been created and applied elsewhere thanks to this project, allowing economic development for the concerned stakeholders, such as the creation of science shows that have been staged in other towns and cities. Furthermore, the design of the machine used for mudflat restoration work opens up market opportunities for the contractor. Contacts have already been made. Finally, the Baie de l'Aiguillon post project has helped the local economy to prosper with over 75% of expenditure made in the departments of Charente-Maritime, Deux-Sèvres, and Vendée.

#### Adherence to the schedule (deliverables and milestones) and next stages

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable D5</b>	Assessment of the socio-economic and ecosystem impacts of the project	31/10/2020	30/06/2022	30/06/2022	Completed
<b>Milestone D5</b>	Start of the socio-economic and ecosystem impact assessment of the project	31/07/2016	31/07/2016	15/03/2017	Completed

## 6.1.14 Action E1: Promoting the LIFE project's actions

### Implementation schedule

	2016				2017				2018				2019				2020				2021				2022			Progress	
	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
	Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
E1	PNR	Enhancement of the Life program actions																											
	Initial																												
	Current																												295 010 €

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jan. 2016** Actual start date: **Jan. 2016**  
Expected completion date: **June 2022** Actual (or expected) end date: **June 2022**

### Objective recap

This action aims to raise awareness of the project's operations and results.

### Recap of expected results

- Reporting on the programme to professionals (feedback meetings, collection of experiences, publications, etc.), to schoolchildren (books and discovery booklets, etc.) and to the general public (exhibitions, films, etc.);
- Creation of a dynamic network to be maintained once the project has ended.

### Course of action

A number of tools to enhance the value of the project were used, in keeping with the initial schedule:

A logo, a graphic charter and a **brochure** presenting the project (Deliverable E1) were produced by the LPO in the first quarter of 2016, following the first technical committee of the project. 1,000 copies of the brochure were published and widely distributed, and 1,000 copies were reissued in 2018 with the inclusion of the project's new co-financiers.

A **travelling exhibition** entitled "Poses en Baie de l'Aiguillon" ("Poses in the Aiguillon Bay", Deliverable E1) allows visitors to discover the natural riches of the bay through a selection of pictures by professional and amateur photographers and illustrators. Over 7,000 visitors during the project!

Initially planned for 2018, the exhibition on the wealth of Aiguillon Bay was produced in February 2017, in partnership with the Beautour Centre, via an agreement. The exhibition opened on 08/03/2017 at the Beautour Centre. The exhibition was then presented and used on several occasions:

- From 08 March to 2 July 2017, Temporary exhibition, Centre Beautour, La Roche-sur-Yon
- 10 November 2017, LIFE Evening, L'Aiguillon-sur-Mer
- From 16 to 19 November 2017, Meeting of naturalists and managers of natural areas in the Pays de la Loire, Angers
- 26 January 2018, General Meeting of the PNR, Saint-Michel-en-L'Herm
- 30th January 2018, 11th day of the Poitevin Marsh Natural Heritage Observatory, Luçon
- From 10 February to 11 March 2018, Maison de la Baie de l'Aiguillon, Esnandes
- From 04 to 07 April 2018, at the General Assembly of Réserves Naturelles de France, Ronces-les-Bains
- On 07 June 2018, during a visit by the agriculture commission of France's PNR, the Prée Mizottière
- 29 June 2018, at the beach cleaning seminar, La Faute-sur-Mer
- From 26 June to 1 September 2018, at the Pôle des Espaces Naturels, Saint-Denis-du-Payré
- From 22 October to 06 November 2018, at the Tourist Office (Maison du maître des digues), Chaillé-les-Marais
- From 27 to 29 November 2018, international conference "*Adaptation of coastal marshes to climate change*", La Rochelle
- From 10 December 2018 to 18 July 2019, main building of the LPO premises, Rochefort
- February 5, 2019, 11th day of the Poitevin Marsh Natural Heritage Observatory, Luçon

- From 1 April to 15 May 2019, Centre Jean-Baptiste Souzy, La Rochelle
- From 28 May to 17 July 2019, Mairie de l'Aiguillon-sur-mer
- From 26 August to 20 September 2019, RNR Marais de la Vacherie, Champagné-les-Marais
- From 27 September to 31 October, Le Milland theatre, Luçon
- From 6 to 20 November 2019, Champagné-les-Marais town hall
- From 20 November to 7 December 2019, Moreilles town hall and village hall
- From 15 to 31 July 2020, Surgères tourist office
- 28 October 2020, at the conference on coastal restoration, Forum des Pertuis, La Rochelle
- 20-23 September 2021, INTERLIFE 2021, Centre Beautour, Châtelailon-Plage
- 6 April 2022, during the final review conference, Forum des Pertuis, La Rochelle
- From 4 July to 26 August 2022, Mairie de l'Aiguillon-sur-mer

A **book illustrated** with drawings, watercolours, oils and pastels presents the remarkable area of Aiguillon Bay (Deliverable E1). The book was originally planned for 2018, but was developed from autumn 2016 and 1,500 copies were delivered in autumn 2017. The book has been featured in the press and has been presented to the public with signings by the author. It is a useful communication and awareness-raising resource for the various stakeholders. Two conferences on the bay were held (Festival de Ménagoute in November 2017 and Ecole de la Mer on 19/06/18), run by the Bay conservationist Frédéric Corre and the illustrator Benoit Perrotin. The two different (naturalist/artistic) but complementary visions reached a diverse audience. The book was distributed to 192 schools in the Marais Poitevin.



Figure n° 6 : Illustred book

A **discovery booklet** for the general public is used as an educational aid for field trips (school groups, guided tours). The creation of this awareness-raising guide was begun in autumn 2017 by the LPO. A service provider was eventually hired to produce the illustrations. The drafting of the specifications and the illustration work itself have delayed the printing of the discovery booklet, which was delivered in autumn 2019. This educational resource is now distributed free of charge to environmental education structures (via an agreement) and is used to support activities.

A “before & after” **photographic report** has been carried out at the sites.

An initial 12-minute film presenting the sites concerned by the project and the wealth of Aiguillon Bay, broadcast on the website and at various meetings, was delivered to the PNR in June 2017 (Deliverable E1). There is a short 8-minute version of this video. It has been seen by 7,500 people.

**Thematic posters** are used as visual aids to present the various actions of the project (Deliverable E1):

- Preliminary results on the use of saltmarshes by dabbling ducks wintering in Aiguillon Bay, western France (2018)
- First results on the distribution of the Mallard in the Bay of Aiguillon (Western France) during winter (2019)
- Carbon input from the outlets of the Marais Poitevin and air CO<sub>2</sub> emissions (2020)
- Introduction of a monitoring system for water quality and quantities exported to Aiguillon Bay and the Brittany Channel (2020)
- Monitoring of water quality and exported quantities to the Aiguillon Bay and the Pertuis Breton (2020)
- Nutrient input from the outlets of the Marais Poitevin and risk of eutrophication in the Aiguillon Bay and in the Pertuis Breton (2020)
- Pesticides found in the Sèvre Niortaise and the consequences for the Aiguillon Bay (2020)
- Depoldering of agricultural land at the Prée Mizottière site - Vendée (France) (2021)
- Depoldering of agricultural land on the Prée Mizottière site (France) (2021)
- Experimental restoration work on the mudflats in the Aiguillon Bay (2022)
- Mudflat restoration experiment in the Aiguillon Bay (2022)
- Use of the Aiguillon Bay and surrounding marshland by wintering Anatidae (2022)
- Use of the Aiguillon Bay and surrounding marshes by overwintering Anatidae (2022)
- Preliminary rewilding of the Pointe de l'Aiguillon (2022)



- Restoration and renaturation work on the Pointe de l'Aiguillon (2022)

Four quirky **animated infographics** present the themes addressed in the project and ten educational videos summarise the project's actions. The providers for the production of these video reports and four animated infographics were selected in autumn 2018. All these videos have been translated into English. The final 20-minute video was broadcast as planned during the final feedback conference.

A **collection of experiences** (French and English version) details the conditions under which the project was carried out.

An **outreach document** designed for an unspecialised audience provides a concise overview of the project and its results (see Action E4).

### Other awareness-raising and communication tools linked to the project actions (actions C1, D1, A5, A6 and F1)

The “Chroniques estuariennes” **newsletters** provide regular updates about the project.

- Chronique estuarienne n°1 (July 2017) Monitoring water quality in Aiguillon Bay (action A6);
- Chronique estuarienne n°2 (September 2017) An experiment to remove wild Japanese oyster beds (action C1);
- Chronique estuarienne n°3 (May 2018): Winter dynamics of nutrients and carbon in the streams of the Marais Poitevin basin and associated land-based flows in the Aiguillon Bay (action A6);
- Chronique estuarienne n°4 (July 2018) First assessment of the trophic availability of salt meadows in the Aiguillon Bay for wintering granivorous dabbling ducks (action A5);
- Chronique estuarienne n°5 (Sept. 2018): Biosedimentary study of the benthic communities of oyster reefs in the Aiguillon Bay - Pre-work assessment (action D1);
- Chronique estuarienne n°6 (Sept. 2019): Morphological and sedimentary evolution of the Aiguillon Bay (action D1);
- Chronique estuarienne n°7 (June 2020): Nutrient input from the outlets of the Marais Poitevin and risk of eutrophication in the Aiguillon Bay and in the Pertuis Breton (action A6)
- Chronique estuarienne n°8 (June 2020) : Carbon intake from the outlets of the Marais Poitevin, consequences on the coastal zone and on carbon dioxide (CO2) emissions (action A6);
- Chronique estuarienne n°9 (June 2020) : Pesticide variability over time at the Sèvre Niortaise outlet and in the Aiguillon Bay (action A6);

The project has been featured in several press articles in print and digital format, as well as in various interviews, throughout the project. The full **press review** forms Deliverable F1.

The placement of the **information and orientation board** was completed in February 2018 (see action A4).

A **website** <https://life.reserve-baie-aiguillon.fr> presents the natural environments and species of the Aiguillon Bay, the objectives of the project, and the actions undertaken. A Resources section is available for downloading publications and information related to the project (action E3). Delivered on 22/12/2016, the QR code links to the project website. A **Facebook account** was opened on 08 July 2016, featuring news about the project: <https://www.facebook.com/lifebaieaiguillon>

Sending press releases and holding press conferences at major events:

- 22/02/17: project presentation
- 08/03/2017: Opening of the exhibition "Poses en Baie de l'Aiguillon
- 10/11/2017: project presentation evening
- 27/11/18: Adapting coastal marshes to climate change" conference
- 28/11/18: “Hé... la mer monte!” (Hey... The sea is rising!) science show in La Rochelle
- 27/06/19: “Hé... la mer monte!” (Hey... The sea is rising!) science show in Niort



- 16/09/19: start of mudflat restoration work
- 30/09/19: delivery of the book "baie de l'Aiguillon" to all schools in the Marais Poitevin
- 11/10/19: "Hé... la mer monte!" (Hey... The sea is rising!) science show in Luçon
- 12/11/20: press release on the progress of the project
- 06/04/22: final conference
- 14/06/2022: presentation of the dune restoration work at the Pointe de l'Aiguillon


The **press kit** partly resulting from these conferences constitutes deliverable F1 (see Action F1).

#### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable E1</b>	Project presentation brochure	30/06/2016	30/06/2016	15/03/2016	Completed
<b>Deliverable E1</b>	10 exhibition notices on the biodiversity of the bay	30/11/2018	30/11/2018	15/02/2017	Completed
<b>Deliverable E1</b>	A visitor guide to the bay	30/06/2019	30/06/2019	25/10/2019	Completed
<b>Deliverable E1</b>	Illustrated book on the bay	30/06/2019	30/06/2019	15/09/2017	Completed
<b>Deliverable E1</b>	A 26mn film	31/10/2020	30/06/2022	05/04/2022	Completed
<b>Deliverable E1</b>	Compiling experience feedback	30/11/2020	30/06/2022	15/03/2022	Completed
<b>Deliverable E1</b>	Printing of 12 technical posters	30/11/2020	30/06/2022	05/06/2022	Completed
<b>Milestone E1</b>	Creation of the Editorial Board	31/05/2016	31/05/2016	16/02/2016	Completed

## 6.1.15 Action E2: Conferences for discussion and presentation

### Implementation schedule

 LIFE Sustainable Investment		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
E2	PNR	Days of exchanges and presentation																													
	Initial																														
	Current																														91 086 €

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **April 2016** Actual start date: **April 2016**  
Expected completion date: **June 2022** Actual (or expected) end date: **May 2022**

### Objective recap

This action aims to raise awareness of the project and encourage discussion about it with a view to positively involving local stakeholders in the process.

### Recap of expected results

- A one-day presentation of the LIFE project
- An international seminar on the interrelated issues of the effects of global warming on the site and the methods of coastal defence (2018)
- A European seminar for professionals during the project (2019), on the experimentation of wild oyster bed removal in the Aiguillon Bay
- A final feedback conference (2022)

### Course of action

The beneficiaries were unable to organise a project launch day in 2016 (see **Chapter 6.2**), but they did organise an information evening on the LIFE project around the theme of preserving the natural wealth of the Aiguillon Bay, on 10/11/2017 in L'Aiguillon-sur-Mer, for project partners, elected representatives and residents of the coastal communities. A presentation of the project's challenges and schedule was given, the book and exhibition were also highlighted, and the film presenting the project was screened. The evening was attended by more than 100 people and ended with a toast to friendship.

Three conferences were held during the project to pass on feedback.

- In November 2018, the conference "Adaptation des marais littoraux au changement climatique" (Adaptation of coastal marshes to climate change), organised in partnership with the Forum des Marais Atlantiques, was attended by over 450 participants in La Rochelle over three days.  
Dedicated website: <https://maraislittoraux.myportfolio.com>  
In the financial chart, this conference is entitled "Coastal marshes and climate change" (flooding conference in the F3 forms)
- In October 2020, the conference "Restauration des fonctionnalités environnementales du littoral en contexte conchylicole" (Restoration of the environmental functions of the coastline for shellfish farming) was attended by over 200 participants in La Rochelle over two days.  
Dedicated website: <https://www.colloque-lifebaieaiguillon-restauration-littoral.com>  
In the financial chart, this conference is called "Coastal restoration conference" (crassats conference in F3 forms)
- In April 2022, the conference presenting the results of the project was attended by over 150 participants in La Rochelle over two days, with 600 connections during the first day.

Dedicated website: <https://colloque-final-lifebaieaiguillon.weebly.com>

The proceedings of these conferences can be consulted on the dedicated websites.

Following the success of the "Adaptation of coastal marshes to climate change" conference in November 2018, the PNR held a second conference, outside of the LIFE Aiguillon Bay project, in November 2019 in La Rochelle, focusing on coastal risks over two days. For this conference, the PNR followed up the experience of the first scientific show by creating "The Sea Strikes Back!" developed as part of the LIFE Aiguillon Bay project. The time for organising this conference and related staff costs were partly declared in the project.

### **The innovative creation of science shows to raise awareness among the general public.**

"Hé... la mer monte!" (Hey... The sea is rising!) science show.

"Hé... La mer monte!" is a science show for the general public about climate change and its impact on the coastline. It is presented by an entertaining double act comprising a researcher and a "green" actor, with texts by a cartoonist. Neither a conference nor a science lesson, "Hé... La mer monte!" offers a clever mix of games of "ills" and illustrations of climate change. This concept of making science accessible to all and exchanging ideas with the public has been a great success with audiences. The show is hosted by actor-presenter Mathieu Duméry (aka "Professeur Feuillage"), researcher Éric Chaumillon and illustrator Guillaume Bouzard.

The show was a great success and was performed several times in 2019 (Rochefort, Niort, Luçon, La Rochelle) then in 2022 (following the health crisis) in La Rochelle, Narbonne.

The book "Hé... la mer monte!" and book

Following this triumph and outside the scope of the project, the book "Hé... la mer monte!" was co-published by the Marais Poitevin Natural Regional Park and Plume de carotte in October 2019, written by Eric Chaumillon, Mathieu Duméry and illustrated by Guillaume Bouzard. Over 2,500 copies have been sold.

"La mer contre-attaque!" (The Sea is fighting back!) science show and book

In addition, the Marais Poitevin Natural Regional Park organised a seminar in October 2019 on the theme of coastal risks, following on from the seminar on adapting coastal marshes to climate change. This event led to the creation of a second science show "La mer contre-attaque!" And a new joint publication entitled "La mer contre-attaque!" in October 2021 by the same authors.

### **Expense changes**

The cost of action E2 was significantly higher than the initial cost for the following reasons:


- Initial underestimation of the time spent on organising these seminars;
- Underestimation of certain expenses (room hire) or omission of certain expenses when preparing the project (e.g., communication on events, recording of contributions);
- Greater ambition during the project to make the most of the activities conducted;
- Coverage of staff and travel costs for the follow-up in 2019 to the 2018 conference and the science show tour;
- Health crisis which resulted in additional costs.

## Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable E2</b>	Proceedings of the international seminar on the problem of marine submersion	31/12/2018	31/12/2018	15/06/2019	Completed
<b>Deliverable E2</b>	Proceedings of the feedback conference on the "oyster slime removal" operation and European seminar on LIFE actions affecting the marine environment	31/12/2019	31/12/2020	31/12/2020	Completed
<b>Deliverable E2</b>	Proceedings of the final conference	31/12/2020	30/06/2022	23/06/2022	Completed
<b>Milestone E2</b>	Launch day	31/03/2016	31/03/2016	Cancelled	Cancelled
<b>Milestone E2</b>	European seminar on LIFE actions affecting the marine environment	30/11/2018	30/11/2018	27 to 29/11/2018	Completed
<b>Milestone E2</b>	Feedback conference on the "oyster slime removal" operation and European seminar on LIFE actions affecting the marine environment	30/11/2019	30/10/2020	28 to 29/10/2020	Completed
<b>Milestone E2</b>	Final conference	30/11/2020	31/05/2022	4 to 05/04/2022	Completed

## 6.1.16 Action E3: Website

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
E3	OFB	Website																												
	Initial																													
	Current																											45 946 €	22 676 €	

Coordinator OFB

Dates Expected start date: Jan. 2016 Actual start date: Jan. 2016  
Expected completion date: June 2022 Actual (or expected) end date: June 2022

### Objective recap

The aim was to create a website.

### Recap of expected results

Creation of a website, a medium for sharing knowledge and a platform for discussion

### Course of action

In keeping with the initial schedule, the **website** has been online since 30 June 2016: <https://life.reserve-baie-aiguillon.fr>. Maintenance is provided by the company Pigment Web Multimédia. The site was fully translated in 2021 at the written request of EASME on 19/11/20.

The site has been populated and its general content is updated annually in late spring. Pages on biological monitoring (with first results) and specific LIFE studies (benthic fauna inventory, sediment study) were created in 2018. The results of the Anatidae survey are reported via the website every 10 days and posted on the LIFE Bay of Aiguillon project Facebook page.

From the beginning of the programme until 30/04/2022: 25,000 visits representing 67,237 page views. For example, in 2021 the site was visited 4,683 times by 3,869 different users, representing 14,827 page views. (61.32% visits from France; 16.2% America; 13% Asia; 5% UK).

A **Facebook account** (<https://www.facebook.com/lifebaieaiguillon>) was opened on 08/07/2016: it has been used to share the events of the project but also the events of partners and other LIFE projects. The Facebook account has over 1,320 followers. Articles and other content are posted regularly.

To avoid multiplying the existing information tools of the LIFE Aiguillon Bay project, the coordination team decided against opening a Twitter account. However, essential information is shared on the twitter page of the Marais Poitevin PNR.


All elected representatives, local authorities, technical and financial partners and local stakeholders were informed by email or post of the various project information tools available and at their disposal (website, Facebook account, article written for external communication tools, etc.).

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
Milestone E3	Creation of the website	31/10/2016	31/10/2016	30/06/2016	Completed

## 6.1.17 Action E4: Outreach report

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
E4	PNR	Layman's report																													
	Initial																														
	Current																												5 981 €	5 843 €	

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: [April 2022](#) Actual start date: [April 2022](#)  
Expected completion date: [June 2022](#) Actual (or expected) end date: [June 2022](#)

### Objective recap

An outreach report, presenting the results of the project, is required to enhance the value of the project and to participate in the emergence of new projects for the conservation of coastal habitats and species within the European Union.

### Recap of expected results

- Knowledge of the project and its results at national and international level;
- The replicability of the programme's actions on other similar sites;
- Encourage discussion with new partners and share experiences after the end of the programme.

### Course of action

The LIFE Aiguillon Bay project team produced the outreach report in April 2022. A DTP (Desktop Publishing) service finalised the layout of this outreach document in May and June 2022.

This document is available in English and French on the project website.


It was also distributed digitally to all project stakeholders.

### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable E4</b>	500 outreach reports, of which 100 are in English and a downloadable version on the project website	30/09/2020	30/06/2022	22/06/2022	Completed
<b>Milestone E4</b>	Release of the project's outreach report	31/10/2020	30/06/2022	22/06/2022	Completed

## 6.1.18 Action E5: Coordination of the network

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
E5	PNR	Animation of the network																													
	Initial																														
	Current																												19 956 €	22 505 €	

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jan. 2016** Actual start date: **Jan. 2016**  
Expected completion date: **June 2022** Actual (or expected) end date: **June 2022**

### Objective recap

This action aimed to forge a partnership with other European projects to benefit from the programmes that have been or are being conducted and to gain from the knowledge acquired during the execution of these programmes.

### Recap of expected results

- Meetings with Life stakeholders
- Involvement of speakers in conferences and seminars organised as part of the project
- Invitation as a speaker to these other Life conferences.

### Course of action

Since the project began, the NRP has been in contact with various LIFE projects under preparation or underway. The network has also been extended to partners other than the LIFE project leaders: managers, academics, etc.

### Technical partnership

- At the beginning of the project, LIFE Pêche à pied (LIFE14 ENV/FR/000316) took part in several monitoring committees relating to actions carried out on the Pointe de l'Aiguillon site and contributed to the survey carried out in summer 2016 on the summer use of the Pointe de l'Aiguillon.
- LIFE ADAPTO (LIFE16 CCA/FR/000131) was contacted as part of the work on the Prée Mizottière, owned by the Conservatoire du littoral.

### Advice to LIFE project stakeholders

Many LIFE project leaders have been met or contacted by telephone by the PNR to help them build their project or to assist them in executing their projects:

- PNR Armorique: assistance in preparing European applications (February 2016);
- PNR Normandie: assistance in setting up the approved LIFE AVALOIRS project (LIFE 17/NAT/FR/000007) (March 2016);
- Cap Atlantique: help with setting up the project (March 2016) and with the administrative and financial aspects of the approved LIFE SALLINA project (LIFE17 NAT/FR/000519) (May 2018, February 2020);
- PNR des Vosges, LIFE BIOCORRIDORS (LIFE 14 NAT/FR/000290): discussions on the financial aspects / tools used (March 2017);
- ADASEA, assistance in setting up the project (June 2017) approved LIFE Coteaux Gascons LIFE19/NAT/FR/000828;
- Conservatoire du littoral, LIFE ADAPTO (LIFE16 CCA/FR/000131): assistance with administrative and financial implementation (September 2018);
- ONCFS, LIFE OXYURA (LIFE17 NAT/FR/000542): assistance with administrative and financial implementation (September/December 2018);

- Herpetological Society, LIFE CROAA (LIFE15 NAT/FR/000864): telephone discussions on budget (December 2018);
- PNR Périgord Limousin: assistance in setting up the WILD BEES project, subsequently approved (LIFE19NAT/FR/000597) and LIFE MAMAC pearl mussel;
- Polleniz: help in setting up the LIFE ALIENAR project (November 2019);
- LIFE Agribiodiv: involved in drafting the project;
- PNR Marais poitevin: assistance setting up a life Climate governance project (February 2022).

### Contact with other LIFE projects

Exchanges (mainly by email) with other projects also occurred: LIFE13 NAT/DK/001357, LIFE13 ENV/ES/001182, LIFE07 NAT/UK/000938, LIFE04 NAT/NL/000202, LIFE03 NAT/CP/NL/000006.

### Symposiums

The LIFE Aiguillon Bay project was invited to participate:

- At the LIFE SERESTO final feedback conference (LIFE12 NAT/IT/000331) on 11/04/ 2018 in Rome. Frédéric Corre, LPO conservationist of the RNN (presented the project LIFE Aiguillon Bay and its progress;
- At the LIFE BLUE NATURA conference (LIFE14 CCM/ES/000957) in Spain on 10/12/2020. Louise Froud of the LPO presented the restoration of mudflats;
- At the seminar "adapting the management of our natural coastal areas to climate change" of LIFE NATUR'ADAPT (LIFE 17 CCA/FR/000089) on 08/03/2021. Eric Chaumilllon presented the innovative concept of a science show;
- At the forum "The climate is changing, let's adapt with nature" of the LIFE ARTISAN on 15/03/2022, Régis Gallais, OFB curator of the RNN presented the LIFE Aiguillon Bay project.

The LIFE Aiguillon Bay project has also invited projects to share their experiences:

- At the international conference "Adapting coastal marshes to climate change" held in La Rochelle from 27 to 29 November 2018, three LIFE projects were invited to participate: LIFE FLANDRE (LIFE+12NAT/BE/000631), LIFE CONVIVE (LIFE14NAT/ES/001213), LIFE ADAPTO (LIFE16 CCA/FR/00013). Unfortunately, the LIFE FLANDERS and LIFE CONVIVE projects were unable to attend the conference due to scheduling problems.
- At the final feedback conference held in La Rochelle on 5 and 6 April 2022, presentations of LIFE MARHA and LIFE ADAPTO (LIFE16 CCA/FR/00013).

### InterLifes

- LIFE project staff took part in the InterLifes from 2016 to 2021.
- The exchanges during the InterLife meetings hosted by the Reunion Island National Park in 2017 led to a summary being sent to the European Commission and EASME. One priority was to call on the Ministry of Ecological Transition and Solidarity to insist on the importance of the LIFE tool and their involvement. An InterLife delegation of three people, including LIFE Aiguillon Bay, therefore went to the Ministry on 10/07/2018. This meeting was discussed at the InterLife 2018 (Jura).
- On-site reception of InterLife 2021 participants: presentation of the work on the Pointe de l'Aiguillon site, book on the bay offered to each participant



## Networking

LIFE Aiguillon Bay attended the networking event on 22/03/2022 organised by LIFE MARHA on the sharing of experiences on protected marine areas.

## Speech at the LIFE presentation day at the MTE

At the request of the Ministry, the Marais Poitevin PNR gave a presentation on the development and implementation of a LIFE project on 10/04/2019 during the LIFE programme presentation days. This presentation is available on the MTE website:

[https://www.ecologique-solidaire.gouv.fr/sites/default/files/InfodayLIFE2019-7-Baie\\_Aiguillon.pdf](https://www.ecologique-solidaire.gouv.fr/sites/default/files/InfodayLIFE2019-7-Baie_Aiguillon.pdf)

## Presentation of the project / reception in the field

- 26/07/2017: the NRP hosted the Biebrza National Park (Poland), holder of the LIFE GORNA BIEBZRA (LIFE11/NAT/PL/422), on a visit to the Marais Poitevin to discuss the issue of European wetlands. This delegation was accompanied by the CAVEB coordinator of the (LIFE+ PTD LIFE13 ENV/FR/001315). This meeting showed that European wetlands are subject to the same challenges and that cooperation is essential to respond to them locally.
- Spring 2019: the NRP hosted the LIFE MICACC project team (LIFE16 CCA/HU/000115) on the theme of wetland grassland preservation;
- 25/10/2019: hosting of a delegation from the European Affairs Department of the Loire Region on the theme of LIFE projects for potential project leaders

Outside the LIFE network, the project has been presented to other groups of managers/academics/partners, potential future LIFE project leaders:


- Annual presentation of a project action at the Marais Poitevin Natural Heritage Observatory day to the region's managers -150 people
- March 2019: presentation of the water quality study by project partner IFREMER at the ASLO Aquatic Science Conference in Puerto Rico (USA);
- 28 /08/2019: the OFB presented the study on anatidae at the IUGB Congress in Lithuania (other LIFE projects present);
- 19/09/2019: presentation of the project at the "Energy and Climate Transition" Commission attended by representatives of eight urban communities, the three départements and the two regions;
- 26/09/2019: field trip to the Pointe de l'Aiguillon for 80 participants at the "Coastal Management" conference (La Rochelle) organised by the British Institution of Civil Engineers in collaboration with the British Environmental Agency;
- 25/10/2019: hosting of a delegation from the European Affairs Department of the Loire Region on the theme of LIFE projects
- 06/11/2019: Presentation of the water quality study in Cheers (Bordeaux) - 80 people
- 14/11/2019: presentation of the project and LIFE programmes to a group of Masters students from La Rochelle

## Adherence to the schedule (deliverables and milestones)

No deliverable or milestone.

## 6.1.19 Action E6: Creation of LIFE information panels

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
E6	PNR	Creation of Life information panels																													
	Initial																											4 548 €	708 €		
	Current																														

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jul. 2017** Actual start date: **Oct. 2017**  
Expected completion date: **Dec. 2019** Actual (or expected) end date: **June 2018**

### Objective recap

These information notices, installed at each site where the LIFE project actions are accessible to the public and detailing the funders and the nature of the action, will communicate on the project and highlight the LIFE Nature financial tool.

### Recap of expected results

- Installing these signs in strategic locations will inform the public about the purpose of the biodiversity work being carried out and its funding by the European Commission through the LIFE project;
- The presence of the QR code referring to the website will allow those interested to deepen their knowledge on the subject.

### Course of action

The PNR designed the various panels in December 2017. These panels were printed and delivered in summer 2018 (see Deliverable E6).

The sign on the Prée Mizottière farm site indicates the completion of hydraulic works, the recession of a deteriorating dyke and a bird-watching platform for the public. It was installed on the site in October 2018.

Signs on the Aiguillon Bay site showing experimental work to remove old oyster structures from mudflats. They were installed on the mudflat habitat restoration site buildings, located in the busy Port du Pavé (Charron commune) from September 2019 to February 2020. A sign has been put up at La Pointe.

The sign on the Pointe de l'Aiguillon site shows that work will be carried out to improve the visitor experience and to restore natural areas and protect dune environments.




### Adherence to the schedule (deliverables and milestones)

Figure n° 7 : Information panels

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable E6</b>	Delivery of LIFE information notices	31/12/2018	31/12/2018	01/09/2018	Completed
<b>Milestone E6</b>	Delivery of LIFE information notices	31/12/2018	31/12/2018	01/09/2018	Completed

## 6.1.20 Action E7: Educational development of the Prée Mizottière farm

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
E7	PNR	Pedagogic enhancement of the Prée Mizottière farm																												
	Initial																												60 810 €	2 057 €
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: Jan. 2018 Actual start date: Jan. 2019  
Expected completion date: Sept. 2019 Actual (or expected) end date: -

### Objective recap

This action was to make the Prée Mizottière site accessible to the public to allow observation of the landscape and the birdlife and to control access to avoid uncontrolled development of nature tourism.

### Recap of expected results

Creation of an observation post on the edge of the Prée Mizottière site with an access road.

### Course of action

Initially, the birdwatching platform was to be built by autumn 2019 at the latest. However, the positioning of this platform depended on the location of the borrowed areas on the Prée Mizottière site, owned by the Conservatoire du Littoral, which were required for SMVSA to repair the so-called "PAPI" dyke.

Following the consultation phase, fresh tensions and difficulties arose in the summer of 2018 between the Conservatoire du Littoral and the Syndicat Mixte Vendée Sèvre Autise (SMVSA) regarding the maintenance of the so-called "PAPI" dykes. Consequently, the positioning of the observatory could not be decided.

In April 2019, the PNR decided not to wait for an agreement between the Conservatoire du Littoral and the Syndicat Mixte Vendée Sèvre Autise to position the future platform. As a result, the PNR, the Conservatoire du Littoral and the managers of the RNN have established the location and its specifications.

In May 2019, the NRP studied the feasibility of the project with government departments. This birdwatching project was compatible with the French National town planning regulations and the Loi Littoral (outside the "100-metre belt"). Moreover, the project imposed no obligation to provide access for people with reduced mobility and required two commissions (Commission Départementale de la Nature, des Paysages et des Sites (CDNPS) & Commission Départementale de Préservation des Espaces Naturels, Agricoles et Forestiers (CDPENAF)), the completion of a NATURA 2000 impact study and the granting of a building permit (the responsibility of the Town Hall). It takes three months to obtain a building permit, plus two months to pass before the two commissions. The minimum time required for this stage was therefore five months.

In order to do this, the PNR considered hiring an architect to carry out the various stages required to create this platform, in accordance with the MOP law (Maîtrise d'Ouvrage Publique). The provisional timetable below indicated over 24 months between the consultation of the architects and the delivery of the platform open to the public.

When EASME visited the LIFE Aiguillon Bay project in October 2019, it was decided to propose an alternative to this project to reduce the regulatory and administrative burden. In December 2019, the PNR carried out a preliminary design study with the PNR landscape architect (see Mid-term report, Appendix 21). This study concluded that it was

technically inappropriate to create a birdwatching area at the previously identified location, which was too small. The cost of such work would be prohibitive for very little added value.

In addition, the "PAPI" dyke-raising work will be carried out in 2023 by the Syndicat mixte Vendée Sèvres Autise. These works will widen the dyke and therefore interfere with the development, removing most of the work carried out by the beneficiaries.

After consulting the site owner and partners, in particular at the Advisory Committee of the Aiguillon Bay National Nature Reserve in December 2019, the project beneficiaries decided not to carry out this work on the edge of the site, near the PAPI dykes, until the work on the PAPI dykes is completed.

The beneficiaries have looked for other locations that could accommodate these structures, but none of them are suitable for the Prée Mizottière site, until the PAPI dyke works are carried out.


In conclusion, it was considered inadvisable to carry out this work for technical and financial reasons. This project is therefore included and developed in the Post-Life Conservation Plan of the LIFE Aiguillon Bay project, in agreement with EASME. Discussions on the subject with the site's owner, Conservatoire du Littoral, have already begun.

#### Adherence to the schedule (deliverables and milestones)

No.	Deliverables / Milestones name	Initial deadline	Amendment deadline	Completion date	Status
<b>Milestone E7</b>	Beginning of work on the observation platform and pathway	31/03/2018	-	-	Cancelled

## 6.1.21 Action F1: Steering, coordinating and administrative and financial oversight of the LIFE programme

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress		
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022	
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report									
F1	PNR	Animation, coordination and administrative and financial monitoring of the LIFE program																													
	Initial																												218 116 €	270 837 €	
	Current																														

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: Jan. 2016 Actual start date: Jan. 2016  
Expected completion date: June 2022 Actual (or expected) end date: June 2022

### Objective recap

This action aims to ensure the proper technical, administrative and financial coordination of the project by the lead beneficiary, to guarantee the smooth running of the project and the fulfilment of its objectives.

### Recap of expected results

- Setting up an annual steering committee;
- Putting in place tools to monitor the programme;
- Drafting of two agreements between beneficiaries and associated beneficiaries;
- Drafting of agreements between beneficiaries and financiers;
- Preparation of five interim reports describing the progress of the project and presenting the results achieved and a final technical and financial report;
- Creation of a press kit.

### Course of action

#### Co-ordination

To recap, the project's general coordination was based on four bodies with related roles:

- (1) The steering committee (CoPil) met every year;
- (2) The Technical Committee (CoTech) met several times a year, with the Editorial Committee (CoRed) being an integral part of said Technical Committee;
- (3) The various oversight committees (CoSui) were arranged depending on the status of the actions (monitoring of Domaine Maritime, Prée Mizottière, Pointe de l'Aiguillon, water studies, ecosystem study);
- (4) Administrative and financial meetings were held three to four times a year.

Since its launch, the project has been presented to many stakeholders in the region (professionals, technical and scientific partners, State services, financiers and local stakeholders) at nearly fifty meetings.

#### Amendments to the Grant Agreement

The five amendments to the funding agreement between PNR and the European Commission (Grant agreement of 23/11/2015) are described in chapter 5 (Administrative section).

#### Beneficiary partnership agreements

The partnership agreements specifying the terms of payment of the funds received by the main beneficiary (PNR Marais Poitevin) to the associated beneficiaries (OFB and LPO) were drawn up in 2016 and were the subject of three amendments by each associated beneficiary (Cf. chapter 5.2 and Appendix 01).

## Co-financing agreement of the Ministry of Ecological Transition and Solidarity

The financing agreement between the Regional Nature Park (PNR) and the Ministry of Ecological Transition was signed on 27 July 2018, securing a €245,000 financial contribution from the Ministry of Ecological Transition (see Mid-term report, Annex 03), contingent on certain actions of the project as of the submission of the application.

## Other co-financing agreements (see Mid-term report, Annex 03)

During the first part of the project, financing agreements were also drawn up with the Prefecture of the Nouvelle Aquitaine Region (DREAL Nouvelle Aquitaine), the Regional Council of Nouvelle Aquitaine, the Biodiversity Caisse des Dépôts et Consignation, and the Etablissement Public du Marais Poitevin. All these financing agreements are presented in the mid-term report (see Mid-term report, Annex 03):

- (1) Subsidy agreement from the New Aquitaine Region no. 2016/PALPC-P-BE-46 of 09/08/16 for the LPO in the amount of €53,475 - paid.
- (2) Grant agreement from the Ministry of Environment, Energy and Sea, dated 22/11/18, for the benefit of the PNR for the three beneficiaries for an amount of €250,000 - NOT COMMITTED
- (3) Subsidy order from the DREAL Nouvelle Aquitaine no. 2016/DREAL/SPN/62/162 of 15/12/16 to the ONCFS for an amount of €8,405, paid.
- (4) Subsidy agreement from the DREAL Nouvelle Aquitaine no. 2016/DREAL/SPN/AP/60/162 of 15/12/16 for the LPO for an amount of €25,595, 73.74% paid
- (5) Subsidy agreement from the Biodiversity CDC, dated 15/12/16 for the benefit of the LPO for an amount of €115,579, paid.
- (6) Subsidy agreement from the Etablissement Public du Marais Poitevin no. 2017/324/EPMP/JEP of 12/12/17 for the benefit of the PNR for an amount of €4,000 (12 December 2017), paid
- (7) Subsidy order from the DREAL Nouvelle Aquitaine no. 2018/DREAL/SPN/DBCEN/49 of 20/07/18 for the benefit of the PNR for an amount of €11,229, in the process of being paid
- (8) Subsidy order from the DREAL Nouvelle Aquitaine no. 2016/DREAL/SPN/DBCEN/48 of 13/07/18 to the LPO for an amount of €21,981 (20 July, 2018), paid.
- (9) Financing agreement from the Ministry of Ecological and Solidarity Transition no. 2102484790 of 27/07/18 for the benefit of the PNR for the three beneficiaries for an amount of €245,000, in the process of being paid

During the second part of the project, other financing agreements were established by the LPO with the Loire-Bretagne Water Authority, contributing to the financing of mudflat restoration work and the hosting of the symposium on mudflat restoration, and with the DREAL Nouvelle Aquitaine, also contributing to the financing of the symposium on mudflat restoration. These supplementary financing agreements are presented in Annex 02:

- (10) LPO - Loire-Bretagne Water Agency financing agreement, participation in the financing of the symposium on the restoration of mudflats, signed on 08/11/2019
- (11) LPO - Loire-Bretagne Water Agency financing agreement, participation in the financing of mudflat restoration work, signed on 08/12/2020
- (12) LPO - DREAL Nouvelle Aquitaine financing agreement, participation in the financing of the symposium on the restoration of mudflats, signed on 30/09/2020

Co-financing from public funds is part of the self-financing of public structures

## Press kit (Deliverable F1)


A press kit has been compiled throughout the project and is provided as Deliverable F1. This press review includes more than 160 references in different media: local newspaper, national newspaper, regional daily newspaper, specialised magazine, local radio, national radio, local TV, regional TV, websites, and more.

## Schedule adherence (deliverable and milestone)

No.	Deliverable/ Milestone name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable F1</b>	Press kit	31/12/2020	30/06/2022	30/06/2022	Completed
<b>Milestone F1</b>	Kick-off meeting	31/01/2016	31/01/2016	08/01/2016	Completed
<b>Milestone F1</b>	Steering Committee no. 1	31/03/2016	31/03/2016	16/02/2016	Completed
<b>Milestone F1</b>	Steering Committee no. 2	31/03/2017	31/03/2017	07/03/2017	Completed
<b>Milestone F1</b>	Steering Committee No. 3	31/03/2018	31/03/2018	08/03/2018	Completed
<b>Milestone F1</b>	Steering Committee No. 4	31/03/2019	31/03/2019	07/03/2019	Completed
<b>Milestone F1</b>	Steering Committee No. 5	31/03/2020	31/03/2020	15/09/2020	Completed
<b>Milestone F1</b>	Steering Committee No. 6	30/09/2020	31/03/2021	09/03/2021	Completed

## 6.1.22 Action F2: Conducting a final external audit

### Implementation schedule

 Biodiversity		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
F2	PNR	Realisation of a final external audit																												
	Initial																											13 899 €	0,00 €	
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: [April 2020](#) Actual start date: -  
Expected completion date: [Dec. 2020](#) Actual (or anticipated) completion date: -

### Objective

The objective is to have an audit carried out by an independent service provider to validate the final statement of expenditure and revenue submitted to the European Commission. This audit will certify compliance with national legislation and accounting rules, but also the compliance of all costs with the "General Conditions" established by the European Commission.

### Expected results

An external audit validating the project as a whole (a general report).

### Status of the action

The amendment to Grant Agreement No. 2 (23/07/2018) specifies that a financial audit is not compulsory for beneficiaries whose total contribution in the form of reimbursement of actual costs referred to in Annex III is less than EUR 750,000. Action F2 was therefore not carried out, with the agreement of EASME, and the expenditure envelope (€10,000) was therefore reallocated to other project actions.


### Schedule adherence (deliverable and milestone)

No.	Deliverable/ Milestone name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable F2</b>	Audit report	31/03/2021	31/03/2021	-	Cancelled
<b>Milestone F2</b>	Audit production	31/03/2021	31/03/2021	-	Cancelled



### 6.1.23 Action F3: "Post-LIFE" Conservation Plan

#### Implementation schedule

 Biodiversity		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
F3	PNR	"Post-Life" conservation plan																												
	Initial																												12 551 €	2 324 €
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jan. 2020** Actual start date: **Jan. 2020**  
 Expected completion date: **June 2022** Actual (or anticipated) completion date: **June 2022**

#### Objective

This action should detail how the actions initiated under the project will be continued in the years following the end of the project.

#### Expected results

Production of a "Post LIFE Conservation Plan" report, in French, in hard copy and electronically, attached to the final report.

#### Course of action


The Post-LIFE Conservation Plan is attached to this final report, in French and English versions.  
 Discussions required for the writing of this report were initiated in January 2020 by the project beneficiaries.

#### Schedule adherence (deliverable and milestone) and next steps

No.	Deliverable/ Milestone name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable F3</b>	Post-Life Conservation Plan attached to the final report	31/03/2021	30/09/2022	30/09/2022	Completed
<b>Milestone F3</b>	Post-Life Conservation Plan attached to the final report	31/03/2021	30/09/2022	30/09/2022	Completed

## 6.1.24 Action F4: Indicators

### Implementation schedule

		2016				2017				2018				2019				2020				2021				2022			Progress	
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	Initial budget	Expenditures as of 30/06/2022
		Progress report I				Progress report II				Midterm report				Progress report IV				Progress report V				Final report								
F4	PNR	Indicators																												
	Initial																											6 645 €	1 396 €	
	Current																													

**Coordinator** Marais Poitevin PNR

**Dates** Expected start date: **Jan. 2016** Actual start date: **Jan. 2016**  
 Expected completion date: **June 2022** Actual (or anticipated) completion date: **June 2022**

### Objective

This action must allow for the project's implementation to be evaluated through regular monitoring of several indicators defined by the Commission.

### Expected results

Improvement of the indicators identified by the Commission between the initial and final project situation.

### Course of action

The implementation of this action started in March 2016, the indicator tables of the initial situation were sent to the Commission, in a digital version, during the first half of 2016 (see Deliverable F4).

In addition, the PNR responded to requests for additional information made by NEEMO on 11 January 2018.

The indicator tables for the final situation have been filled in and are the subject of the second deliverable F4, attached to this final report.

### Schedule adherence (deliverable and milestone)

No.	Deliverable/ Milestone name	Initial deadline	Amendment deadline	Completion date	Status
<b>Deliverable F4</b>	Completed indicator tables of the initial situation, in digital form, sent to the Commission	30/06/2016	30/06/2016	25/07/2016	Completed
<b>Deliverable F4</b>	Completed indicator tables of the final situation, in digital form, sent to the Commission	31/03/2021	30/09/2022	30/09/2022	Completed
<b>Milestone F4</b>	Completion of the indicator tables relating to the initial situation of the project	30/06/2016	30/06/2016	25/07/2016	Completed
<b>Milestone F4</b>	Completion of the indicator tables relating to the final situation of the project	31/03/2021	30/09/2022	30/09/2022	Completed

## 6.2 MAIN DEVIATIONS, PROBLEMS, AND CORRECTIVE ACTIONS IMPLEMENTED

### 6.2.1 Justification for the 18-month extension of the project duration

The project beneficiaries requested an 18-month extension of the project without financial impact (project to end on June 30, 2022 instead of December 31, 2020) during the project visit by EASME in October 2019.

The preparatory actions A1 (Elaboration of an experimental protocol of wild oyster habitat removal from the Aiguillon Bay), A3 (Prefiguration of ecological enhancement works of the Prée Mizottière site) and A4 (Prefiguration of renaturation works on the Aiguillon Pointe) took longer to complete than originally planned.

As a result, the concrete conservation actions C1 (Implementation of experimental works of wild oyster habitats removal from the Aiguillon Bay), C3 (Implementation of ecological enhancement works for the Prée Mizottière site) and C4 (Implementation of renaturation works on the Aiguillon Pointe) were initiated late, and were completed between November 2020 and November 2021.

It was essential to allow 6 to 12 months to elapse between the end of the concrete conservation actions and the implementation of the final stages of monitoring actions D1 (Monitoring in intervention sectors of wild oyster habitat removal in the Aiguillon Bay), D3 (Biological Monitoring on ecological engineering work on the Prée Mizottière site), D4 (Biological monitoring on the Aiguillon Pointe intervention sector) and D5 (Survey on the socio-economic and ecosystem impacts of the project) to measure and assess the biological, socio-economic, and ecosystem impacts of the operations carried out on the various project sites.

As a result, the PNR and its beneficiaries sent an amendment request on 16 December 2019 to EASME (cover letter, amendment request, form A1, form C2 and form C3), proposing a modification of the implementation schedule of the LIFE Aiguillon Bay project. This request was accepted by EASME and was the subject of Grant Agreement no. 4 (04/06/2020). Forms A1, C2 and C3 in Annex II of the Grant Agreement have been modified, and the duration of the project in art. I.2.2 of the grant agreement has been extended and runs from 01/01/2016 to 30/06/2022.

As a reminder, the explanations for the various delays justifying the 18-month extension of the project for the actions carried out in the Aiguillon Bay (Actions A1, C1, D1) are as follows:

- Delay in carrying out the fauna inventory and identification of food webs (action A1).  
The fauna inventory and food web identification was received on 4 July 2018, although it was expected in June 2017. The weather conditions explain part of the delay. Indeed, the Volkmar storm of February 2017 made it impossible to use a boat that was needed for sampling in the Bay. This led to a delay in the production of the regulatory appraisal and the obtaining of prior authorisations.
- Delay in regulatory appraisal and obtaining prior authorisations (action A1).  
The fauna inventory and identification of food webs was a prerequisite for carrying out the regulatory appraisal and obtaining prior authorisations. In addition, the additional request recommended by the regulatory study and requested by the RNN's scientific council was carried out in 2017 to assess the possible presence of pollutants in the sediments at risk of being resuspended, also lengthened the procedure (assessment carried out in 2018).
- Reduced intervention periods (action C1).  
The period during which the work will be carried out is conditional on shellfish farming activities and on the avifauna issues in the RNN. These two factors reduce the intervention periods to two periods: January/February and September/October.

- Postponement of the commissioned service (action C1).  
The contractor informed the LPO at the beginning of January 2019 that the work could not start on 7 January 2019 as originally planned. This was a delay at another construction site due to the demonstrations in France during the winter of 2018/2019 (the "gilets jaunes" blockade movement), which kept the necessary equipment from being moved into place.
- Extension of the duration of Action D1 (Action D1).  
The delay in undertaking work to restore mudflat habitats in the Aiguillon Bay has led to an extension of the implementation schedule for action D1. The second survey campaign was carried out in October 2021, not March 2019, and completed in June 2022 with an analysis of the two sets obtained during the project.
- Delay in holding the symposium on mudflat restoration (action E2).  
This delay has also led to a postponement of the seminar on the mudflat restoration experiment originally planned for autumn 2019. Indeed, this seminar was held in October 2020, after the work had been completed.

As a reminder, the explanations for the various delays justifying the 18-month extension of the project for the actions carried out at the Prée Mizottière site (Actions A3, C3, E7) are as follows:

- Conflicts between the actors involved  
The conflicts between the actors involved (SMVSA, CDL, farmer) and the necessary mediation phase led by the PNR led to a delay in the implementation of action A3. As a consequence, the modification of the implementation schedules of actions A3, C3 and E7 approved by EASME in its email dated 12/05/2017 and by letter dated 09/11/2017 (noted in the mid-term report) were in Grant Agreement no. 4 (04/06/2020).
- Extension of the duration of Action D3 (Action D1).  
The delay in starting work on the dyke repositioning resulted in an extension of the implementation schedule for action D3.

As a reminder, the explanations for the various delays justifying the 18-month extension of the project for the actions carried out at the Pointe de l'Aiguillon site (Actions A4, C4, D4) are as follows:

- Procedure for authorising work  
The procedure for authorising work at the Pointe site, which was initiated with the DDTM 85, took longer than initially planned. This resulted in an extension of the implementation schedule for action A4 by 6 months, causing a delay in the start of work on action C4 and the monitoring of action D4.

### 6.2.2 Change of status of an associated beneficiary

On 1 January 2020, the National Hunting and Wildlife Office (ONCFS), an associate beneficiary of the LIFE Aiguillon Bay project, became the French Biodiversity Agency (OFB). This was a merger of the old French Agency for Biodiversity (AFB) and the National Hunting and Wildlife Office (ONCFS). This change was the subject of an amendment to the Grant Agreement (Amendment No. 5 of 07/10/2021).

### 6.2.3 Financing agreement of the Ministry of Ecological Transition and Solidarity

The financing agreement between the PNR and the Ministry of Ecological and Solidarity Transition was established on 22 November 2016 for a duration of 5 years and a financial contribution of €250,000. However, PNR learned on 17 January 2018 that the agreement had not been committed by the Ministry, as it had not been approved by their budget controller, resulting in the non-eligibility of the expenditure incurred and committed in 2016 and 2017. The PNR sent a letter to the Ministry on 08 March 2018 to report this situation. The various exchanges between the PNR and the Ministry led to the signing of a new agreement on 27 July 2018 securing a €245,000 financial contribution from the Ministry (see Mid-term report, Annex 03), albeit under less flexible conditions (6 targeted actions over a shorter eligibility period). The difference of €5,000 has been absorbed by the coordinating beneficiary.

### 6.2.4 The minor impact of the Covid-19 pandemic

In February 2020, Europe was hit by the Covid-19 pandemic. The French government imposed several nationwide lockdowns in 2020 and 2021.

The first consequence was the postponement of the 5th Steering Committee which was to be held on 12 March 2020, but which was held on 15 September 2020.

The second consequence could have been the one-year delay in the start of the dyke repositioning, due to the lockdown imposed by the French government in March, April and May 2020. However, despite the pandemic, the PNR was able to carry out the final stage of the appraisal phase, the public enquiry in June 2020. Thus, all the administrative procedures and regulatory appraisals (public consultation, Water Law dossier, Natura 2000 impact studies, public enquiry, etc.) prior to the implementation of these works have been carried out (Action A3: Prefiguration of ecological enhancement works of the Prée Mizottière site).

However, the lockdown had an impact on the holding of presentations, field activities for the general public (discovery booklet), and on the visibility of the exhibition.

### 6.2.5 Postponement and cancellation of the LIFE Aiguillon Bay project launch day (action E2)

In 2016, Action E2 included the hosting of a project launch day before 31 March 2016. Though scheduled three times, this day could not be held due to several difficulties stemming from the personal schedules of the PNR's elected representatives, a possible reason mentioned in the initial project (Constraints and assumptions).

Indeed, due to the PNR Bureau elections on 23 March 2016, the launch day had to be put off, as the remit of the newly elected PNR officials had not been established. This is why the day has been postponed to 7 June 2016, as the elected members of the PNR would by then be fully involved in their duties. However, a further postponement was made as the President of the PNR was no longer available at that time.

It was therefore decided to organise a press conference at the beginning of 2017, after an active year during which all the professionals, partners, funders and actors of the territory concerned by the project were met with during the various LIFE committees and other specific meetings (1 steering committee, 4 monitoring committees, 4 technical committees and 2 drafting committees, 25 meetings with the actors of the territory directly or indirectly involved in the project). It was therefore no longer necessary to hold this presentation day.

A press conference was therefore to be held on Friday 13 January 2017, combined with a discussion period between the technical partners of the project and the signing of the partnership agreement relating to an action dedicated to the waters of the bay between IFREMER, EPMP, ONCFS and LPO. 38 people representing the various partners in the project had announced their attendance. However, due to another change in the schedule of the PNR President, who was eager to be present, this press briefing and discussion could not be held.

As they were unable to hold a project launch day in 2016, the beneficiaries organised an evening information session on the LIFE project to talk about preserving the natural wealth of the Aiguillon Bay on 10 November 2017 in L'Aiguillon-sur-Mer, for the project partners, elected representatives, and inhabitants of the coastal municipalities. The issues and programme of the project were presented during the evening, the book and the exhibition were also highlighted, and the film was shown. The evening was attended by more than 100 people and ended with a friendly drink.

#### 6.2.6 Additional co-financing to continue mudflat restoration work (action C3)

The remaining financial envelope allocated to this action did not allow the LPO to cover all the areas of experimental work initially planned. For this reason, the project beneficiaries sought additional co-financing to increase the work period and the treatment area. The LPO responded to the Loire-Brittany Water Authority's call for projects in March 2020 to obtain €150,010 of additional co-financing to extend the work, lasting to 25 February 2021. In addition, the LPO has also applied for and obtained funds from the government's Recovery Plan to continue the restoration of mudflats (€100,000, excluding LIFE), lasting to November 2021.

#### 6.2.7 Additional co-financing for the symposium on the restoration of mudflat habitats (action E2)

Budgetary changes have been necessary for the organisation of the mudflat restoration conference in October 2020. Additional funds from the DREAL NA (€5,000) and the AELB (€15,000) were requested and obtained by the LPO to carry out a more ambitious conference in accordance with Covid-19 protocols.

#### 6.2.8 Cancellation of the financial audit (action F2)

The amendment to Grant Agreement No. 2 (23/07/2018) specifies that a financial audit is not compulsory for beneficiaries whose total contribution in the form of reimbursement of actual costs referred to in Annex III is less than €750,000. Action F2 was therefore not carried out, the allocated expenditure envelope of €10,000 was reallocated to other project expenditure, with the agreement of EASME.

#### 6.2.9 Justified cancellation of action E7

The difficulties encountered with the stakeholders of the Prée Mizottière site were presented in the mid-term report. During the EASME visit in October 2019, an agreement was reached to propose an alternative to this project in order to reduce the regulatory and administrative burden.

Thus in November and December 2019, the PNR carried out a preliminary design study with the PNR landscape designer. This study concluded that it was technically not appropriate to create a birdwatching area at the previously identified location, which was too small. The cost of such work would be prohibitive for very little added value.

In addition, the work to raise the PAPI dyke will be carried out in 2023 by the Syndicat mixte Vendée Sèvres Autize. These works will result in the widening of the dyke and will therefore interfere with the development carried out, resulting in the elimination of most of the work carried out by the beneficiaries.

After consultation with the site owner and partners, in particular at the Advisory Committee of the Aiguillon Bay National Nature Reserve in December 2019, the project beneficiaries have consequently decided not to carry out this work on the edge of the site, near the PAPI dykes, until the PAPI dyke work has been completed.

The beneficiaries have looked for other locations that could accommodate these works, but none of them are relevant on the Prée Mizottière site, as long as the PAPI dyke works will not be carried out.

In conclusion, it is not appropriate to carry out this work for technical and financial reasons. The beneficiaries are therefore proposing to include this objective in the Post-Life Conservation Plan. Discussions with the Conservatoire du Littoral, the owner of the site, are already underway. This decision was validated in a letter from EASME (received on 19/11/2020).

€60,000 was allocated to this operation. This envelope was reallocated to the concrete conservation actions of the project on the Prée Mizottière site, with the agreement of EASME.

Objet	Prévu	Prévisionnel	Réalisé	Différentiel
<b>Actions de conservation de la Prée Mizottière</b>		<b>299 364 €</b>	<b>337 593 €</b>	<b>- 38 229 €</b>
<b>Personnel</b>		<b>28 464 €</b>	<b>28 349 €</b>	
Agents bénéficiaires		28 464 €	28 349 €	
<b>Déplacements</b>		<b>- €</b>	<b>60 €</b>	
			60 €	
<b>Assistance extérieure</b>		<b>270 000 €</b>	<b>301 575 €</b>	
Etude de faisabilité digues et ouvrages	Oui	50 000 €	59 655 €	
Travaux de déplacement de la digue	Oui	200 000 €	216 368 €	
Travaux ouvrages hydrauliques de la Prée Mizottière	Oui	20 000 €	25 553 €	
<b>Autres coûts</b>		<b>900 €</b>	<b>7 609 €</b>	
Consultation marché	Oui	900 €		
Commissaire enquêteur enquête publique	Non		2 808 €	
Publication des annonces officielles enquête publique	Non		4 801 €	
<b>Plateforme</b>		<b>66 832 €</b>	<b>1 922 €</b>	<b>64 910 €</b>
<b>Personnel</b>		<b>6 832 €</b>	<b>1 922 €</b>	
Agents bénéficiaires		6 832 €	1 922 €	
<b>Assistance extérieure</b>		<b>10 000 €</b>	<b>- €</b>	
Etude de faisabilité plateforme	Oui	10 000 €		
<b>Infrastructures</b>		<b>50 000 €</b>	<b>- €</b>	
Construction de la plateforme	Oui	50 000 €		
<b>Total</b>		<b>366 196 €</b>	<b>339 515 €</b>	<b>26 681 €</b>

#### 6.2.10 Consultation for mudflat restoration work (Action C1)

A procedural defect in the consultation for the implementation of the second phase of work was indicated to EASME following the annual visit of the external monitoring team on 29 and 30 September 2020. Several submissions were made on this subject to explain how the associated beneficiary (LPO) was acting in good faith.

### 6.2.11 Unforeseen but absorbed expenditure from C3 action

Various expenses not initially foreseen were necessary during the compulsory public enquiry related to the dyke recession work. At the request of the Préfecture de Vendée, an investigating commissioner was appointed and public announcements were published. Payment is at the expense of the client. The total amount is €7,608.81. The work also required the intervention of a safety mission that was not initially foreseen but is mandatory. The cost of this service is €1,173 (APAVE). Furthermore, the cost of the work was €15,368 higher. The cancellation of the platform work helped finance these various additional costs (see 6.2.9).

### 6.2.12 Additional work on the Pointe de l'Aiguillon (Action C4)

At the end of the work carried out in 2019 on the Pointe de l'Aiguillon site, the financial envelope dedicated to the implementation of concrete actions to restore the natural habitats of the Pointe de l'Aiguillon site allowed for new phases of work to be carried out (€30,742 consumed out of the €76,500 credited to these operations (€16,500 External assistance and €50,000 Infrastructure)). In fact, all the operations carried out so far have been carried out at lower costs than initially planned.

It therefore seemed appropriate to undertake a new phase of work in 2020 and 2021 to enable the project's objectives to be exceeded in terms of the area of dune habitat preserved and restored. The project beneficiaries have decided to carry out additional work in 2020 and 2021 to strengthen the protection of these dune areas:

- At the end of the Pointe de l'Aiguillon: Reducing access to certain parts of the site by installing fences, continued removal of certain concrete blocks to restore 500 m<sup>2</sup> of dune habitat, closure of a footpath for fishermen by installing fences to protect against trampling and human disturbance and removal of an invasive plant, the Yucca, which appeared during the project. Informative signs explaining the implementation of these works will also be installed on the site.
- At the former campsite: Stump removal and crushing of poplar residues (validated by EASME by letter).
- At the Sablons beach site: operation to eliminate invasive species (Yucca, Sumac, Robinier faux-acacia) that appeared during the project and installation of signs on the preservation of the Interrupted Collared Plover.

Purpose	Planned	Forecast	Actual
<b>Outside assistance</b>		<b>€26,500</b>	<b>€25,020</b>
Felling of trees at Pointe de l'Aiguillon	Yes	€16,000	€14,710
Removal of concrete blocks at Pointe de l'Aiguillon	Yes	€10,500	€4,277
Cleaning at the dunes of the former campsite	No	€ -	€4,033
Removal of invasive species from the Sablons beach at the Pointe de l'Aiguillon	No	€ -	€2,000
<b>Infrastructure</b>		<b>€50,000</b>	<b>€25,923</b>
Dune development	Yes	€50,000	€25,923
<b>Total</b>		<b>€76,500</b>	<b>€50,943</b>



### 6.2.13 Unfinished start of work at the Pointe de l'Aiguillon (action E1)

Action E1 had planned to start work in November 2019 (Milestone C4 - Inauguration of the Pointe de l'Aiguillon renaturation work). This start has been postponed and scheduled for November 2020 in the form of a press conference, in the presence of the elected representatives of the Marais Poitevin PNR, partners and the press, at the Pointe de l'Aiguillon and Prée Mizottière sites to present all of the work carried out during 2020.

However, this press conference was cancelled due to a reinstated lockdown in France in response to the resurgent pandemic. Nonetheless, in order to cope with the pandemic, the PNR issued a press release in November 2020 on all the work done by the PNR on the project.

In addition, the PNR planned to hold a press conference in February 2021 during the final phase of work to meet its commitment. However, it turned out that the company had to intervene earlier than originally planned due to the winter floods, which changed the company's schedule. It was therefore not possible for the PNR to get elected representatives and the press there in time.

Thus, the press conference (and its commitment - Milestone C4) was held following the final steering committee and a summary of all the work carried out by the PNR on the various sites of the Point was published on the LIFE and PNR websites, accompanied by a Facebook post referring to the sites.

### 6.2.14 Continuation of Action A6

The project beneficiaries wished to continue the work begun during the six-month mission to popularise the scientific results entrusted to a person on a fixed-term contract taken on by the OFB in 2020.

Indeed, many partners and stakeholders are interested in the results produced by this operation. The continuation of the presentation of these results and the initiation of a dialogue with local stakeholders on this topic seemed necessary and advisable, particularly with a view to setting up a water quality effort in the project's post-LIFE conservation plan.

The project's beneficiaries therefore wished to carry out an additional 4-month mission in 2022 to carry out this consultation work and finalise the drafting of the handbook on water by taking advantage of the technical skills of the person hired in 2020 by the OFB for 6 months. To finance this additional mission, the PNR du Marais Poitevin proposed to transfer €12,000 (+7%) to the OFB, responsible for actions A6 and A7, in order to renew a contract. This has been accepted by EASME, as the PNR's state of expenditure as of 31 December 2020 allows for this transfer, without any financial impact on the EC's participation in the project.

### 6.2.15 Pooling between partners: "Adapting coastal marshes to climate change" conference (action E2)

The partnership with the Atlantic Marshes Forum (FMA) provided additional funding and enabled a large-scale international conference to be held. The hosting of this event required more human and logistical resources than initially planned. The initial operational budget was €12,550. The pooling of resources with the FMA made it possible to carry out a more ambitious seminar for an operational amount of €85,876, financed to the tune of €61,150 by the FMA (direct expenditure) and €24,725 by the LIFE Bay project.

Objet	Prévu	Montant prévisionnel	Montant total
<b>Personnel non employées</b>		- €	<b>1 610 €</b>
			1 610 €
<b>Déplacement</b>		<b>600 €</b>	<b>790 €</b>
Frais de mission		600 €	790 €
<b>Assistance extérieure</b>		<b>7 250 €</b>	<b>14 160 €</b>
Impression des actes	Oui	2 250 €	
Frais de réception	Oui	500 €	
Frais intervenants	Oui	3 000 €	1 198 €
Frais de traducteur sur place	Oui	1 500 €	
Contrat d'assistance	Non		8 672 €
Communication	Non		4 290 €
<b>Autres coûts</b>		<b>4 700 €</b>	<b>8 165 €</b>
Traduction des actes	Oui	600 €	
Location salle/assurance/location pupitre	Oui	1 600 €	
Frais intervenants	Oui	2 500 €	4 600 €
Communication	Non		720 €
Tours de cous	Non		374 €
Location materiel de sonorisation terrain	Non		151 €
Repas/hébergement agents PNR et partenaires techniques	Non		2 320 €
<b>Total</b>		<b>12 550 €</b>	<b>24 725 €</b>

#### 6.2.16 Contribution by the LIFE Aiguillon Bay project to the hosting of a symposium in 2019 (action E2)

Following the success of the "Adapting coastal marshes to climate change" conference in November 2018, the elected representatives of the PNR wanted to hold a second, two-day conference, outside the LIFE Aiguillon Bay project, in November 2019 in La Rochelle, focusing on coastal risks.

On the occasion of this conference, the PNR repeated the experience of the first science show "Hé ... la mer monte !" (Hey... The Sea Is Rising!) by creating the second science show "La mer contre-attaque!" (The Sea Fights Back!) promoted as part of the LIFE Aiguillon Bay project.

The organisational time and mission costs of the agents for this conference were partly declared, considering that it was an action resulting from the LIFE Bay project and that its implementation required the skills of the project coordinators. The same applies to the science show tour.

#### 6.2.17 Organisation of the symposium and financial contributions for the symposium on the restoration of mudflat habitats (action E2)

Budgetary changes have been necessary for the organisation of the mudflat restoration conference in October 2020. Additional funding from the DREAL NA (€5,000) and the AELB (€15,000) enabled the LPO to carry out a more ambitious seminar, to make up for the omissions in the initial budget and to adapt to the Covid-19 pandemic (filming, streaming, live translation, headset rental). The total operational cost of the conference reached €38,980 instead of the €22,534 initially planned

#### 6.2.18 Organisation of the project feedback conference (action E2)

Budgetary changes were also necessary for the hosting of the feedback symposium (see Chapter 8.1).

The operational cost of the restitution symposium was €27,835, instead of the €19,250 initially planned. The quality of the previous seminars, combined with past experiences regarding the pandemic, forced the PNR to carry out a seminar requiring additional expenditure.

Objet	Montant prévisionnel	Montant total
<b>Déplacement</b>	<b>24 500 €</b>	<b>36 418 €</b>
Frais de mission	600 €	- €
<b>Assistance extérieure</b>	<b>11 950 €</b>	<b>18 209 €</b>
Frais pour les participants	2 450 €	3 150 €
Buffet repas pot d'accueil	5 000 €	2 350 €
Communication		7 176 €
Animation de la journée du 06/04/2021		5 533 €
Impression des actes	3 000 €	
Traducteur	1 500 €	
<b>Consommables</b>	<b>- €</b>	<b>17 €</b>
	- €	17 €
<b>Autres coûts</b>	<b>6 700 €</b>	<b>9 609 €</b>
Frais intervenants/organisateurs/invités	4 500 €	3 605 €
Location salle/assurance/location pupitre	1 600 €	5 217 €
Traduction des actes	600 €	679 €
Frais participants		108 €
<b>Total</b>	<b>18 650 €</b>	<b>27 835 €</b>

## 6.3 EVALUATION OF THE PROJECT'S IMPLEMENTATION

### 6.3.1 Evaluation of the methodology applied to the project

The coordination of the project was based on consultations prior to the start of each action. This working method has been successful, particularly in relation to actions A3 and C3.

Indeed, a major consultation stage with the various partners involved in the Prée Mizottière site has enabled difficulties to be resolved and a consensus to be found, leading to the initiation of the regulatory appraisals necessary for the implementation of major works on the maritime side of the Marais Poitevin.

These consultation stages, which were also technical in nature, helped set the right level of expenses for each action.

### 6.3.2 Evaluation of the objectives and expected results

At the end of the project, this chapter provides an evaluation of the implementation of the LIFE Aiguillon Bay project.

The following table compares the results obtained at the end of the project with the initial objectives and the expected results of the initial proposal, using quantitative and qualitative information:

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action A1	<b>Objectives</b>		The preliminary studies were carried out, with a delay in the initial schedule, which in turn delayed the start of the restoration work in this area.
	> Carrying out preliminary studies for the experimental restoration of mudflat habitats	> Achieved	
	<b>Expected results</b>		
	> Wildlife inventory and food web	> Achieved	
	> Regulatory appraisals	> Achieved	
	> Mapping areas of intervention	> Achieved	
	> Raising awareness of the shellfish industry	> Achieved	

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action A3	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Carrying out preliminary studies for the restoration of estuarine habitats at the Prée Mizottière</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Waterworks: Regulatory and technical appraisals</li> <li>&gt; Dyke removal: Regulatory and technical appraisals</li> <li>&gt; Building a platform: Regulatory and technical appraisals</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Not achieved</li> </ul>	<p>A necessary mediation phase allowed this action to be initiated, with some delay:</p> <ul style="list-style-type: none"> <li>&gt; Regulatory appraisals prior to hydraulic developments carried out</li> <li>&gt; Identification of a project manager responsible for carrying out the preliminary studies for dyke repositioning</li> <li>&gt; Unsuccessful study of the regulatory appraisals prior to the development of a platform associated with an unsuccessful technical study</li> </ul>
Action A4	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Carrying out preliminary studies for the restoration of dune habitats</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; The Aiguillon Bay development project</li> <li>&gt; Conducting a user survey</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>The expected items were produced in accordance with the initial schedule.</p>
Action A5	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Establishing better knowledge of the ecology of Anatidae</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Diet: Analysis of over 100 duck crops</li> <li>&gt; Geographical distribution: Capturing and tagging of 42 ducks (instead of the planned 30)</li> <li>&gt; Food resource: Analysis of more than 4000 cores (instead of the 1512 cores initially planned)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Exceeded</li> <li>&gt; Exceeded</li> <li>&gt; Exceeded</li> </ul>	<p>The numerical targets of these studies have been not just achieved, but exceeded.</p> <p>The report analysing all these data presents relevant conclusions that improve our knowledge of the ecology of Anatidae</p>

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action A6	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Better understanding the hydraulic relationships between the Aiguillon Bay, the Marais Poitevin and its catchment area</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Setting up 4 additional measuring stations</li> <li>&gt; Drafting a biannual water newsletter</li> <li>&gt; Scientific publications</li> <li>&gt; Decision support for upstream water management</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Exceeded</li> <li>&gt; Exceeded: 5 newsletters</li> <li>&gt; Partially achieved</li> <li>&gt; Achieved</li> </ul>	<p>At the end of the project, this action achieved its objectives.</p> <p>The number of flow measurement stations is higher than the initial target: 5 measuring stations carried out.</p> <p>5 newsletters dedicated to this topic.</p> <p>Deep analysis of the hydraulic relationships between the Aiguillon Bay, the Marais Poitevin and its catchment area</p>
Action A7	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Drafting the future management plan for the RNN</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; A handbook on water management</li> <li>&gt; Proposed priority areas for coastal setback interventions</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>All documents were produced from the data collected and analysed in actions A5 and A6.</p>
Action C1	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Experimental restoration of mudflat habitats over three years (2017-2019)</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Restoration of 118 hectares of mudflats</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Exceeded</li> <li>&gt; Exceeded</li> </ul>	<p>The preliminary studies have delayed the start of the work. However, additional funding has enabled the project to exceed its initial objectives (100 ha).</p>
Action C3	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Restoration of the estuarine habitats of the Prée Mizottière</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Adaptation of water management on 17 hectares of grassland</li> <li>&gt; Creation of at least 10 hectares of maritime marshes</li> <li>&gt; Creation of wetland habitats for nesting waterfowl species</li> <li>&gt; Creation of a resting area for Anatidae and waders during migration</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Exceeded</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>Waterworks have been built, improving the management of the water level on nearly 20 ha of meadows, conducive to the reception of waterfowl.</p> <p>The work of moving back the dyke was carried out during the summer of 2020, creating 10 ha of marine environment.</p> <p>The development of the observation platform will not be carried out as part of the project.</p>

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action C4	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Carrying out ecological engineering operations</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Restoration of dune habitats (800 mL of protection)</li> <li>&gt; Development of public access and protection of the dunes (2500 mL of protection)</li> <li>&gt; Creation of 1,500 m<sup>2</sup> of dune grassland (70 trees felled)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	Several phases of work have enabled the restoration of 13.6 ha of dune environments and 4.17 ha of salt meadows planted with Obione.
Action D1	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Evaluation of mudflat restoration actions</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Mapping of treated areas</li> <li>&gt; Mapping of potential areas of recolonisation by wild oysters</li> <li>&gt; List of benthic macrofauna species present in each intervention sector</li> <li>&gt; Granulometry on each intervention sector</li> <li>&gt; Mapping and analysis report of bathymetric surveys at Bay-wide level</li> <li>&gt; Prospects for morphological changes in the Aiguillon Bay and the causes of these changes</li> <li>&gt; Cost/benefit analysis of the methodology</li> <li>&gt; Validation of results with oyster farmers</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	The various biological monitoring and topographical surveys before and after the operations carried out on the site made it possible to assess the impact of these works on the populations and natural habitats.
Action D3	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Evaluation of the restoration actions carried out on the Prée Mizottière site</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Expansion of maritime marsh areas</li> <li>&gt; Increased numbers of bluebirds, white stilts and associated avifauna</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	The various biological monitoring projects carried out on the site have made it possible to assess the impact of these works on the populations and natural habitats. An increase in the populations of the target species is observed. Monitoring of breeding birds should be continued in the coming years in order to assess whether the work is improving the attractiveness of the site.

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action D4	<p><b>Objectives</b></p> <p>&gt; Evaluation of conservation actions carried out at the Pointe de l'Aiguillon</p> <p><b>Expected results</b></p> <p>&gt; Increase in populations of target species</p>	<p>&gt; Achieved</p> <p>&gt; Achieved</p>	<p>The various biological monitoring projects on the site have made it possible to assess the impact of these works on the populations and natural habitats.</p> <p>The work carried out has supported the nesting of the species breeding on the site.</p> <p>Continued monitoring of breeding birds is necessary to assess whether the work is worthwhile in the long term.</p>
Action D5	<p><b>Objectives</b></p> <p>&gt; Characterise all the benefits provided by the project to the territory</p> <p><b>Expected results</b></p> <p>&gt; Analyses of the socio-economic and ecosystemic impact assessment of the project</p>	<p>&gt; Achieved</p> <p>&gt; Achieved</p>	<p>Ecosystem services were identified, data were collected, and an analysis was produced in spring 2022.</p>
Action E1	<p><b>Objectives</b></p> <p>&gt; Publicise the operations implemented and the results obtained</p> <p><b>Expected results</b></p> <p>&gt; Communication about the project to professionals, schools, and the general public</p> <p>&gt; Creation of a dynamic network to be maintained after the end of the project</p>	<p>&gt; Achieved</p> <p>&gt; Achieved</p> <p>&gt; Achieved</p>	<p>All communication tools were produced: A project brochure, a travelling exhibition, an illustrated booklet, a photo report, ten videos, a press follow-up, nine newsletters, four animated infographics, a discovery booklet, topical posters and a collection of experiences.</p>



Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action E2	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Publicise the project and encourage discussions about it in order to positively integrate local stakeholders into the process</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; A day for presenting the project</li> <li>&gt; An international seminar on the problem of global warming at the site and methods of coastal defence (2018)</li> <li>&gt; A European seminar on mudflat restoration experimentation (2019)</li> <li>&gt; A final feedback conference</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Replaced by an evening</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>An evening dedicated to the project was attended by over 100 people in 2017, replacing the launch day which could not be organised.</p> <p>The first conference of the project attracted more than 450 participants and more than 800 spectators for the science show (a new experience).</p> <p>The second conference was attended by over 150 people.</p> <p>The third conference was attended by more than 150 participants, with 600 logins on the first day.</p>
Action E3	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Creation of a website</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Creation of a website</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved and exceeded (Facebook)</li> </ul>	<p>The project's website and Facebook page were regularly updated.</p>
Action E4	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Production of an outreach report presenting the results of the project</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Awareness of the project and its results at the national and international level</li> <li>&gt; Replicability of the project's actions on other similar sites</li> <li>&gt; Promote dialogue with new partners and discuss experiences after the end of the project</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>The outreach report has been produced.</p> <p>For example, the science show has been performed in other territories (Narbonnaise PNR, Rochefort, etc.).</p> <p>Stakeholders from other territories have asked the project's beneficiaries to talk about what the project did.</p>

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action E5	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Create a partnership with other European projects</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Meetings with LIFE's support structures</li> <li>&gt; Speakers participate in conferences and seminars held for the project</li> <li>&gt; Invited to speak at other LIFE conferences</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>The PNR has supported several LIFE project leaders.</p> <p>More than 70 participants contributed to the success of the three symposia held within the framework of the project.</p> <p>The beneficiaries have had contacts with several other LIFE projects and have spoken at several conferences.</p>
Action E6	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Creation of information signs about the project</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Putting up signs in strategic locations</li> <li>&gt; QR code to the website on the signs</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>The results of this action are in line with the objectives and timetable.</p>
Action E7	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Make the Prée Mizottière site accessible to the public to allow birdwatching and observation of the landscape</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Creation of an observation post and its access road</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Not achieved</li> <li>&gt; Not achieved</li> </ul>	<p>This action has not been carried out, see action C3.</p>
Action F1	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Achieve good technical, administrative and financial coordination for the project</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Setting up a steering committee</li> <li>&gt; 6 steering committee meetings</li> <li>&gt; Establishment of programme monitoring tools</li> <li>&gt; Drafting of two agreements between beneficiaries and associated beneficiaries</li> <li>&gt; Drafting of agreements between beneficiaries and funders</li> <li>&gt; Preparation of five interim reports and a final technical and financial report</li> <li>&gt; Production of a press kit</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	<p>The coordination of the project is in line with the objectives set by the original project.</p> <p>The various committees set up have enabled the project to be implemented successfully.</p> <p>The set of agreements (partners, funding) has been established.</p> <p>A press review has been produced (Deliverable F1).</p>

Action	Provided for in the proposal	Status at the end of the project	Evaluation
Action F2	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Conducting a financial audit of the project</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Conducting an external audit and evaluation of the project as a whole</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Not achieved</li> <li>&gt; Not achieved</li> </ul>	This action has not been carried out, see action F2.
Action F3	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Production of a "Post LIFE Conservation Plan" report</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Production of a "Post LIFE Conservation Plan" report, attached to the final report</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Achieved</li> </ul>	The "Post LIFE Conservation Plan" report is attached to this final report.
Action F4	<p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>&gt; Evaluating the project's implementation through regular monitoring of several indicators defined by the Commission</li> </ul> <p><b>Expected results</b></p> <ul style="list-style-type: none"> <li>&gt; Improvement of the indicators identified by the Commission between the initial and final project situation</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Achieved</li> <li>&gt; Partially achieved</li> </ul>	The indicators identified by the Commission were filled in at the beginning of the project and at the end of the project.

The project enabled the preparation of preparatory documents for the evaluation of the RNN management plan for the Aiguillon Bay 2013-2022 and the updating of the text of this management plan for the years 2023-2032 (action A7). These documents and this management plan correspond to an operational version of the Marais Poitevin NATURA 2000 Objectives Document, the implementation of which has been entrusted to the PNR by the EPMP, which is responsible for the management of the Marais Poitevin NATURA 2000 sites.

The project was also an opportunity to address a sensitive issue in the Marais Poitevin area, namely adjusting methods for withstanding the effects of climate change. This is because suggesting the retreat of human activity from the Prée Mizottière polder, though small in terms of the space involved, was a major step to stakeholders in the area, who were reluctant to revise their strategies for seaside development. However, this operation has been a success, noted by other regions. In addition, the symposium "Adapting coastal marshes to climate change" held in November 2018 provided scientific arguments on the usefulness of depoldering in the fight against sea level rise, to sceptical local stakeholders.

Finally, this action highlighted the need to raise awareness of climate change issues among the inhabitants of the Marais Poitevin wetland. In this respect, the PNR du Marais Poitevin plans to carry out a LIFE Governance and Information project to raise awareness of the general public and institutional stakeholders in the Marais Poitevin area of the consequences of climate change.

### 6.3.3 A beneficial project extension

The 18-month extension of the project with no financial impact allowed for an evaluation of all the operations carried out. It was essential to allow 6 to 12 months to elapse between the end of the concrete conservation actions and the implementation of the final stages of the monitoring actions in order to measure and evaluate the biological, socio-economic and ecosystemic impacts of the operations carried out on the various project sites.

## 6.4 BENEFIT ANALYSES

### 6.4.1 Environmental benefits

#### 6.4.1.1 Direct and quantitative environmental benefits

The Aiguillon Bay, located on the border between the Vendée and Charente-Maritime, is the outlet for the 600,000 hectare watershed of the Marais Poitevin. The current morphology of the bay is the result of successive dyking of the marsh over the centuries. The classification of the Aiguillon Bay as a National Nature Reserve is due to its exceptional wealth of bird life. The French coastline is a preferred area on the East-Atlantic migration route, and the Aiguillon Bay is a site of prime importance for waterfowl, a direct reflection of the richness and quality of the environment.

To protect this ecosystem, LIFE Aiguillon Bay has deployed different actions at three different sites: the Aiguillon Bay, the Pointe de l'Aiguillon and the Prée Mizottière, in order to meet multiple objectives.

#### Site 1: The Aiguillon Bay

In the Aiguillon Bay, oyster beds called *crassats* have been removed in order to restore the natural habitat of the mudflats (Cor.14; Eur. 28: 1140) and thus stop these *crassats* from acting as sediment traps. The actions have enabled the restoration of nearly 118 hectares of mudflats in the Aiguillon Bay. In addition, 34 tonnes of scrap metal were removed from the mudflats. These actions aim to improve the living conditions of molluscs, a source of food for birds, and thus optimise the ability to accommodate migrating and wintering waders.

#### Site 2: The Prée Mizottière

On the Prée Mizottière, three hydraulic structures have been restored. The restoration of these structures has enabled the farm and the RNN conservationists to collectively manage water levels on nearly 20 hectares of sub-moist grassland (Eur. 15: 1410, 1330) of the farm. Thus, a thin layer of water is maintained in spring on these grassland areas, constituting a resting area that is very favourable for migratory birds, such as Anatidae and waders.

Work to retreat the dyke has been carried out and has protected the site while creating 10 hectares of future maritime salt meadows (Eur. 15: 1130, 1330) with the aim of restoring the habitats present on the site and maintaining extensive farming activity, which is favourable to the development of biodiversity in the meadows.

#### Site 3: The Pointe de l'Aiguillon

On the Pointe de l'Aiguillon, restoration work has been carried out on several sites, enabling the preservation of nearly 17.7 hectares of natural habitats, including 13.6 hectares of dune environments (Cor. 16.22 Grey dunes; Cor. 15.35 Sand meadow; Eur15 1140 and 1210 Sand beach; Eur15 2110 Embryonic dune; Eur15 2120 Mobile dune; Eur15 2130 Grey dune) and 4.17 ha of salt meadows planted with *Obione* (Cor. 15.621). More than 100 m<sup>3</sup> of waste was exported (stumps, invasive plants, fences, bitumen) as well as almost 100 tonnes of concrete blocks, bitumen and scrap metal.

Landscaping was also carried out to redirect the public. Nearly 1,000 metres of fences have been installed or repaired and over 1,000 metres of smooth wire have been put in place. Finally, almost 6,000 m<sup>2</sup> have been closed to the public in order to preserve the salt meadows.

At the end of the Pointe de l'Aiguillon, an awareness and orientation sign was revised, and awareness signs were also installed about the preservation of the nesting sites of the Kentish Plover, as were informative signs explaining why

access to a small part of the Pointe de l'Aiguillon site was being closed.

Various scientific studies have also been carried out to gain new knowledge about the use of the site by wintering Anatidae. In total, about 56 ducks were fitted with transmitters. Nearly 12,000 cores were collected to identify the most nutritious areas and nearly 150 duck crops were analysed to learn about their diet.

Inventories of the benthic fauna, studies of the sediments and the topography of the site as well as monitoring of the water quality and the variation in salinity within the bay were also carried out in order to understand how the health of the Bay was changing.

#### 6.4.1.2 [Qualitative environmental benefits](#)

The removal of crassats has restored mudflat habitats and improved the living conditions of molluscs, a source of food for birds, and thus optimised the ability to accommodate migrating and wintering waders.

At the Pointe de l'Aiguillon, the habitat restoration work carried out, such as the restoration of dune habitats, the installation of public access facilities and the protection of the dunes, has made it possible to reduce the degradation of habitats caused by foot traffic and to redirect the public. This will eventually increase the range of flora on the site and thus encourage passerines and nesting birds, including certain heritage species such as the Bluethroat (*Luscinia svecica*), the Kentish Plover (*Charadrius alexandrius* - 5 to 10 breeding pairs at the Pointe de l'Aiguillon) and the Tawny Pipit (*Anthus campestris* - 5 breeding pairs).

At the Prée Mizottière, the work of moving back the dyke has made it possible to protect the site while creating maritime salt meadows with the aim of restoring the habitats present on the site and maintaining extensive farming activity, which is favourable to the development of biodiversity in the meadows. The development of hydraulic structures has also made it possible to reinforce the hygrophilic character of the restored meadows with the aim of optimising water management for the benefit of avifauna. These actions will ultimately benefit the avifauna, as they will improve the conditions for the settlement of species through the development of a range of flora favourable to Anatidae and waders.

These biological monitoring actions (actions D1, D3 and D4) will be continued within the framework of the Observatory of the Natural Heritage of the Marais Poitevin, created within the framework of the LIFE04 NAT/FR/00087 project, in order to evaluate the long-term impacts of the various actions undertaken in the LIFE Aiguillon Bay project.

The Post-LIFE conservation plan, attached to this final report, includes several biodiversity monitoring actions, which will be carried out by the RNN conservationists and the RNP after the end of the project in order to secure the environmental benefits gained during the project's implementation (see Deliverable F3).

#### 6.4.2 [Economic benefits](#)

The LIFE Aiguillon Bay project, like most Life projects, has enabled public and associative structures, beneficiaries of the project, to retain employees already in post but also to recruit new people to jobs entirely or partially devoted to LIFE.

The direct jobs are those of the project beneficiaries: The Marais Poitevin Regional Nature Park (PNRMP), the French League for the Protection of Birds (LPO) and the French Biodiversity Agency (OFB). All these jobs have been determined as well as their nature (permanent, fixed-term, internship, etc.). Eight people have benefited from contracts created specifically for LIFE, including one full-time staff member, currently on an open-ended contract at the LPO.

The full-time equivalents achieved by the three project beneficiaries for each year were calculated. Since its launch in 2016, the project has averaged 3 FTEs per year.

Five training courses benefited employees working on the project, enabling them to acquire new knowledge and skills needed for their jobs (see Deliverable D5).

This project has been an economic boost not only for the LIFE beneficiaries, but also for those involved as providers. Indeed, many companies have been able to increase their activity in a difficult economic context due to the pandemic between 2019 and 2021 (see Deliverable D5). Some innovative schemes, which have been replicated, have also seen the light of day thanks to this project and have also enabled an economic boom for the structures behind these new ideas.

The Baie de l'Aiguillon LIFE project has helped the local economy to prosper with over 75% of expenditure made in the departments of Charente-Maritime, Deux-Sèvres, and Vendée. The project also invested nearly 17% of its expenditure in tools designed to promote the project's actions and raise awareness among the general public, elected officials, and decision-makers about climate change and the biodiversity of the environments targeted by the project.

### 6.4.3 Social benefits

#### 6.4.3.1 [Improved safety conditions for individuals at the project](#)

With regard to the safety of individuals, feedback from users of the Prée Mizottière on the moving of the dyke and from the general public on the removal of concrete blocks from the Pointe de l'Aiguillon provided interesting information.

The concrete blocks on the Pointe de l'Aiguillon site are remnants of a former sand extraction business. These blocks increase the disturbance of the environment by encouraging visitors to trample the salt meadows to get as close as possible. At the Pointe de l'Aiguillon, 92 tonnes of concrete blocks were removed to make the environment and the general public using the site safer.

In 2010, the Xynthia storm completely flooded the Prée Mizottière farm, destroying the existing protective dikes. The action of moving the weakened dyke has made it possible to depolder an area of 10 hectares of grain crops and convert it into an area of 10 hectares of natural environment. It also makes the site more secure.

#### 6.4.3.2 [Improving awareness](#)

LIFE projects include many actions to raise awareness among the general public, elected officials and decision-makers. This is done through events organised to present the project or to exchange views on common themes during conferences and seminars, and through the development and distribution of paper and digital communication tools. Behavioural change of targeted audiences is also an indicator investigated in this study.

Numerous awareness-raising events have been organised as part of the LIFE Aiguillon Bay project:

- 3 symposiums have raised awareness among approximately 1500 people
- The “Hé... la mer monte!” (Hey... The Sea Is Rising!) science show, held seven times (Rochelle (3), Rochefort, Niort and Luçon, Narbonne), raised awareness among more than 2,600 people
- More than 100 presentations of the project or its actions at outside events, raising awareness among more than 4,200 people, including the following examples: the presentation of the project at Interlifes (Alpilles), the

presentation of the project to the participants of the "Coastal Management" symposium held by the British Institution of Civil Engineers and the British Environment Agency, and the presentation to the delegation of European affairs of the Pays de Loire Region.

Though most of the events took place in France, it is important to highlight the presentations made abroad:

- Spain: Life Blue seminar, presentation of mudflat restoration work
  - Italy: LIFE SeResto final symposium, "Mudflat restoration" in Rome
  - Puerto Rico: ASLO Conference, Presentation of the water study
  - Lithuania: IUGB conference: Presentation of the duck study
  - Scotland: Coastal Ecology Workshop: Presentation of the duck study
- 20 interventions in naturalist school courses, which have raised awareness among 426 people, including the following examples: Presentation of LIFE actions to the Master 2 UBO Brest, presentation of LIFE actions to the Lycée agricole des Etalières.

More than 8,700 people were thereby reached directly during the various events and awareness-raising activities carried out as part of the LIFE Aiguillon Bay project.

In addition to this figure, there were meetings to present the project to technical partners and funders.

#### 6.4.3.3 [Improved communication](#)

Numerous communication tools have also been developed in order to communicate and promote the project's actions (see action E1).

- 1 website created for the LIFE Aiguillon Bay project: 25,000 visits
- 10 videos and 4 infographics were produced and posted on the LIFE Aiguillon Bay project Facebook page as well as on the platforms Vimeo and Youtube. They have almost 23,000 views. These videos were made with the aim of presenting the project and the operations undertaken, to improve knowledge on specific topics via animations, and to enhance the value of public events carried out, e.g: The conference "Adapting coastal marshes to climate change"
- 1 Facebook page dedicated to LIFE was created at the beginning of the project. 1,350 people have subscribed to the page
- 1 travelling exhibition consisting of 24 panels, which was hosted in 20 facilities and raised awareness among more than 7,000 people
- 1 book "Aiguillon Bay" published in 1,500 copies, distributed for example to all schools in Marais Poitevin and libraries
- 1 LIFE brochure was printed and distributed in 2,000 copies
- 9 LIFE newsletters published in 1,800 copies
- 1 discovery booklet printed in 2,000 copies
- 3 awareness signs have been installed on the Pointe de l'Aiguillon
- 3 vertical signs were created

A number of high-quality communication tools have been produced as part of the LIFE Aiguillon Bay project. In total, more than 90,000 people have been directly reached by the tools put in place.



#### 6.4.3.4 [Improved media coverage](#)

Within the framework of the project, the communication actions of the project have often led the press and the media to approach the beneficiaries in order to carry out various reporting. In total, during the LIFE period, at least:

- 16 radio appearances
- 54 articles published on websites
- 56 articles published in online/print newspapers
- 22 TV reports or online videos
- 8 articles published in specialist magazines
- Other communication tools (municipal newsletters, activity reports from financial and technical partners, etc.).

#### 6.4.3.5 [Behaviour change of target audiences](#)

As part of the LIFE project, questionnaires were carried out in early 2022 to gather information about behavioural change in targeted individuals. These surveys have highlighted changes in behaviour (see Deliverable D5):

- Change in the behaviour of users of the Pointe de l'Aiguillon site with regard to the fences and wires installed in order to improve movement within the site and reduce the trampling of natural habitats
- Change in behaviour of the general public on the beaches during the egg-laying period of the Kentish Plover following the installation of the signs
- Change in behaviour of hunters and anglers

#### 6.4.3.6 [Cooperation and social cohesion](#)

LIFE projects aim to enable a wide range of organisations to work collaboratively among beneficiaries but also with stakeholders in the study sites. In some cases, there are tensions between stakeholders, and holding meetings within the framework of LIFE projects has shown that the project has helped to ease certain conflicts or differences of opinion.

### 6.4.4 [Innovation and demonstration value](#)

The development of innovations within the project has created opportunities for the company involved in the research and development of oyster bed removal using an amphibious excavator. The Science Show for the general public was also a real innovation in terms of communication within the LIFE projects. Testimonies and feedback have been collected to allow for their analysis (see Deliverable D5).

#### 6.4.4.1 [Innovation at sea](#)

In order to restore the Aiguillon Bay mudflat, old oyster structures and the Japanese oysters present had to be removed. In order to be able to move on both water and mud, a 20-tonne amphibious excavator mounted on 2 floats and equipped with a crusher was designed by the company SAS CTAT.

In 2021, the machine was upgraded to include a claw directly for removing oyster-farming tables and a front-end crusher to be able to crush oysters while moving forward, thus processing more linear metres per day.



Figure n°8: Amphibious excavator in action to restore mudflats

#### 6.4.4.2 [Innovation on land: Centre stage!](#)

The “Hé... la mer monte!” (Hey... The Sea Is Rising!) science show, including Éric Chaumillon (researcher), Mathieu Duméry (actor, writer and journalist) and Guillaume Bouzard (cartoonist, author), was first performed at the Espace Encan in La Rochelle during a conference on adapting coastal marshes to climate change, held by the Marais Poitevin PNR and its partners. This new concept presented to the general public was a real success and was replayed several times in 2019 (Rochefort, Niort, Francfolies de La Rochelle, Luçon).

Based on this success, the book “Hé... la mer monte!” was published in October 2019, co-published by Plumes de Carottes and the Marais Poitevin PNR with the same protagonists, and sold a few thousand copies.

In November 2019, the Marais Poitevin PNR held a second symposium at the Espace Encan in La Rochelle (outside LIFE) on coastal risks in the face of climate change. For this occasion, a second science show was designed. This second science show, “La mer contre-attaque” (The Sea Strikes Back), brought in a second actor, Max Bird, who is committed to environmental causes, to freshen the concept. This popular science format was again a great success.

In 2020, the science shows “Hé... la mer monte!” and “La mer contre-attaque” were scheduled to be staged throughout France, but these performances were cancelled due to the Covid-19 pandemic.

In October 2021, the book version of “La mer contre-attaque!” was co-published by Plumes de Carottes and the Marais Poitevin PNR with the same protagonists.

Lastly, in 2022, the tour of the science show “Hé... la mer monte” was reprised to be performed at other coastlines.

#### 6.4.5 [Replicability, transferability, cooperation](#)

Following the development of its amphibious excavator, the contractor was contacted by several local authorities.

The project has established a strong partnership between the ONCFS, IFREMER and the EPMP around qualitative and quantitative studies of the waters of the Aiguillon Bay. Without the LIFE project, this partnership would not have been possible.

The PNR has pooled its financial resources to host a major symposium with two other partners (action E2). It was able to build a large-scale event that reached over 1,200 people.

The “science show” featuring Éric Chaumillon (a university professor), Professor Feuillage (a video actor who raises awareness of social issues) and Guillaume Bouzard (a nationally known comic book artist) toured France. Since 2020, the shows have been organised by a production company based in La Rochelle.

#### 6.4.6 Policy implications

Action A7 carries this objective, but it will be implemented in the last year of the project, so it is not possible at this stage to assess the impact of the project on local policies.

The implementation of actions A1, C1, D1, A5, A6 and A7 has enabled a better characterisation of the functionality of the Aiguillon Bay.

The conclusions of these studies have contributed to the preparation of preparatory documents for the evaluation of the RNN management plan for the Aiguillon Bay 2013-2022 and, above all, will enable the updating of the drafting of this management plan for the years 2023 to 2032 (action A7).

The objective of this document and of the management plan for the Aiguillon Bay RNN is the conservation of the natural heritage and compliance with the European directives associated with this environment. Indeed, the RNN is included in the Natura 2000 site of the Marais Poitevin and corresponds to part of the coastal fringe of the Marais Poitevin. However, the RNN management plan is considered to be an operational version of the Natura 2000 objective document for the Marais Poitevin, the implementation of which has been entrusted to the PNR by the EPMP, which is responsible for managing the Natura 2000 sites in the Marais Poitevin.

It should be noted that the LIFE Aiguillon Bay project has played a role in providing financial leverage for action A6, the objective of which is to better understand the hydraulic relations between the Aiguillon Bay and its catchment area, by enabling the emergence of a second action programme led by the EPMP which is dedicated to assessing the volumes of water discharged by the catchment area into the Aiguillon Bay.

## 7. KEY PROJECT-LEVEL INDICATORS

The final actual values of the different project indicators are entered into the online KPI database (<https://webgate.ec.europa.eu/eproposalWeb/kpi>).

The area-based targets of natural habitats to be restored or preserved have been achieved. The restored mudflats are even larger than initially planned (118 ha instead of 100 ha restored). The various works have improved the initial situation of the project sites.

The changes in amphibian and bird populations reported are not only due to the operations carried out within the framework of the project, a large number of other factors can partly explain the trends in certain target species.

The number of partnerships developed during the project is much higher than initially envisaged: More than 20 different partners worked on the project's actions.

More than 90,000 people have been impacted by the project through the various awareness-raising and communication tools developed as part of the project.

The objectives of the website dedicated to the LIFE Aiguillon Bay project have been exceeded. The project website has been visited more than 25,000 times. The initial target was to reach 1000 people by the end of the project.

The final number of publications (31), print media articles (64), websites developed by the project (5), video and print media (46) is significant.

A large number of events and meetings were held within the framework of the project (115).

The three symposia organised as part of the project were all successful, with more than 2,250 people reached through these three events.

## 8. COMMENTS ON THE FINANCIAL REPORT

The financial report of the project includes the statement of expenditure and income of each beneficiary of the LIFE Aiguillon Bay project and their certificates, attached to this report:

- Annex 06 – Financial statement of individual beneficiary PNR
- Annex 07 – Financial statement of individual beneficiary LPO
- Annex 08 – Financial statement of individual beneficiary OFB
- Annex 09 - Payment request
- Annex 10 - Cost summary
- Annex 11 - Income summary
- Annex 12 - Consolidated financial statement
- Annex 13 - Statement of payments from EU
- Annex 14 - Life financial reporting, PNR (Excel file)
- Annex 15 - Life financial reporting, LPO (Excel file)
- Annex 16 - Life financial reporting, OFB (Excel file)
- Annex 17 - Life financial reporting, Consolidated (Excel file)

In addition, the certificates of the three project beneficiaries are presented in the following annexes:

- Annex 18 - PNR Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)
- Annex 19 - LPO Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)
- Annex 20 - OFB Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)

### 8.1 SUMMARY OF COSTS INCURRED

Budget breakdown categories	Budgeted costs in €	Costs incurred from the start date in € 01/01/2016 to 30/06/2022	% of Budget
<b>1. Personnel</b>	671 391,00	782 105,40	116,49%
<b>2. Travel and subsistence</b>	32 284,00	17 269,47	53,49%
<b>3. External assistance</b>	951 316,00	1 117 985,93	117,52%
<b>4. Durable goods</b>			
<i>Infrastructure</i>	320 000,00	266 843,86	-
<i>Equipment</i>	110 340,00	105 247,99	95,39%
<i>Prototype</i>	-	-	-
<b>5. Land purchase / long-term lease</b>	-	-	-
<b>6. Consumables</b>	16 310,00	4 130,06	25,32%
<b>7. Other Costs</b>	64 460,00	55 025,39	85,36%
<b>8. Overheads</b>	151 626,00	164 402,57	108,43%
<b>TOTAL</b>	<b>2 317 727,00</b>	<b>2 513 010,66</b>	<b>108,43%</b>

## 8.1.1 Comments on the budget item : Staff

### 8.1.1.1 Clarification of staff cost calculations

Staff involved in the implementation of the LIFE Aiguillon Bay project have been reported under this expenditure category. Internship stipends have also been included in this budget item.

The cost of the staffing envelope is determined by the following **two methods**:

#### Method 1: Hourly rate multiplied by the actual number of hours worked

The calculation of the hourly rate is defined according to the following three values:

##### 1.1. Annual productive hours

- The total annual productive hours of each employee are recorded in timesheets signed by the employee and a supervisor.
- A default value of 1720 total annual production hours is used for staff working less than two full days per month on average in a calendar year. The PNR agents affected by this second option are: Alain Texier (PNR) as of 2018, Dominique Giret, Technical Director (PNR), Séverine Le Ridant, Communication Officer (PNR), Nicolas Beaubeau, Environmental Technician (PNR), Valérie Rousseau (Communication Assistant)

##### 1.2. Actual salary

For employees, the annual salary taken into account corresponds to the total gross real remuneration and the employer's share of social security contributions (on pay slips).

**For the PNR**, the personnel costs not taken into account in the calculation of the real salary correspond to:

- The amount relating to the hours not worked in 2015 and paid in 2016 in the framework of the agents' Time Savings Contracts. For subsequent years, the amount relating to the Time Savings Contract is included in the statement.
- The employer's participation in the provident fund: The PNR covers part of the contribution paid by staff for their supplementary social protection. In accordance with the decision of 15 January 2014, the gross monthly amounts are set at €8 for category A staff. The employer's charges on this benefit are also removed from the calculation. Until now, the PNR had wrongly considered these costs to be ineligible. However, from 2019 onwards, these costs have been taken into account when calculating actual salaries, on the recommendation of NEEMO. Incorporating this information into the calculation of the real eligible salaries for years 2016, 2017 and 2018 would entail a significant workload, so the PNR has decided not to proceed with these modifications (except for Alain Texier in 2018).
- Elise Chourré's annual salary supplement in 2021.

**For the OFB**, the personnel costs not taken into account in the calculation of the real salary correspond to:

- The "Sundays off" allowance, relating to Sundays worked in December 2015 and removed from the total gross cost for January 2016.
- Charges related to the "benefit in kind" of the agent Jacques Marquis. This agent has been granted housing as an absolute necessity of service. An employer who provides accommodation to an employee free of charge must assess a benefit in kind for accommodation and pay social security contributions on it. This staff member pays his dues once a year in February.
- Régis Gallais' risk premium and associated charges corresponding to the year 2019 in the calculation of the 2020 daily cost.
- The allowance and associated charges corresponding to Régis Gallais' 2019 time bank (CET) days in the 2020 daily cost calculation.

For trainees, the actual salary is the traineeship bonus. This allowance is exempt from social security contributions.

### 1.3. Productive hours worked on the project

Only the costs of actual hours worked on the project are taken into account.

- In most cases, actual hours are recorded in timesheets signed by a supervisor.
- For staff working less than two days per month, a certificate from the head of the organisation validates the hours worked on the project in the light of the staff member's schedule.

### Method 2: Calculation on the basis of a full-time job or percentage assigned to the project

For staff (employees or trainees) working full-time on the project or on a percentage of their time defined in the contract, the eligible salary cost will be calculated proportionally on the basis of the actual annual salary (defined as for method 1).

The agents affected are the following:

- Laurine Bouffandeau, Anatidae officer, 100% contract (ONCFS)
- Maud Lardon, carrying out coring and filtering of sediments, 100% contract (ONCFS)
- Elise Coignot, water study and popular science outreach officer, 100% contract (OFB)
- François Cavallo, duck study officer, seed analysis, 100% contract (OFB)
- Natacha Lorand, policy officer (OFB), 100% contract
- Mathieu Duméry, artist, 100% contract (no employees PNR),
- Rémi Bruneau, intern, 80% agreement (PNR),
- Fanny Journaux, intern, 100% agreement (PNR)

### Calculation of the hourly rate

The hourly rate, calculated on an annual basis, is obtained by dividing the actual gross annual salary plus the employer's share of compulsory social security charges and any other statutory costs included in the remuneration of the staff by the total number of annual production hours.

In general, for trainees, the hourly rate of the gratuity is equal to 15% of the Social Security cap, i.e. €3.60 in 2016 and €3.75 in 2018.

Hourly rates are calculated on an annual basis.

### Calculation of the daily rate

This rate is calculated on the basis of the theoretical number of hours worked by staff per day.

### For 2022

The daily cost in 2022 is the same as in 2021, except for staff who did not work in previous years.

### 8.1.1.2 [Comments on the “Staff” budget item for Marais Poitevin Regional Nature Park](#)

The rate of expenditure realised on the PNR budget item "Staff" at the end of the project is 116.49%

#### (1) Agents

The overall implementation of the project relied mainly on three permanent staffers:

As a reminder, a LIFE Bay coordinator was included to ensure the technical implementation and coordination of the project. Due to a worsening budgetary context, the PNR wished to rely on agents already on their payroll.

EASME validated this modification by email dated 08/12/2015. This position was therefore filled internally by:

- Loïc Chaigneau, project coordinator, who was responsible for the general coordination of the project, as well as for the implementation and technical monitoring of the majority of the actions led by the Park, and for promoting and communicating about the project.
- Alain Texier, Natura 2000 project manager, who was responsible for the implementation and technical monitoring of the dune restoration work at the Pointe de l'Aiguillon, took part in the fieldwork for the duck study and in the hosting of project-related events.

There were also:

- Elise Chourré, project coordinator, who was responsible for the administrative and financial monitoring of the overall project, and for the implementation of certain actions, particularly in relation to communications and the ecosystem study.

Additional staff, not initially foreseen, were brought in to reinforce certain actions:

- In 2016, an intern, Rémi Bruneau, managed the tourist visitation study. The recruitment of an intern was essential given the time needed for field surveys (Action A4).
- In 2017, three staff members working no more than two days per month were declared on the project. They are Séverine Le Ridant (communication officer for the 2018 conference, Action E2), Nicolas Beaubeau (environmental technician, works manager for the waterworks of the Prée Mizottière, Action C3), and Dominique Giret (technical director, operations supervision, Action F1).
- In 2018, an intern, Fanny Journaux, was recruited by the Park to support the ONCFS in the operational implementation of the Anatidae study in conjunction with the Reserve's staff (Action A5).
- In 2018, for the purposes of the public event "Hé...la mer monte!", at the conference, the PNR recruited an artist, Mathieu Duméry. This mission is included in the "non-employee staff" section (Action E2). This staffer was given a fixed-term employment contract via the GUSO hiring system for live performances.
- In 2022, two staff members working no more than two days per month were declared for the programme. They are Séverine Le Ridant (Communication Officer for the final conference, Action E2) and Valérie Rousseau (Communication Assistant for the final conference and final communication materials, Actions E1 and E2).

#### (2) Time allowed

Among the actions that took more time than originally planned:

- Action C3: The administrative constraints linked to the works on the Prée Mizottière dike led to higher coordination costs.
- Action E2: The PNR wanted the conferences to be more ambitious than initially planned, in order to reach the biggest possible audience. The creation of a science show, linked to the 2018 conference, is included in this action's events.
- Action F1: The extension of the project by 18 months necessarily resulted in more longer coordination time.

#### (3) Daily cost

The daily costs of the agents do not significantly exceed those initially estimated (€230).

The initial dossier therefore provided for the recruitment of a LIFE coordinator (€230/day). In the end, this position was filled internally by Loïc Chaigneau in conjunction with Alain Texier. Only Loïc Chaigneau exceeds the cost initially planned in 2020 (+0.73%).



Agent	Initial cost	2016	2017	2018	2019	2020	2021	2022	Max. increase
<b>Initially planned</b>									
Loïc Chaigneau	€230	€198.78	€191.40	€194.51	€209.29	€231.69	€212.12		+0.73 %
Alain Texier	€230	€208.29	€196.58	€204.90	€207.89	€214.82	€223.44		-
Elise Chourré	€230	€197.46	€217.23	€210.34	€206.19	€217.13	€216.90		-
<b>Not initially planned</b>									
Nicolas Beaubeau	-		€165.23						
Séverine Leridant	-		€166.80					€178.22	
Dominique Giret	-		€286.18						
Valérie Rousseau	-							€173.69	

No agent significantly exceeded the daily cost initially planned.

#### 8.1.1.3 [Comments on the LPO's "Staff" budget item](#)

The rate of expenditure on the LPO budget item "Staff" by the end of the project is 109%.

#### (1) Agents

19 agents were involved in some way in the project, including:

- **Olivia Mercier** joined the Aiguillon Bay RNN team as the National Nature Reserve's project manager in January 2017. She left her job at the end of 2018, replaced by **Louise Froud** from 2019 on an open-ended contract within the Reserve. Louise Froud has also taken over the tasks of the project from Jacques Marquis (ONCFS), who retired in 2019. She worked full-time on the project.

For information:

- **Guillaume Roy** arrived and replaced **Grégory Garandeau** as of 3 February 2020 for the financial management of the project.
- **Anne Confoland** replaced **Yann Hermieux**, who has retired, as Head of Publishing.

Additional staff, not initially foreseen, were brought in to reinforce certain actions:

- **Emmanuelle Champion** was in charge of managing the contracts for studies and work on mudflats restoration in 2016 and 2017 (Action A1).
- **Hervé Roques** participated in the production of the LIFE presentation brochure: Writing text, design (Action E1).
- **Fabien Ratelet** participated in the design of the discovery booklet (Action E1). Another graphic designer was initially planned.
- **Alice Goosens** and then **Florent Bignon** were involved in carrying out the ecosystemic and socio-economic studies. This work was initially to be carried out as an external service by the PNR. The use of the TESSA tool, and the proven skills of the LPO in this method, made it possible to carry out these studies on a contract basis (Action D5). This modification was accepted by EASME in a letter dated 11/07/18.
- **Isabelle Chesnot**, service assistant, was tasked with organising the "coastal restoration" conference: Invitations, meal reservations, communication, conference reception, etc. (Action E2).
- **Sylvie Thieux** arrived in 2020 to assist Guillaume Roy with administrative and financial matters (Action F1).

The following staff time is not included in the project, but justifies some expenditure in the categories "consumables" and "other costs".

- A large part of the coordination was also provided by the LPO Conservationist of the RNN: Frédéric Corre from January 2016 to September 2018, then by Jean-Pierre Guéret from October 2018 to June 2022. Sylvain Haye, a Reserve agent, and Pamela Lagrange also took part in implementing certain actions (notably Anatidae monitoring, work at Pointe de l'Aiguillon, and organising events).

## (2) Time allowed

Some actions initially mentioned little or no LPO time. However, the field and analytical constraints required the skills of this beneficiary. The LPO was therefore heavily involved in the following actions:

- Action A5: Study of the use of the Aiguillon Bay and surrounding marshland by wintering Anatidae (taking core samples, analysis)
- Action A6: Monitoring water quality in Aiguillon Bay (sampling at sea)
- Action D3: Biological monitoring of the Prée Mizottière site
- Action D4: Biological monitoring after work on the Pointe de l'Aiguillon
- Action D5: Socio-economic and ecosystemic impact assessment of the project
- Action E5: Participation in network facilitation, hosting of groups, presentations at external conferences, including seminars of other LIFE projects

## (3) Daily cost

Agent	Initial cost	2016	2017	2018	2019	2020	2021	Max. increase
<b>Initially planned</b>								
Travichon S.	€260	€267.01	€269.48	€264.10	€273.18	€300.76	€427.50	+64.42 %
Barreau A.	€223	€183.68	€190.21			€197.97	€198.44	-
Rousse C.	€135		€152.77			€146.88		+13.16 %
Aribert D.	€497	€450.23	€469.82	€479.81	€508.99			+€2.4
Champion E.	€200	€322.41	€255.78					+61.00 %
Robin F.	€178			€200.86	€169.31	€194.63	€164.78	12.86 %
Garandeau G.	€174	€174.02	€181.70	€180.89	€185.50	€185.50		6.6 %
Ratelet F.	€178				€141.96			-
Roy G.	€174					€134.31	€134.23	-
Mercier O.	€202	€144.03	€139.07					-
Froud L.	€202				€130.71	€126.18	€137.52	-
Lefort T.	€181		€173.31	€185.76	€189.71	€193.56		6.93 %
Hermieu Y.	€327	€253.44	€251.54	€261.15	€270.51			-
Confoland A.	€327						€223.13	-
<b>Not initially planned</b>								
Roques H.	▪	€194.69						-
Bignon F.	▪			€127.61	€129.35	€138.81	€173	-
Goosens A.	-			€170.26				-
Thieux S.	-					€183.83	€124.43	-
Chesnot I.						€205.70		-

- **Ségolène Travichon** is head of the protected areas department. Her projected daily cost in 2016 was €260. In 2021, her daily cost was €427.50, an increase of 64.42% compared to the forecast. This agent was on sick leave for several months and subsequently became part-time for health reasons. LPO employees have no loss of pay during sick leave. Under its benefits package, the LPO pays the employee their full salary, including for the waiting period (*jours de carence*) and the balance of payment with social security and *prévoyance* insurance (for leave lasting more than 3 months).
- This was also the case for agent **Emmanuelle Champion**, Natura 2000 coordinator, in charge of RNN studies. In 2016, its daily cost is €322, which is 60% more than the forecast amount (€200). This is due to the fact that Emmanuelle Champion, who has been employed at the LPO since 1992, was not initially designated for this position within the project. This agent was on sick leave for several weeks and became part-time for health reasons for 4 months in 2016. In 2017, the daily cost was €255.78. Emmanuelle Champion's daily cost also

exceeds 20% for 2017. This is mainly due to her one-month sick leave (15/01 to 09/02). It is worth noting that LPO employees have no loss of pay during sick leave. Under its benefits package, the LPO pays the employee their full salary, including for the waiting period (*jours de carence*) and the balance of payment with social security and *prévoyance* insurance (for leave lasting more than 3 months).

- For information, **Gregory Garandeau** left his job on 31 January 2020 using his paid leave. The daily rate was deemed inadmissible. The hourly cost taken into account is that of 2019.

#### 8.1.1.4 [Comments on the OFB's "Staff" budget item](#)

The rate of expenditure on the ONCFS/OFB budget item "Staff" by the end of the project is 123%.

### (1) Agents

- **Emmanuel Joyeux**, conservationist at the National Nature Reserve, was replaced in 2020 by **Régis Gallais**.
- **Jacques Marquis**, technician, retired. The tasks he held within the project were subsequently carried out by **Louise Froud** of the LPO.
- The position of "Anatidae project manager" was carried out by three agents, whose missions are relating to studying the diet of ducks
  - **Laurine Bouffandau**: Sorting and analysis of soil cores
  - **Maud Lardon**: Coring and filtering of sediments
  - **François Cavallo**: Seed determination
 This item was supplemented by a service in 2020. This possibility was specified in the "Constraints and assumptions" section of Action A5.

During the course of the project, two additional agents joined the project for the following reasons:

- The water quality study (Action A6) was carried out by a scientific research organisation, IFREMER. Given the complexity of the subject, it quickly became necessary to put the results obtained in a form laypeople could understand, in order to communicate the study results to decision-makers, managers, marine professionals and the general public. **Elise Coignot**, who is skilled in the field of water quality, was therefore recruited for a period of 6 months to carry out this mission.
- The OFB then recruited **Natacha Lorand** to finalise this mission of putting the water quality study's scientific results into an understandable form and, in parallel, to produce the handbook on the hydraulic management of the territory.
- It should be noted that Louis Marsaud, in civil service at the RNN, participated in the organising team of the final conference. The time spent has not been included in the project, however it justifies expenditure under the category "Other costs".

### (2) Time allowed

The time spent by ONCFS/OFB was higher than initially estimated for permanent staff. This is due in particular to the Anatidae study for the following reasons:

- Modification of the coring protocol (added a sampling site)
- Initial underestimation of time spent in the field
- The cores were to be stored by freezing before sieving and analysis. Due to the lack of storage facilities, it was decided to start sieving and oven-drying the core samples in 2017. This required additional time and in 2017 and 2018, in particular, the recruitment of a temporary employee, Laurine Bouffandau;
- Much longer catch period. Indeed, the weather conditions and the low number of birds never allowed for optimal management (i.e. a lot of catches in one go) that would have allowed several ducks to be fitted with transmitters quickly. This capture was therefore done in dribs and drabs every morning from November to February. Ideally, many birds should have been captured in the shortest possible time to reduce the workload.
- Continuation of the Anatidae monitoring campaign for another year

**(3) Daily cost**

Agent	Initial cost	2016	2017	2018	2019	2020	2021	2022	Max. increase
Originally planned									
E. Joyeux	€284	€274.18	€250.18	€268.32	€385.46				+35.72 %
J. Marquis	€283	€313.44	€305.88	€419.59					+48.26 %
R. Gallais						€276.90	€269.47		-
Anatidae Project Manager	€290	€104.22	€94.62	€128.75	€128.12				-
Additional jobs									
E. Coignot						€162.39			-
N. Lorand								€146.35	-

- **Emmanuel Joyeux**, was appointed as engineer as of 03/03/2017. The increase of 48.26% is linked to a salary recall for her professional development since that date.
- **Jacques Marquis** drew on his time savings account when he retired in October 2019, which explains the daily cost exceeding 20% of the forecast.

## 8.1.2 Comments on the budget item: Travel and subsistence expenses

### 8.1.2.1 Comments on the budget item "Travel and subsistence expenses" of the Marais Poitevin Regional Nature Park

The rate of expenditure on the PNR budget item "Travel and subsistence expenses" at the end of the project is 48%.

In general, LIFE staff used the Yaris hybrid vehicle acquired in the project. The costs of this vehicle are reported under "consumables" for fuel (with supporting documents until 2018) and "other costs" for maintenance, insurance, etc.

For the rest, PNR staff fill out expense reports used to support:

- (1) Reimbursement of mileage expenses related to the use of personal vehicles when conditions do not allow for the use of the LIFE Yaris hybrid vehicle (vehicle already reserved in particular within the framework of the project), under the following conditions:

Power of the vehicle for tax purposes	Up to 2000 kms per year	From 2001 to 10,000 km per year	Over 10,000 km per year
5 hp and less	€0.18	€0.25	€0.31
6 to 7 hp	€0.23	€0.32	€0.39
8 hp or more	€0.25	€0.35	€0.43

- (2) Mission allowances

Expense account allowances	Mission Paris/Dept77/92/93/94 and municipalities with more than 200,000 inhabitants*	Mission in Province
Parking/tolls	Actual cost	Actual cost
Meals	€15.25	€15.25
Overnight stay	€60	€45
Daily allowance (one night + 2 meals)	€90	€75.50

- (3) As of 1 March 2019, the mileage reimbursements have changed as follows:

Power of the vehicle for tax purposes	Up to 2000 kms per year	From 2001 to 10,000 km per year	Over 10,000 km per year
5 hp or less	€0.29	€0.36	€0.21
6 to 7 hp	€0.37	€0.46	€0.27
8 hp or more	€0.41	€0.50	€0.29

- (4) As of 1 January 2020, the mission allowances have changed as follows:

Expense account allowances	Base rate	Major cities and towns of the Greater Paris metropolis	Paris Commune
Parking/tolls	Actual cost	Actual cost	Actual cost
Meals	€17.50	€17.50	€17.50
Accommodation allowance (including breakfast)	€70	€90	€110

(5) As of 1 January 2022, the mission allowances have changed as follows:

Power of the vehicle for tax purposes	Up to 2,000 km	From 2,001 to 10,000 km	Over 10,000 km
5 hp or less	€0.32	€0.40	€0.23
6 to 7 hp	€0.41	€0.51	€0.30
8 hp or more	€0.45	€0.55	€0.32

Tolls can also be substantiated by invoices from Total. Substantiation for these costs was dropped during the project.

Expenses related to mission costs can also be invoiced directly to the PNR by travel agencies, food service facilities, or hotels.

Details of the recipients of the meals in the following invoices:

As indicated in the letter of 09/07/2019, the travel expenses of non-employees and other agents not mentioned in the "Employee" staff item have been included in the "Other costs" item. The corrections from 2016 to 2018 have been completed.

#### 8.1.2.2 [Comments on the LPO's budget item "Travel and subsistence expenses"](#)

The rate of expenditure on the LPO budget item "Travel and subsistence expenses" at the end of the project is 99.62%.

Reimbursements are made to staff on the basis of expense reports.

Meals	Hotel	Personal vehicle
Actual cost	Actual cost	0.38€/Km until 31/03/17 0.40€/Km since 01/04/17

As of January 2022, travel expenses are calculated as follows:

Meals	Hotel	Personal vehicle
Actual cost	Actual cost	0.50 € (car), 0.40 € (motorbike)

The cost of using the association's vehicles depends on a mileage cost calculated annually and submitted for deliberation at the beginning of the following year. For the year 2022, the cost per kilometre of 2021 will be taken into account.

#### 8.1.2.3 [Comments on the OFB's budget item "Travel and subsistence expenses"](#)

The rate of expenditure on the OFB budget item "Travel and subsistence expenses" at the end of the project is 36%.

The costs incurred include significant travel for:

- The presentation of the Anatidae study and mudflat restoration work in Bangor, Wales, at the Coastal Ecology Workshop, a university working group on coastal ecology (salt meadows, mudflats, estuaries) in 2018.
- The presentation of the project's actions at the workshops on Nature-based Solutions for Adapting to Climate Change (SafN ) of the LIFE ARTISAN project in 2022

### 8.1.3 Comments on the budget item: Outside assistance

#### 8.1.3.1 Comments on the "Outside assistance" budget item for Marais Poitevin Regional Nature Park

The rate of expenditure realised on the PNR budget item "Outside assistance" at the end of the project is 95%

#### For information

- The feasibility study for the platform, estimated at €10,000, has not been carried out. The project beneficiaries decided not to carry out this work for technical and financial reasons, by agreement with EASME in a letter received on 19/11/2020 (see Action E7).
- The feasibility study for the dam and structures had an estimated cost of €50,000. The final cost for the dam is €59,562. A mandatory €1,173 safety mission related to the works was also necessary.
- The €7,320 service "Development and deployment of a project for rewilding the Pointe de l'Aiguillon" was not carried out. This work was carried out by the PNR staff (see Action A4)
- The "Socio-economic and ecosystem studies" services are cancelled. The €10,000 was redirected to the LPO's "staff" budget item, which, given their skills, carried out these studies on their own.
- The video monitoring of the project was carried out without the Eye Time process. The "shooting and production of the 26-minute film" line, combined with the "Eye time video" line (initially intended for the demolition of the Maison de la Pointe), made it possible to finance:
  - 10 videos (including a 20-minute project summary film)
  - 4 three-minute infographics
  - 2 event recordings

Purpose	Planned	Forecast	Actual
Shooting and production of the 26-minute film	Yes	€17,100	
Eye Time video	Yes	€55,000	
Installation and supply of the Eye Time electrical system	Yes	€500	
Filming and production of presentation videos on the project	No		€12,078
Filming of 4 French/English infographics	No		€15,066
Filming and production of a teaser for the science show	No		€1,365
Filming and production of French/English reporting	No		€20,690
Filming and production of the project's final film (French/English)	No		€13,740
Recording of the science show	No		€1,752
Recording of the final symposium	No		€5,280
<b>Total</b>		<b>€72,600</b>	<b>€69,971</b>

- The publication of the "Bay illustrated book, 1500 copies" initially budgeted at €29,000 cost €26,058.50.
- The outreach report was produced internally by PNR (see Action E4). It was not published, but distributed in a digital version (estimated cost: €2,000)
- The design of the communication signs was carried out by the PNR staff (estimated cost €800)
- The annual reports were not printed. Instead, they were disseminated digitally (estimated cost: €1500)
- Given the model proposed by the European Commission for the production of the final report, it was not necessary to carry out the "graphic design of the final report" service (estimated cost: €2000)

## Services not included in the Grant Agreement

### *On the conference "Adapting coastal marshes to climate change" (Action E2)*

The partnership with the Atlantic Marshes Forum (FMA) provided additional funding (over €60,000) and enabled a large-scale international conference to be held. The hosting of this event required more human and logistical resources than initially planned. The pooling of these resources required a modification of the initial budget and a division of expenses between the FMA and the PNR.

The expenses not initially foreseen for this event were for:

- The recruitment of an agent, Marion Léchelon, from 17 September 2018 to 16 December 2018 for an amount of €8,672.15. The PNR enlisted the public temporary employment service of the Vienne Management Centre (Centre de Gestion 86) to provide a competent agent to assist in the organisation, tracking and assessment of the "Adaptation of coastal marshes to climate change" symposium. This staff was invoiced.
- The design of communication tools (posters, flyers, badges, advertising inserts, pennants, folders with flaps, lectern covers, flags, outdoor tarpaulins) for a total of €2,530; the production or printing of these items, except for the badges (€248.40), was paid for by the FMA.
- Coverage of the poster campaign for the show "Hé !...La mer monte...", a popular science show, for the amount of €1,512 (packed house of 800 people, 100 turned away).

At the same time, some services planned for this conference were not carried out or were financed by the FMA: Reception costs, on-site translator costs, printing of proceedings.

Purpose	Planned	Forecast	Actual
Reception fees	Yes	€500	
Services provided by stakeholders	Yes	€1,000	€400
On-site translator costs	Yes	€1,500	
Transport for participants	Yes	€2,000	€798
Printing of documents	Yes	€2,250	
Support contract	No		€8,672
Communication materials about the conference	No		€2,778
Science show poster campaign	No		€1,512
<b>Total</b>		<b>€7,250</b>	<b>€14,161</b>

### *About the "Hé... la mer monte!" (Hey... The Sea Is Rising!) science show*

The science show created during the conference "Adapting coastal marshes to climate change" has been reproduced in various municipalities. The PNR has been asked to put the show online. The show was therefore recorded at a cost of €1,752. This video has been viewed almost 900 times.

### *About the additional information signs at the Pointe de l'Aiguillon*

An explanatory sign, not initially planned, on the implementation of the work at the Pointe de l'Aiguillon was necessary in view of the large number of fishermen visiting that area. Three copies of this sign were produced. In addition, nine signs on the need to preserve the Kentish Plover were produced to inform the general public about the area and nesting season of this species. The graphic design was done in-house by the LPO. The PNR financed the printing of the panels for an amount of €640.80. This service was beneficial as 71% of the people interviewed for the Socio-Economic Assessment felt that they paid more attention to the nests of gravel birds when walking on the beach.

### *About the dune restoration work*

Dune clean-up work was necessary to promote the rewilding of areas of the former campsite and the sandy beach (removal of old fences, old tarmac road, etc.) at the Pointe de l'Aiguillon. In addition, the arrival of exotic invasive species (Sumac, Yucca, Robinia) on the dunes during the project also necessitated uprooting and exporting.



Purpose	Planned	Forecast	Actual
Felling of trees at Pointe de l'Aiguillon	Yes	€16,000	€14,710
Removal of concrete blocks at Pointe de l'Aiguillon	Yes	€10,500	€4,277
Cleaning at the dunes of the former campsite	No	€ -	€4,033
Removal of invasive species from the Sablons beach at the Pointe de l'Aiguillon	No	€ -	€2,000
<b>Total</b>		<b>€26,500</b>	<b>€25,020</b>

### On the final conference

The PNR wanted a more ambitious final conference than originally planned. The experience of previous seminars, particularly in relation to the pandemic, also showed the need to develop certain services in order to reach as many people as possible.

- In the initial report, the expenses related to communication about the conference had not been included in the budget. However, they were necessary. The PNR called on a DTP company to produce the communication materials for the conference (posters, invitations, banners for the networks, welcome pennant, etc.) and on the illustrator of the science show to produce the drawings for the poster and the communication materials.
- Each participant was given a bag and a notebook with the logo of the conference.
- The presence of a professional photographer made it possible to capture the highlights of the two-day event and to illustrate the dedicated website, the conference proceedings, and various reports.
- Mathieu Duméry, a science popularizer for a TV channel, and Guillaume Bouzard, an illustrator, co-presented the show "Hé ! La mer monte." The PNR has asked them to lead the day of 6 April 2022 in the hall and to produce the live illustrations of the performance.

At the same time, some planned services were not carried out for this conference: On-site translation costs, printing of the proceedings.

Purpose	Planned	Forecast	Actual
Transport for participants	Yes	€2,000	€1,950
Briefcase design	Yes	€450	
Buffet lunch welcome drink	Yes	€5,000	€2,350
Translator	Yes	€1,500	
Printing of documents	Yes	€3,000	
Communication materials about the conference	No		€5,572
Design of personalised bags and goodies ( <i>equivalent to briefcase design</i> )	No		€1,200
Photographic report	No		€1,604
Facilitation of the day of 06/04/2021 (facilitation and live drawings)	No		€5,533
<b>Total</b>		<b>€11,950</b>	<b>€18,209</b>

*\*The recording of the final conference is included in the video section*

### 8.1.3.2 [Comments on the LPO's "Outside assistance" budget item](#)

The rate of expenditure realised on the LPO budget item "Outside assistance" at the end of the project is 136%

#### Services not included in the Grant Agreement

##### *On mudflat restoration operations*

- "Assistance on the public tender for the removal of wild Japanese oyster beds" for an amount of €600. In view of the total estimated cost of the contract, the LPO wished to enlist the services of a legal firm to draft the contract documents relating to the *crassat* work.
- "Characterisation of marine sediments and leaching tests in the context of mudflat restoration." This qualitative study of the mudflat sediments was recommended as part of the regulatory study by the Charente Maritime Departmental Directorate for Land and Sea (DDTM, the referring department) and by the Scientific Council of the National Nature Reserve, in order to study the environmental impact of the resuspension of sediments during mudflat restoration. The cost of this service is €8,051.29.
- "Embryotoxicity test on hollow oyster larvae". As part of the sediment study, depending on the levels observed, an ecotoxicity test on oyster larvae was carried out to assess the overall toxicity of the samples. This analysis is carried out whenever a site has significant contamination. The cost of this service is €2,400.
- The Vendée Departmental Directorate for Land and Sea requested additional monitoring of water quality (turbidity and bacteriological) before and during the work. The Charente-Maritime DDTM, which is responsible for the inter-prefectoral order relating to the authorisation of the removal of slag, requested its implementation. Qualyse and LEAV, organisations carrying out REMI (Microbial Control Network) monitoring on the territory, were selected without competition.
- As part of the call for projects on "marine biodiversity" by the Loire Bretagne Water Authority, to which the LPO responded to complete the work (action C1), the BRGM (Geological and Mining Research Office) expressed its interest in using the LIFE action to refine the indicators of the DCSMM (Strategic Framework Directive for the Marine Environment) on the integrity of the sea bed. The LPO, which is responsible for this action, was also interested in these indicators as part of the future management plan for the reserve (indicators). This operation, valued at €4,338, will help to disseminate the knowledge acquired during the project. Consequently, it was validated in a letter from CINEA on 03/12/2021.

##### *On the "Mudflat Restoration" conference*

Some budgetary changes were necessary compared to the initial budget for the "Coastal Restoration" conference.

- Some costs were underestimated when the project was set up, namely for catering. The choice of organic, local food was favoured (€6,945, €2000 initially budgeted).
- Furthermore, the pandemic required additional services for live broadcast nationwide and internationally. These costs correspond to an amount of €7,014.29 (recording, streaming, live translation, headset rental). This service was ultimately worthwhile, as 123 people, representing 9 countries, participated in the video conference.
- All the speeches were therefore filmed and shared on a web page specifically created for the conference (to be hosted until 2026). The recordings were transcribed and translated into English so that they could be accessed by as many people as possible at a cost of €7,734.
- As the conference took place at the time of the mudflat restoration work, it was more helpful for the participants to observe the restoration site (too far from the Pointe de l'Aiguillon) from a boat. The cost of €3,000 replaces the planned bus costs.
- Some expenses were added as they were deemed relevant: The presence of a professional photographer made it possible to capture the highlights of the event and to illustrate the web page and the conference proceedings. The corresponding cost was €1,411.13.
- Various other additional expenses were also necessary in connection with communication about the conference (printing of posters, valued at €97.20), temporary printing of posters on water for the reception area).

Purpose	Planned	Forecast	Actual
Catering services	Yes	€2,000	€6,945
Communication printing	No		€97
Recording the talks	No		€3,465
Photographic report	No		€1,411
Simultaneous translation	No		€3,549
Transport of participants	No		€3,000
Transcription and translation of videos	No		€7,734
Website	No		€104
Posters for entrance	No		€120
<b>Total</b>		<b>€2,000</b>	<b>€26,425</b>

### *On the discovery booklet*

The design of the discovery booklet eventually required the services of an illustrator. Benoit Perrotin, already involved in the project through the illustrated book and the travelling exhibition, was chosen for this mission. The cost of this mission was €4,775 for 60 illustrations.

### *On the travelling exhibit*

A travelling exhibit was planned as part of the project. The custom design of transport boxes for the signs (action E1), which were not initially budgeted, was necessary in 2017 due to the fragility and high mobility of the exhibit. Due to the high usage, the transport boxes had to be replaced in 2020, allowing the exhibit to travel for a few more years. The total cost of this purchase was €1,872.66.

### 8.1.3.3 [Comments on the OFB's "Outside assistance" budget item](#)

The rate of expenditure realised on the OFB budget item "Outside assistance" at the end of the project is 109%.

### For information

- The total amount for the service "Understanding the factors influencing primary production" was €90,081.60 (€95,000 initially budgeted)
- Form F3 was entitled "Continuous assessment of salinity in Aiguillon Bay". In reality, other measurements than salinity were carried out: Nutrients, carbonates and associated environmental parameters for a cost of €89,911.64, which did not exceed the projection.

### Services not included in the Grant Agreement

#### *On the water quality study*

The training related to the use of the 10 probes acquired for the water study was technically foreseen in action A6, but the amount was not specified in form F3. This service is included in the contract for the purchase of the probes. It is provided to the staff of the Nature Reserve and is necessary for maintenance, routine use, maintenance of the acquired probes, programming, and data transfer. The cost of this service is €720.

*On the Anatidae study*

Plans were to recruit an agent with the possibility of using a service provider. This possibility had been specified in the "Constraints and assumptions" of the action. The service provider Cavallo was therefore recruited for this mission in 2019. In 2020, he was recruited as a contract worker by the OFB to finalise the seed determination mission.

Purpose	Planned	Forecast	Actual
<b>Staff (Anatidae project manager)</b>		<b>€34,800</b>	<b>€5,299.43</b>
BOUFFANDEAU Laurine	yes		€772.71
BOUFFANDEAU Laurine	yes		€905.11
LARDON Maud	yes		€936.87
CAVALLO François	yes		€2,684.74
<b>Outside assistance</b>			<b>€23,500</b>
CAVALLO François	Provided for in the "Constraints and assumptions" of Action A5		€23,500.00
<b>Total</b>		<b>€34,800</b>	<b>€28,799.43</b>

*On the website*

Following the fifth visit of the external team, EASME was officially requested by letter of 19/11/20 to translate the website pages into English. The entire site was translated at a cost of €1,900 and put online at a cost of €1,620.

#### 8.1.4 Comments on the budget item: Infrastructure of the PNR

LIFE Nature is not affected by depreciation on the investment.

The rate of expenditure realised on the PNR budget item "Infrastructure" at the end of the project is 83%

##### For information

- The cost of the "Prée Mizottière waterworks" initially planned at €20,000 amounted to €25,552.80.
- The cost of work on the dam initially budgeted at €200,000 came to €218,522.20.
- The cost of work relating to the Pointe de l'Aiguillon was €28,314,78 instead of the €50,000 initially budgeted.

## 8.1.5 Comments on the budget item: Capital goods

### 8.1.5.1 Comments on the "Capital goods" budget item for Marais Poitevin Regional Nature Park

The rate of expenditure realised on the PNR budget item "Capital goods" at the end of the project is 146%.

The additional cost is linked to the acquisition of transceivers on behalf of the ONCFS (see action A5).

#### Acquisitions not included in the Grant Agreement

The PNR has acquired:

- An additional computer for the needs of the coordination team valued at €1,921.91, as the computer of the financial coordinator is old.
- Two pairs of binoculars necessary for observation (birds, work on the mudflat, etc.) and used during visits and on-site presentations for an amount of €3,182.
- Anatidae transmitters valued at €15,786: The ONCFS wished to launch a national call for tenders for the acquisition of monitoring equipment. The delay caused by this type of contract would have been too long for the proper implementation of the A5 action in 2017. These administrative constraints led the PNR to support the acquisition of this monitoring equipment. The information was sent to Neemo by e-mail on 14/06/17.

#### For information

- The acquisition of the GPS device was cancelled (acquisition made in 2015 outside LIFE by the PNR).
- The cost of the vehicle, initially budgeted at €20,000, came to €17,172.

### 8.1.5.2 Comments on the LPO's "Capital goods" budget item

The rate of expenditure realised on the LPO budget item "Capital goods" at the end of the project is 212%.

The computer was acquired in 2019. The cost of this equipment is higher than initially budgeted because it was decided to acquire a powerful device that would allow statistical data to be processed, particularly in connection with the Anatidae study.

### 8.1.5.3 Comments on the OFB's "Capital goods" budget item

The rate of expenditure realised on the OFB budget item "Capital goods" at the end of the project is 76%.

#### For information:

- €46,140 was earmarked for the purchase of 30 transmitters and associated equipment. In the end, 47 items of equipment were acquired within the planned budget. This equipment was to be acquired solely by the ONCFS. For the reasons mentioned in paragraph 8.1.5.1, the PNR participated in the acquisition of this equipment.

Purpose	Planned	Forecast	Actual
<b>ONCFS/OFB</b>			
Tracking equipment and receivers	yes	€46,140	€28,690.40
<b>PNR</b>			
Tracking equipment and receivers	No	€ -	€15,786.00
<b>Total</b>		<b>€46,140</b>	<b>€44,476.40</b>

## Acquisitions not included in the Grant Agreement

### On the water quality study

In addition to the acquisition of new probes, action A6 was to perpetuate the multi-parameter measurement stations belonging to IFREMER and made available to the project for data acquisition. It is in this context that the following were acquired:

- Specific power supply batteries (€1,944) needed to charge the probes (only available from NKE Instrumentation)
- A probe protection cage (€1,116 incl. VAT) to replace a defective cage. The equipment ordered is suitable for the probe sold only by NKE.



Figure n° 9 : Defective cage @ RNN



Figure n° 10 : New cage without probe @ RNN

- A submersible GRPS/GPS antenna for a float (€1,776). The Sèvre Niortaise station was destroyed by a boat crash in July 2017. The data transmission antenna had to be replaced. This equipment is suitable for probes and is only available from NKE.



Figure n° 11 : Antenna buoy and cage (without probe)

Three multiparameter probes were planned in the original project. In the end, 10 probes were acquired at a lower cost.

Purpose	Planned	Forecast	Actual
Acquisition of 3 multi-parameter probes	yes	€35,000	
Acquisition of 10 multi-parameter probes	No		€28,440
Associated equipment (batteries, GPS antenna for probes, etc.)	Yes/No		€4,836
<b>Total</b>		<b>€35,000</b>	<b>€33,276</b>

## 8.1.6 Comments on the budget item: Consumables

### 8.1.6.1 [Comments on the "Consumables" budget item for Marais Poitevin Regional Nature Park](#)

The rate of expenditure realised on the PNR budget item "Consumables" at the end of the project is 16%.

#### For information

- These are mainly fuel costs related to the Yaris hybrid vehicle. The fuel costs are quantified. Each trip was recorded in a tracking sheet, and linked to a specific action. At the end of the year, a fuel cost per kilometre is calculated. The distribution is then made for each action and certified by the head of the agency. This expenditure was substantiated by documents until 2018 (which was time-consuming).
- The acquisition of field clothing, as well as its replacement, did not prove necessary.

#### Expenses not included in the Grant Agreement

- The purchase of LIFE-branded stamp pads was necessary to make up for some omissions on the invoices. This stamp pad was used occasionally at the start of the programme, and is currently used as a last resort.
- Purchases of consumer goods may be included under this heading.
- Envelopes were purchased specifically for sending the illustrated book to all schools in the Marais Poitevin.

### 8.1.6.2 [Comments on the LPO's "Consumables" budget item](#)

The rate of expenditure realised on the LPO budget item "Consumables" at the end of the project is 126%.

#### Expenses not included in the Grant Agreement

- Technical equipment was needed to monitor the ducks. This involves weighing, sieving, and monitoring equipment (antennas) for a total of €318.70.

### 8.1.6.3 [Comments on the OFB's "Consumables" budget item](#)

The rate of expenditure realised on the OFB budget item "Consumables" at the end of the project is 21%.

#### For information

- The cost of the material for the construction of the duck traps is lower than initially planned (€5,800).
- The fuel costs of the RNN boat for the probe survey were not justified in the end for the project. They are part of the overhead.

#### Expenses not included in the Grant Agreement

- The equipment needed to attach the probes acquired as part of the project was acquired for an amount of €505.32 (action A6).
- Petri dishes for the storage of seeds contained in the sampling cores necessary for the Anatidae study (Action A5) for an amount of €354.12.



## 8.1.7 Comments on the budget item: Other costs

### 8.1.7.1 Comments on the “Other costs” budget item for Marais Poitevin Regional Nature Park

The rate of expenditure realised on the PNR budget item "Other costs" at the end of the project is 119%.

#### For information

- No contracting costs were charged to the project (initial cost €1,200)
- No costs that benefited the Neemo team were reported on the project.
- Meal expenses outside the internal conference were financed for the following people:

Agent	Agency	Status	Purpose
Food service invoices			
E. Chaumillon	LIENS's	Researcher	Presentation of study Action D1
J. Blanloeil	LIENS's	Researcher	Presentation of study Action D1
S. Travichon	League for the Protection of Birds (LPO)	Project staff	Member of the technical committee – Neemo visit
E. Happy	ONCFS	Project staff	Member of the technical committee – Neemo visit
C. Rouennier	PNR	Director	Neemo visit
C. Tromas	PNR	Elected / Vice President	Neemo visit
F. Corre	League for the Protection of Birds (LPO)	RNN conservationist	Member of the technical committee – Neemo visit
L. Romao	PNR	Financial Director	Neemo visit
R. Gallais	French Biodiversity Agency (OFB)	Project staff	Member of the technical committee – Neemo visit
O. Mercier	League for the Protection of Birds (LPO)	Project staff	Member of the technical committee – Neemo visit
J-P. Guéret	League for the Protection of Birds (LPO)	RNN conservationist	Member of the technical committee – Neemo visit
F. Bignon	League for the Protection of Birds (LPO)	Project staff	Member of the technical committee – Neemo visit
G. Garandeau	League for the Protection of Birds (LPO)	Project staff	Member of the technical committee – Neemo visit
D. Giret	PNR	Technical Director	Neemo visit
Berthome invoice – Neemo visit			
L. Chaigneau / E. Chourre S. Travichon / O. Mercier E. Joyeux / J Marquis	PNR League for the Protection of Birds (LPO) ONCFS	Project staff	Members of the Technical Committee
F. Corre	League for the Protection of Birds (LPO)	RNN conservationist	Member of the Technical Committee
Agent	French Biodiversity Agency (OFB)	RNN reception agent	
E. Rocher	Commune of Aiguillon	Elected official	Project partner in charge of the Pointe matter
J. Guevel	Coastline Conservation Authority	Director	Project partner, owner of the Prée Mizottière site
J-P Rault	Private	Farmer	Project partner, farming on the Prée Mizottière site
2 interns	RNN	Interns	Participation in the duck study

- For external contributors, travel expenses using a personal vehicle are reimbursed on the basis of the scale applicable to local civil servants.
- For external contributors, elected officials, and PNR agents, travel, catering and accommodation costs are charged on an actual basis in the case of direct payment to a service provider or on the basis of the scale applicable to agents of the local civil service.

## Expenses not included in the Grant Agreement

### On the Toyota Yaris vehicle (Action F1)

- As the insurance costs were lower than initially estimated, the costs of maintaining the vehicle, which were exclusively for the project, were taken from this line.

Purpose	Planned	Forecast	Actual
Insurance	Yes	€4,500	€2,836.79
Maintenance	No		€930.96
Technical inspection	No		€62.00
<b>Total</b>		<b>€4,500</b>	<b>€3,830</b>

### On the conference "Adapting coastal marshes to climate change" (Action E2)

As indicated in the "Outside assistance" section, the scope of the "Adapting coastal marshes to climate change" conference generated expenses that were not initially foreseen, which were split with the FMA and the PNR.

This expenditure includes:

- The publication of an advertisement for the public event "Hé...la mer monte !" (Hey...The Sea Is Rising!) (packed house, 800 attendees)
- Accommodation and meals for some of the PNR staff (other than those declared as staff) who participated in organising the conference and other partners. The costs of Marion Léchelon, recruited by the PNR via the Vienne management centre (temporary civil service) are included in this line, as well as those of Mathieu Dumery, a "non-employee" artist
- The acquisition of lanyards for badges for organisers, speakers and attendees
- The necessary rental of sound equipment for the site visit on the third day of the conference.

Purpose	Planned	Forecast	Actual
Day insurance	Yes	€100	
Room rental	Yes	€1,000	
Meals/accommodation/transportation for speakers	Yes	€2,500	€4,347
Lectern rental*	Yes	€500	
Translation of proceedings	Yes	€600	
Meals/accommodation for PNR staff + service providers	No		€2,320
Communication	No		€720
Lanyards	No		€374
Rental of sound equipment	No		€151
Miscellaneous reception	No		€220
Copyright	No		€33
<b>Total</b>		<b>€4,700</b>	<b>€8,165</b>

At the same time, various expenses listed for the "submersion conference" were covered by the FMA or were not realised: room rental (€1000), lectern rental (€500), translation of proceedings (€600).

### On the book "Aiguillon Bay" (Action E1)

- The distribution of books on the Aiguillon Bay to all the schools (192) required €665.96 in specific postage.

### On the dyke repositioning work at the Prée Mizottière de l'Aiguillon (Action C3)

- The public enquiry procedure for the dyke relocation work required the publication of legal notices and the appointment of an enquiry commissioner at the request of the prefecture (Vendée). Due to the Covid pandemic postponing the opening dates of the public enquiry, three orders were necessary, resulting in additional publication costs. The cost associated with compulsory expenditure amounted to €7,608.81.

**On the final symposium (Action E2)**

- Initially in the project, the PNR planned to rent a basic room for the final seminar. It finally settled on a seminar room with the following advantages: A conference room close to a railway station with associated technical services and staff, a reception hall for various exhibitions, a reception room for meals, a reception room for the press, etc. The Communauté d'Agglomération de La Rochelle granted financial assistance to cover the cost of rental in the form of a credit to La Rochelle Tourisme Evenements.
- Accommodation and meals for some of the PNR, LPO and OFB agents who participated in the organising of the conference, PNR elected officials, and other partners.
- The acquisition of lanyards for badges for organisers, speakers and attendees.

Purpose	Planned	Forecast	Actual
Day insurance	Yes	€100	
Lectern rental*	Yes	€500	
Meals/accommodation/transportation for speakers**	Yes/No	€4,500	€3,601
Room rental	Yes	€1,000	€5,217
Translation of proceedings	Yes	€600	€679
Lanyards	No		€108
<b>Total</b>		<b>€6,700</b>	<b>€9,609</b>

\*The rental of the lectern is included in the room rental

\*\*Additional support to the organisers and partners

#### 8.1.7.2 [Comments on the LPO's "Other costs" budget item](#)

The rate of expenditure realised on the LPO budget item "Other costs" at the end of the project is 63%.

#### Expenses not included in the Grant Agreement

- Photo credits were necessary for the preparation of the brochure. These rights were acquired from Fotolia, Erick Faucher and Studio Lézard Graphique for an amount of €154.60.
- Neemo's annual visit took place on 19 July 2017 at the headquarters of the National Nature Reserve, on the Prée Mizottière site. Being far from a catering service, this day required the purchase of food (€116.42)
- Advertising costs (€256.80) were required for the contract for experimental mudflat restoration work. However, such costs had been planned for the PNR.
- During the "Coastal Restoration" conference, the LPO paid for the evening meals and/or accommodation of the following agents who helped organise it, in addition to the speakers:
  - Jean-Pierre Guéret and Régis Gallais, conservationists of the Regional Nature Reserve of the Bay
  - Paméla Lagrange, LPO project manager
  - Louis Marsaud and Jean-Lou Leclaire (LPO interns) from the Reserve
  - Elise Coignot and Maud Laurent, OFB project managers
  - As well as the following providers and funders being involved in the project:
    - > André Tempéreau and Claudi Vergnault (SAS CTAT, mudflat restoration company)
    - > Delphine Berlioux, video maker
    - > Vincent Dordain (DREAL NA), funder

#### 8.1.7.3 [Comments on the OFB's "Other costs" budget item](#)

The rate of expenditure realised on the OFB budget item "Other costs" at the end of the project is 17%.

##### For information

- The book about seeds, originally planned as a paperback, is now available as a free digital version. It has therefore not been acquired.
- A reception via Argos was planned and therefore subject to a charge. The choice was made to equip the ducks with a GSM transmission mode. The cost is lower than that initially envisaged for the "subscription to receive tracking data" line.

#### 8.1.8 Comments on the budget item: General expenses

Costs are subject to a flat rate of 7% of the total direct eligible costs of the project.

## 8.2 ACCOUNTING SYSTEM

### 8.2.1 Accounting system

- The PNR uses cost accounting. The code for the LIFE operational action is 26-254. A project analyst then directs expenditures to the action in question where possible.
- The LPO uses code 2929 in its cost accounting.
- Since 2017, the OFB has been using the RF31 code. However, at the beginning of the programme it was code RA16/921.

### 8.2.2 Cost approval procedure

- For the PNR: At the beginning of the project, the expenses were validated by the technical director or financial director and the person in charge of the financial monitoring of the project. During the course of the project, the procedure for validating expenses changed. Each expense is validated by the person in charge of the financial monitoring of the project, then by the technical and financial directors in view of the accounting situation of the operation, and approved by the Director of the agency before the purchase orders are signed by the President. Invoices are sent by post and now mostly submitted on the secure Chorus platform, validated by the coordinating unit and authorised by the project's administrative and financial manager.
- The request for a quote is usually made by the RNN project manager. After approval by the Conservationist of the Reserve or the Head of Department (depending on the amount), the quotation is sent to the selected supplier or service provider with a notice of approval ("bon pour accord"). The invoice is then validated by the RNN project manager, then the conservationist or Head of Department, before being sent to the financial management services for payment.
- For the OFB, the procurement procedure follows circular no. CIRC-2017-DAF-06 on the terms of competitive procurement and service note 2021-DGDR-DF-004 on the request for procurement qualification. For information, the SIREPA software incorporates several levels of validation depending on the amounts of the legal commitments. Invoices submitted on Chorus are checked and validated by the Financial Directorate on the basis of the legal commitments entered in the SIREPA software and entered into the same software for settlement.

### 8.2.3 Monitoring work hours

- For the PNR, the agents record their working hours in timesheet software (Gédéon) or in a printed log for some and report on the Timesheets in Excel. Staff working for the LIFE project for less than two full days per month on average during a calendar year are exempt from the requirement to log their hours in the timesheets. However, the time spent on the LIFE programme by these agents is recorded and certified by the President of the agency.  
The timesheets of L. Chaigneau and Elise Chourré are based on Excel tables that describe the purpose of the work they did and the time spent.  
Alain Texier filled out his timesheet until 2020. Thereafter, his working time was certified by the President (less than 2 days/year)
- At the beginning of the project, the LPO used Excel files to produce the timesheets. Since 2017, the LPO implemented a project management software (LOGEPROJ) that incorporates an interface for the recording of staff time worked. 2017 was a "test phase", few people entered their time in this software; most of the entries were made in Excel. As of 2018, the vast majority of the Nature Protection Unit has switched to time

recording on LOGEPROJ. A few departments remained on Excel, including some of the support functions (management control, communication, publishing). From 2019 onwards, all employees working on funded projects have been entering their time in the LOGEPROJ software.

- For the ONCFS/OFB, the agents recruited at 100% for specific one-off missions such as the "Anatidae" project managers or the "water study" project managers do not submit timesheets. For the other staff, the time actually worked is tracked on the GEACO time tracking software and reported on Excel files.

All timesheets are signed off by a supervisor.

- For the PNR: From 01/01/16 to 31/12/16, signatures of PNR Director Boris Sallaud. From 01/01/2017, exclusive signature of Dominique Giret, Technical Director of the Environment and Agriculture Department.
- For the LPO: Signature of Olivier Denoue, Executive Secretary General.
- For the ONCFS: In 2016, Christophe Bayou signed as the inter-regional delegate for Brittany and the Pays de Loire; in 2017, Christophe Bayou, Aurélien Viau as deputy interregional delegate; and then Nathalie Franquet as inter-regional delegate from October 2017.

For Emmanuel Joyeux's timesheets, as he changed departments, they were signed from April 2018 until 2019 by Bertrand Trolliet, Limicoles project manager.

#### 8.2.4 Branding of invoices

- For the PNR, all invoices mention the LIFE brand. This condition is included in the project contracts and purchase orders (unless exceptionally omitted). Invoices without the reference are put on hold. Suppliers usually take over their billing on request. In some cases (unable or unwilling to modify the invoice, etc.), the use of the stamp with the LIFE brand is used, on an ad hoc basis.
- For the LPO, the invoices show the LIFE brand and/or the billing code 2929. Applying the brand with the stamp pad is used as an exception.
- For ONCFS/OFB, the LIFE brand is indicated as well as the billing code. Applying the brand with the stamp pad is used as an exception.

### 8.3 PARTNERSHIP AGREEMENTS

The PNR, as the beneficiary of the project, has signed a partnership agreement with its associate beneficiaries, the LPO and ONCFS/OFB, which mentions, in addition to the rights and duties of each party, the financial terms of payment of the European subsidy and French government funds.

The payment will be made in three stages, according to the European Commission's terms: 30% was paid upon signature of the agreement, 40% after validation by EASME and payment of the interim instalment, and the balance after validation and payment by CINEA.

French government funds (€245,000 agreement) are channelled through the PNR. Initially, the €250,000 grant covered 10.79% of the overall programme.

The grant between the Ministry and the lead beneficiary now covers expenditure for only 6 actions, over an eligibility period from 2018 to June 2022. However, the repayment to the associated beneficiaries took place as originally planned: 10.79% on their overall expenditure.

### 8.4 CERTIFICATION OF THE FINANCIAL STATEMENT

The financial statements of the three beneficiaries are attached to this final report (Annexes 18 to 20).

## 8.5 ESTIMATED PERCENTAGE OF DAYS WORKED BY ACTION GROUPS

Action type	Budgeted person-days	Nb jours 2016 à 2022	Estimated % of person-days spent
Action A: Preparatory actions	599	1 194	199%
Action C – Concrete conservation actions	214	316	148%
Action D: Monitoring and impact assessment	289	338	117%
Action E: Communication and Dissemination of results	1 090	1 241	114%
Action F: Project management (and progress)	693	1 032	149%
<b>TOTAL</b>	<b>2 885</b>	<b>4 120</b>	<b>143%</b>

### 8.5.1 Number of days spent on group A

1,194 days, 99% more than originally planned (53% more than budgeted). This is due in particular to:

- **Action A5 (OFB):** It was decided to add the Lairoux communal to the sample sites for monitoring the food resource. The aim was to improve knowledge of this resource by including a site known to be frequented by ducks but which is hunted in winter. In this way, all the sites frequented by ducks were represented. This required additional agent time for the sampling (additional LPO and PNR agents).

It was also originally planned to store all the cores and analyse them in the final year. But the volume of cores had clearly been underestimated. Only a portion of the annual samples could be stored. It was therefore decided to filter all the cores, store their contents in Petri dishes, and oven-dry them to overcome these storage problems. The impact of these choices has led to greater involvement by staff and the occasional recruitment of temporary workers. This action has therefore been spread out over time. The analysis of the seeds was carried out in part by a specialist who was initially recruited as a service provider and later on a contract basis.

Initially, it was planned to install at least 10 transmitters per season. This rate was unachievable, mainly due to the weather. The early winters of the 2016/2017 and 2017/2018 seasons were particularly dry, resulting in low numbers of birds on site and therefore very small catches. As a result, trapping took longer, resulting in more staff time being spent on trapping (E. JOYEUX in particular). The lack of significant transmitter installation (Teal in particular) during these two seasons has therefore led to the obligation to install more than 30 transmitters during the 2018/2019 season, which required a significant trapping effort. This extra effort has resulted in a higher investment. The objective of installing transmitters was achieved, but this required an increase in the time spent on this action.

- **Action A6 (OFB):** The recruitment of two agents to make the response elements of the water quality study understandable to laypeople was not initially planned, but appeared necessary for better comprehension of the results and uptake by managers, elected representatives, and professionals and consequently better integration into future management protocols.



### 8.5.2 Number of days spent on group C

316 days, 48% more than originally planned (24% more than budgeted). This is due in particular to:

- Action C3 required a lot of time for mediation and implementation due to the administrative constraints of the project.
- In action C4, in connection with the additional work validated by CINEA for the maintenance of the old campsite (stump removal).

### 8.5.3 Number of days spent on group D

338 days, 17% more than originally planned (11% less than budgeted). This is due in particular to action D5, as the service envisaged by the PNR for the ecosystem study evolved into dedicated staff time for the LPO, which is skilled in the subject.

### 8.5.4 Number of days spent on group E

1241 days, 13% more than originally planned (10% less than budgeted). This is due in particular to action E2, where the beneficiaries wanted to make each of their conferences ambitious. This required more staff than originally planned. On the other hand, the tracking of science shows linked to the project and replicated regionally required additional time.

### 8.5.5 Number of days spent on group A

1032 days, 49% more than originally planned (31% more than budgeted). This is due in particular to the F1 action in connection with the 18-month extension granted by CINEA.

## 8.6 RULE OF 102%

The amount of permanent salaries for the public structures PNR Marais poitevin and OFB amounts to €515,541.69.

The mandatory self-financing therefore amounts to €525,852.52. The sum of the contributions from the PNR Marais poitevin, the OFB and public funds (State) amounts to €639,337.53.

The 102% rule is therefore respected.

## 9. DELIVERABLES AND MILESTONES

### 9.1 DIRECTORY OF DELIVERABLES AND MILESTONES

The LIFE Aiguillon Bay project includes 40 deliverables listed in **Annex 05**, in which the status of transmission since the start of the project is specified. This annex also shows the dates for the 33 project milestones.

### 9.2 LIST OF DELIVERABLES SENT WITH THE MID-TERM REPORT

As a reminder, 10 deliverables were submitted with the mid-term report:

- Deliverable A4 - Summer tourism user survey
- Deliverable A4 - Pointe de l'Aiguillon development project
- Deliverable A1 - Wildlife inventory report and food web identification
- Deliverable A1 - Impact assessment and other regulatory appraisals carried out, authorisations obtained
- Deliverable D1 - Bathymetric survey analysis report and associated maps (part 1)
- Deliverable E1 - Project presentation brochure
- Deliverable E1 - Illustrated book on the Bay
- Deliverable E1 - 10 exhibition signs on the treasures of the Bay
- Deliverable E6 - Reception of LIFE information signs
- Deliverable F4 - Completed indicator tables of the initial situation.

### 9.3 LIST OF DELIVERABLES SENT WITH THE FINAL REPORT

30 deliverables are included in this final report, listed below:

- Deliverable A3 - Development study and regulatory appraisals (Prée Mizottière)
- Deliverable A5 - Study report on the use of the Aiguillon Bay and surrounding marshland by wintering ducks
- Deliverable A6 - Action follow-up report
- Deliverable A6 - Additional deliverable - Abstract of the IFREMER study
- Deliverable A7 - Water management handbook
- Deliverable A7 - Summary report
- Deliverable A7 - Preparatory document for the evaluation of the RNN's PG 2013-2022 and the drafting of the management plan 2023-2032
- Deliverable C1 - Summary report: Work & Assessment of oyster regrowth monitoring
- Deliverable C3 - Report on the works (dyke, hydraulic structures: Prée Mizottière)
- Deliverable C4 - Review of work carried out
- Deliverable D1 - Studies of geomorphological changes in the Aiguillon Bay 2017 - 2022 (Parts 1 and 2)
- Deliverable D1 - Report on the benthic macrofauna and granulometric monitoring of the mudflat in the treated sectors
- Deliverable D1 - End-of-work report and prospects for further removal of wild oyster beds, see Deliverable C1 - Summary report: Work & Assessment of oyster regrowth monitoring
- Deliverable D3 - Inventory report on the habitats of the Prée Mizottière
- Deliverable D3 - Inventory report on the amphibians present on the Prée Mizottière site
- Deliverable D3 - Inventory report on the birdlife present on the Prée Mizottière site
- Deliverable D4 - Pointe de l'Aiguillon habitat maps
- Deliverable D4 - Final summary report on the birdlife monitoring at the Pointe de l'Aiguillon site
- Deliverable D5 - Socio-economic and ecosystemic impact assessment of the project
- Deliverable E1 - Discovery Booklet about the Bay

- Deliverable E1 - Compilation of project experiences
- Deliverable E1 - 20 min project film
- Deliverable E1 - Printing of 12 technical posters
- Deliverable E2 - Proceedings of the international conference on the issue of marine submersion
- Deliverable E2 - Proceedings of the conference on the "oyster bed removal" operation
- Deliverable E2 - Proceedings of the project feedback conference
- Deliverable E4 - Layman's report – English and French versions
- Deliverable F1 - Press kit
- Deliverable F3 - Post-LIFE Conservation Plan
- Deliverable F4 - Completed indicator tables of the final situation.

## 10. TABLE OF ANNEXES

Annex 01 - Partnership agreements and their amendments	
Annex 02 - Additional funding agreements since the mid-term report	
Annex 03 - Letters sent by EASME/CINEA since the mid-term report	
Annex 04 - Amendments 4 and 5 to the Grant Agreement	
Annex 05 - Milestones & Deliverables	
Annex 06 – Financial statement of individual beneficiary PNR	
Annex 07 – Financial statement of individual beneficiary LPO	
Annex 08 – Financial statement of individual beneficiary OFB	
Annex 09 - Payment request	
Annex 10 - Cost summary	
Annex 11 - Income summary	
Annex 12 - Consolidated financial statement	
Annex 13 - Statement of payments from EU	
Annex 14 - Life financial reporting, PNR (Excel file)	
Annex 15 - Life financial reporting, LPO (Excel file)	
Annex 16 - Life financial reporting, OFB (Excel file)	
Annex 17 - Life financial reporting, Consolidated (Excel file)	
Annex 18 - PNR Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)	
Annex 19 - LPO Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)	
Annex 20 - OFB Certificate (Beneficiary's Certificate for Nature and Biodiversity Projects)	

## 11. LIST OF FIGURES

FIGURE N° 1 : THE FIVE ACTION AREAS OF THE AIGUILLON BAY LIFE PROJECT .....	7
FIGURE N° 2 : THE STAGES OF A SAMPLING CAMPAIGN: COLLECTION, SIEVING AND IDENTIFICATION @ PNR.....	24
FIGURE N° 3 : DUCK GIZZARD ANALYSIS @ RNN .....	25
FIGURE N° 4 : FITTING A TRANSCEIVER - FEBRUARY 2017 @ RNN .....	25
FIGURE N° 5 : POSTER PRESENTING THE ANATIDAE STUDY @ RNN .....	26
FIGURE N° 6 : ILLUSTRATED BOOK .....	47
FIGURE N° 7 : INFORMATION PANELS.....	58
FIGURE N° 8: AMPHIBIOUS EXCAVATOR IN ACTION TO RESTORE MUDFLATS .....	90
FIGURE N° 9 : DEFECTIVE CAGE @ RNN .....	111
FIGURE N° 10 : NEW CAGE WITHOUT PROBE@ RNN.....	111
FIGURE N° 11 : ANTENNA BUOY AND CAGE (WITHOUT PROBE).....	111