



# FINAL REPORT LIFE SEABIL

04/10/2021 to 30/12/2024

## Saving SeaBirds from Marine Litter

LIFE20 GIE/FR/000114



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### Coordinator



### Beneficiaries



### Financial partners





LIFE Project Number  
**LIFE20 GIE/FR/000114**

**Final Report**  
**Covering the project activities from 04/10/2021 to 30/12/2024**

Reporting Date  
31/08/2025

LIFE PROJECT NAME or Acronym  
**Saving SeaBirds from marine Litter**

<b>Project location:</b>	France, Spain and Portugal	
<b>Project start date:</b>	04/10/2021	
<b>Project end date:</b>	30/09/2024	<b>Extension date:</b> 30/12/2024
<b>Total previsional budget:</b>	1,076,352 €	
<b>Total declared costs:</b>	1,085,871 €	
<b>EU previsional contribution:</b>	576,822 €	
<b>(%) of eligible costs:</b>	53,59 %	

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Package completeness and correctness check	
Obligatory elements	✓ or N/A
Technical report	
The correct latest template for the type of project (e.g. traditional) has been followed and all sections have been filled in, in English <i>In electronic version only</i>	✓
Index of deliverables with short description annexed, in English <i>In electronic version only</i>	✓
<u>Final report</u> : Deliverables not already submitted with the MTR annexed including the Layman's report and after-LIFE plan Deliverables in language(s) other than English include a summary in English <i>In electronic version only</i>	✓
Financial report	
The reporting period in the financial report (consolidated financial statement <b>and</b> financial statement of each Individual Beneficiary) is the same as in the technical report with the exception of any terminated beneficiary for which the end period should be the date of the termination.	✓
Consolidated Financial Statement with all 5 forms duly filled in and signed and dated <i>On paper (signed and dated originals*) and in electronic version (pdfs of signed sheets + full Excel file)</i>	✓
Financial Statement(s) of the Coordinating Beneficiary, of each Associated Beneficiary and of each affiliate (if involved), with all forms duly filled in (signed and dated). The Financial Statement(s) of Beneficiaries with affiliate(s) include the total cost of each affiliate in 1 line per cost category. <i>In electronic version (pdfs of signed sheets + full Excel files) + in the case of the Final report the overall summary forms of each beneficiary on paper (signed and dated originals*)</i>	✓
Amounts, names and other data (e.g. bank account) are correct and consistent with the Grant Agreement / across the different forms (e.g. figures from the individual statements are the same as those reported in the consolidated statement)	✓
Mid-term report (for all projects except IPs): the threshold for the second pre-financing payment has been reached	✓
Beneficiary's certificate for Durable Goods included (if required, i.e. beneficiaries claiming 100% cost for durable goods) <i>On paper (signed and dated originals*) and in electronic version (pdfs of signed sheets)</i>	N/A
Certificate on financial statements (if required, i.e. for beneficiaries with EU contribution ≥750,000 € in the budget) <i>On paper (signed original) and in electronic version (pdf)</i>	N/A
Other checks	
Additional information / clarifications and supporting documents requested in previous CINEA letters (unless already submitted or not yet due) <i>In electronic version only</i>	✓
This table, page 2 of the Mid-term / Final report, is completed - each tick box is filled in <i>In electronic version only</i>	✓

*\*original signature by a legal or statutory representative of the beneficiary / affiliate concerned*

# 1. TABLE OF CONTENTS

1.	TABLE OF CONTENTS .....	3
2.	Lists .....	5
2.1.	List of appendices .....	5
2.2.	List of tables .....	5
2.3.	List of figures.....	5
2.4.	List of keywords and abbreviations.....	6
3.	Summary of the project and its overall results .....	8
4.	Introduction .....	11
4.1.	Description of background, problems and objectives .....	11
4.2.	Expected long-term results .....	11
5.	Administrative part.....	13
5.1.	Project coordination .....	13
5.2.	Communication with CINEA and the external NEEMO and ELMEN design office team .....	13
5.3.	Proposed amendments.....	14
6.	Technical part.....	15
6.1	- Technical progress, per Action .....	15
6.1.1.	Action A1: Obtaining derogations and authorizations .....	16
6.1.2.	Action B1: Select and adapt a beach cleaning and stranded seabird monitoring tool for transnational use .....	19
6.1.3.	Action B2: Low footprint cleaning guide and bird-risks maps .....	25
6.1.4.	Action B3: Training and demonstration of low footprint beach clean-ups.....	27
6.1.5.	Action B4: Create a transnational and 5 local networks for monitoring and collecting stranded seabirds .....	31
6.1.6.	Action B5: Procedures for ongoing transmission of biological material to research laboratories.....	34
6.1.7.	Action B6: Demonstrate the implementation of network mobilization .....	38
6.1.8.	Action B7: Organize transnational training and experience-sharing workshops.....	43
6.1.9.	Action B8: Implement transnational marine litter monitoring to improve source identification.....	45
6.1.10.	Action B9: Territorial evaluation and sharing experience for a local reducing waste action plan .....	49
6.1.11.	Action B10: Raise awareness amongst the general public on the issue of marine litter and seabirds in the N2000 areas .....	53
6.1.12.	Action B11: Raise awareness widely by mass media.....	58
6.1.13.	Action C1: Monitor the impact on seabirds targeted.....	60
6.1.14.	Action C2: Monitor the impact on marine litter management and prevention.....	63

6.1.15.	Action C3: Evaluation of the socio-economic impact of the project .....	65
6.1.16.	Action D1: Communication on the project.....	67
6.1.17.	Action D2: Ensure the dissemination of the results of the project .....	70
6.1.18.	. Action E1: Project management .....	72
6.2	- Main deviations, problems and corrective actions implemented.....	74
6.3	- Project implementation .....	78
6.4	- Analysis of the programme's benefits .....	88
6.4.1.	Environmental's benefits.....	88
6.4.2.	The socio-economic benefits.....	88
6.4.3.	Replicability and transferability strategy. ....	89
6.4.4.	Sharing best practices.....	89
6.4.5.	Innovation and demonstration value. ....	89
6.4.6.	Policy impact.....	90
7.	Key Project-level Indicators.....	92
8.	Comments on the financial report .....	92
8.1	- Expenditure by budget category and action.....	92
8.2	- Accounting system.....	95
8.3.	Agreements and financial transfers with associated beneficiaries .....	98
8.4.	Estimation of person-days used per action.....	99
9.	Reply to the European Commission's correspondence .....	100
9.1.	Reply to the European Commission's correspondence of 17/10/2024 .....	100
9.2.	Reply to the European Commission's correspondence of 08/10/2025 – additional information request on Final Report .....	101
10.	Deliverables and milestones.....	102
11.	Appendixes.....	107

## 2. Lists

### 2.1. List of appendices

<i>appendix 1: exemple of panels installed on the beach</i> .....	107
<i>appendix 2:screen captures of the tissue bank online interface</i> .....	108
<i>appendix 3: extract from the CEDRE analyzes report</i> .....	109
<i>appendix 4 : Final seminar program</i> .....	110
<i>appendix 5 : Final table of key performance indicators</i> .....	111

### 2.2. List of tables

<i>Table 1 : Difficulties encountered, corrective actions and impacts on LIFE objectives and results</i> .....	74
<i>Table 2: Summary of objectives and expected results, results achieved and evaluation of the action at the end of the project</i> .....	79
<i>Table 3 : Innovations deployed as part of the LIFE project and associated demonstration elements</i> .....	90
<i>Table 4 : LIFE SeaBiL estimated and actual expenditure by budget category</i> .....	92
<i>Table 5 : LIFE's projected and actual expenditure per action</i> .....	93
<i>Table 6 : Detailed budget per beneficiary concerning action E1</i> .....	94
<i>Table 7:Project code references in ABs administrations</i> .....	95
<i>Table 8: Internal procedures for costs' approbations in ABs structures</i> .....	96
<i>Table 9:Time registration procedures in ABs structures</i> .....	97
<i>Table 10:Estimation of person-days used per action</i> .....	99
<i>Table 11: List of deliverables and milstones</i> .....	102

### 2.3. List of figures

<i>Figure 1: Map of the Life SeaBiL project implementation</i> .....	8
<i>Figure 2: ICAO welcome page</i> .....	22
<i>Figure 3: beach clean-up at Moëze-Oléron ran by LPO France</i> .....	29
<i>Figure 4: Beach clean-up ran by SEO/BirdLife at Noja</i> .....	29
<i>Figure 5:Percentage of profile of participants who completed the survey</i> .....	30
<i>Figure 6 : Urdaibaï workshop</i> .....	35
<i>Figure 7 : repartition of SeaBiL monitored areas in France during winter 2022/2023</i> .....	39
<i>Figure 8: SPEA monitoring report on stranded seabird events</i> .....	40
<i>Figure 9: CEDRE protocol training</i> .....	47
<i>Figure 10: Ludovico from SEO/BirdLife standing next to newly installed tidal bin in Cantabria</i> .....	52
<i>Figure 11: SPEA beach stand and SEO/BirdLife stand at EcoNoja</i> .....	54
<i>Figure 12: Laye NDiaye exposition at LPO FRANCE</i> .....	55
<i>Figure 13: panel installed at the entrance of Gatseau peak beach in Oléron island, France</i> .....	56
<i>Figure 14 : Quercus article and summary of Oiseau magazine junior</i> .....	59
<i>Figure 15: Steel bottle and SeaBiL flag</i> .....	68
<i>Figure 16 : Comparison between provisional and effective budget</i> .....	95

## 2.4. List of keywords and abbreviations

- AB: associated beneficiary / ABs : associated beneficiaries
- CARA: Communauté d'agglomération Royan Atlantique – Urban community of Royan
- CDA La Rochelle : agglomeration community of La Rochelle
- CARO : Rochefort collectivity
- CDC Oléron : Oléron island community of municipalities
- CEDRE: CEnter for Documentation, Research, and Experimentation on accidental water pollution - French organism providing expertise about accidental pollution of waters. Specialised in marine litter
- CIESM – Mediterranean Science Commission
- CREAS: Centers for the Recovery of Endangered Species – care centers network
- DREAL: Regional Directorate for Environment, Development and Housing
- EEA : European Environment Agency
- FAIR: Findable, Accessible, Interoperable, Reusable
- FO: Frequency of Occurrence
- FOA: Fundação Oceano Azul – Portuguese foundation for environment protection
- GES : Good Ecological State
- GTAM : Seabirds working group of SEO/BirdLife NGO
- HOS : Hellenic Ornithological Society
- ICAO: Inspección Costera de Aves Orilladas – Survey of stranded seabirds
- ICNF: Instituto da Conservação da Natureza e das Florestas – Public institution for the nature conservation and forests
- IEPAAC : Institut d'Estudis Proffesionals Aqüicoles i Ambientals de Catalunya - Institute of Professional Aquaculture and Environmental Studies of Catalonia
- IFREMER : Public french institute for sea exploitation
- ISPA: University Institute of Psychological, Social, and Life Sciences, with MARE-ISPA research center
- LIENSs : Coastal Environment and Societies laboratory of LRUniv
- LPO France : Ligue pour la protection des Oiseaux
- LRUniv : La Rochelle University
- MSFD: Marine Strategy Framework Directive
- MMN: Manche Mer du Nord – northern stranded seabirds network in France
- NGO: non-governmental organisation
- OFB : French public office for biodiversity
- OSPAR: Convention for the Protection of the Marine Environment of the North-East Atlantic
- PNM EGMP : Gironde estuary and Pertuis sea Marine Natural Park
- PNM BA: Arcachon Bassin Marine Natural Park

- RESOM: Réseau des oiseaux marins – French seabirds network
- Rivages de France : French national NGO of the national network of coastal and lake area managers
- SEO/BirdLife : Spanish Ornithological Society, Spanish representant of BirdLife
- SFE: Surfrider Foundation Europe - NGO
- SPEA : Sociedade Portuguesa para o Estudo das Aves – Portuguese society for the study of birds
- TEO: Territoires Environnement Océan – Society working on the installation of tidal bins in France
- TRAGSA : TRAGSA is a group of public companies that is part of the State Industrial Holdings Company
- UCA : University of Cadiz
- UAL: University of Andalusia



### 3. Summary of the project and its overall results

When they are not killed by ingestion, plastic threatens seabird's survival and affects their habitats and their reproduction.

The aim of the Life SeaBiL project was to better take into consideration birds in the monitoring of marine environmental quality and in waste management by pooling the transnational skills of the participants involved (managers, organisers of beach clean-ups, wildlife care centres, researchers, local authorities), by deepening cooperation and knowledge, and by producing common tools, methodologies and governance. It aims at improving the European monitoring of marine litter, promoting research on its impact on seabirds and enhancing the work of care centres at a transnational level.

Within the context of the fight against marine pollution, the LIFE SeaBiL Project "Saving SeaBirds from marine Litter" intends to evaluate and reduce the impact of plastic pollution on seabirds. The project involves 5 pilot sites in 3 countries:

- France: Gironde estuary and Pertuis sea Marine Natural Park (PNM EGMP)
- Portugal: Berlengas Natural Reserve
- Spain: Ebro Delta Natural Park, Urdaibai Biosphere Reserve / Santoña Marshes Natural Park; Cabo de Gata Natural Park

**In France**, the project was implemented by the Ligue pour la protection des Oiseaux (LPO France), also coordinator of the project and by La Rochelle University (LRUniv) through its dedicated laboratory to Coastal Environment and Societies (LIENSs), the French associated beneficiary (AB). **In Spain**, it was the Spanish Ornithological Society (SEO/BirdLife) and University of Cadiz (UCA) who managed most of the action (University of Andalusia (UAL) left the project, replaced by UCA). **In Portugal**, it was the Portuguese society for the study of birds (SPEA).



Figure 1: Map of the Life SeaBiL project implementation

The coordination of beach cleaning actions and the monitoring of stranded seabirds were improved thanks to:

- Adaptation and launch of the ICAO (Inspección Costera de Aves Orilladas), a mobile application for the survey of stranded seabirds usable on the Atlantic and Mediterranean coast for the general public (B1). Another mobile application to monitor marine litter watch is linked with ICAO if user needs to. During the project, the use of ICAO permitted 1 619 users through 3 973 surveys to register 4 326 seabirds.
- The creation of a low footprint cleaning guide and bird-risks maps to make organizers and beaches managers aware of the rules to follow during beach cleanups so as not to impact biodiversity. Training sessions on those tools and coastal biodiversity gathered 139 stakeholders. 1 035 guides were uploaded and distributed, and 56 beach clean-ups were organised with these tools (guide and maps), making aware of 1 263 participants (B2, B3).

- The structuring of networks for monitoring and collecting stranded seabirds was done by bringing together beaches managers, beach-clean-up organisers, volunteers, care centers and scientifics (B4); a skillsbook was made. Charters were signed to formalized national and transnational networks, based on protocols already working in French Channel coast. At the end of the project, at least 88 structures made up the stranded seabird network (27 care centers, 14 Natura 2000 managers, 20 scientific partners, 27 volunteer's structures), at national and transnational level.

The acquisition of knowledge on the impact of plastic waste on seabirds and the definition of an indicator species for MSFD were consolidated by:

- Collecting, operating and routing biological material from beaches and care centers to research laboratories were set up through procedures (breeding colonies protocol, transportation and necropsies protocol, monitoring and collect protocol, structured during several workshops between stakeholders (B5).
- A biological tissue bank searchable through an online interface was made (B5). The database used to list the stored tissue samples includes all the data collected from the project necropsies (B6) and operates using FAIR logic (Findable, Accessible, Interoperable, Reusable) for international scientifics.
- Through two winters of implementation the network mobilization permitted to validate its functioning (B6) and to run necropsies to search for ingested plastics items. Stakeholders from France, Spain and Portugal stranded seabirds network provided 405 seabirds for necropsies (82 from France, 128 from Portugal and 195 from Spain). 4 326 seabirds were also recorded by the network on ICAO (B1). A necropsies report was made and proposed to continue research for an indicator for MSFD (B6).
- Three workshops were organized to share experiences and knowledge about the importance of collecting data (on seabirds during beach clean ups, on impact of marine litter in breeding seabirds), about the impact of marine litter at seabird colonies and about the importance of necropsies as means of providing information about marine litter impact (B7). 109 stakeholders participated.

The identification of marine litter sources and the prevention of waste were improved by:

- The implementation of MSFD marine litter protocol in three beaches in Spain during 2022, 2023 and 2024 and test of meso and micro-plastics protocol in 3 beaches in France where MSFD protocol were already implemented since a lot of years. 6 MSFD operators were trained to implement MSFD protocol in Spain (B8).
- Sharing skills between associated beneficiaries (ABs) and stakeholders about MSFD protocol (B8) and tidal bins (B9) during workshops. This is how ABs used a common field sheet integrating stranded seabirds but also shared marine litter photos by a specific WhatsApp group and emails to validate classification of marine litter under the MSFD list. French stakeholders also shared with Spain their feedback about the implementation of tidal bins. 5 tidal bins were deployed by Spanish stakeholders. An analysis report is available (C2).
- The structuration of a marine litter identification reference system validated between ABs and with local and national stakeholders as well as two analysis reports about marine litter found in Spain and France (B8). LPO France has asked and convinced national referent to add a section about stranded seabirds on the field sheet for all french operators of MSFD marine litter protocol (more than 40 structures (mostly NGOs and natural areas managers)).
- The mobilization of local stakeholders in France through workshops to the co-construction of an action plan to reduce marine litter at source. 12 stakeholders attended the three workshops, almost all of them team leaders, who were able to pass on considerations from the field and

disseminate the action plan that had been co-constructed internally within their organisation. A technical guide to replicate this mobilization is also made available by the Life SeaBiL project (B9).

The general public has been made aware of marine litter and stranded seabird issues by:

- Organization of activities for the public and local schools. Stand animations on the beaches in the three countries and exhibitions with a global approach to preserve biodiversity were proposed by ABs. 57 events were animated by SEO/BirdLife, UCA, SPEA and LPO France. At least 3 032 people and schoolchildrens were reached (B10). Activities to engaged local schools reaching 676 childrens.
- Installation of exhibitions about plastics, one permanent, in a SEO/BirdLife ornithological reserve (with more than 10 000 visitors per year) and another in different public places in LPO France offices (reached 265 people).
- Installation of informatives panels at the entrance of 21 beaches in the three countries with elements about plastics pollution, impacts on seabirds, ICAO (B1), coastal biodiversity and how to reduce its impact for average person.
- Using media to raise awareness through the various types of communication about plastics pollution, project tools/guide and others results (article online in website or in social media, in newspaper, online video, radio interview, conference). Specific magasin, l'Oiseaux mag Junior, was also produced by LPO France to raise awareness amongst 2 200 subscribers. The communication actions (B11, D1) reached around 35 000 people.

The project has been assessed by:

- An analysis report about Kentish Plovers surveys in pilot site of the project made since 2022
- The monitoring of stranded seabirds treated by wildlife care centers and registered in the participatory application (ICAO) (C1).
- An analysis report to quantify and monitor the efforts on marine litter prevention and management and its impact on reduction of marine litter through the assessment of different indicators (C2). 56 beach clean-ups were made under the low footprint orders engaging 1 263 volunteers. 1 807.3 Kg of marine litter were collected during the project.
- A socio-economics analysis based on questionnaires, literature review dans desktop study and interviews (C3).

The deliverables expected and provided are listed in part 10 and are available on the BUTLER platform.

## 4. Introduction

### 4.1. Description of background, problems and objectives

The main objective of the LIFE SeaBiL project is to evaluate and reduce the direct and indirect impacts of plastic pollution on our ecosystems, using seabirds as Good Ecological State (GES) indicators. To do so, ABs want to create a strong and consistent in time network that will help to collect, store and analyze the plastic ingestion and in the end its consequences on seabird's organisms. LIFE SeaBiL project also aims to reduce plastic pollution impacts by working with stakeholders and working on its reduction at its source, and by public sensibilization.

The communication strategy is to use mass media, but also expositions, interactive stands and beach clean-ups to address the plastic issue to the population. Scientific papers and press publications are also a good way to speak of plastic pollution to public.

Moreover, ABs want to raise awareness the youngsters as they are part of the solution, and can spread the word to other youngsters, but also to their parents. ABs want to do that by doing beach clean-ups with younger ones, intervening in schools, and publishing special newspapers.

Throughout the project, the main stakeholders targeted are local and public authorities and Natura 2000 managers, beach clean-ups associations and care centers, mainly through stranded seabirds' network, but also to train them to beach clean-up good practices. ABs also want to have great impact on OSPAR referents.

It is currently estimated that 90% of seabirds have plastic in their stomach, and they will be 99% by 2050 if nothing is done. We are rejecting 8 million tons of plastic each year in the ocean. Their decomposition time is unknown, and we think it might be infinite. In the end, the plastic fragments get swallowed by marine mammals, seabirds etc. As humans, we end up eating plastics. The public tends to be increasingly aware of this problematic. However, the knowledge of actual plastic pollution impact is really limited to estimations today, and public needs better understanding of its direct and indirect impacts.

To tackle this issue, LIFE SeaBiL will evaluate these impacts on seabirds and educate stakeholders and public.

### 4.2. Expected long-term results

LIFE SeaBiL specific objectives (SO) are:

**SO1. Improve the coordination of beach cleaning actions and the monitoring of stranded birds by strengthening the skills of those involved and by setting up a transnational network.**

B1: Optimised Mobile quadrilingual application for the census of stranded birds, over 300 users.

B2: "Low footprint" guide for natural area managers and organisers of beach clean-ups, over 500 downloads, risk-maps for pilot sites.

B3: 5 training courses for natural area managers and beach clean-up organisers/150 users follow online training/200 managers and organisers of beach clean-ups change their practices and use SeaBiL tools/50 beach clean-up initiatives adapted, 1000 volunteers.

B4: 5 local and 3 national stranded birds monitoring networks, one transnational network/50 networked structures, and 300 actors involved/Guide "structuring an efficient network to improve the analysis of the impact of waste on birds".

**SO2. Consolidate the acquisition of knowledge on the impact of plastic waste on seabirds and define an indicator species for Good Environmental Status (GES), in agreement with the Marine Strategy Framework Directive (MSFD)**

At least one indicator species will be identified by analyzing stomach contents to define an initial state of contamination by plastic particles and to assess its evolution. A biological tissue bank will be set up.

B5: Protocols for long-term sampling of stranded seabirds and for monitoring marine litter impact at seabird colonies/Procedure to move biological material from wildlife care centres and breeding sites/Set up of one transnational tissue bank hosted by LIENSs.

B6: 180 birds collected and analyzed; at least 60 individuals per country/Database of samples/Identify one "GES" indicator species for MSFD monitoring programme.

B7: 90 people participating at workshops.

**SO3. Improve the identification of marine litter sources to optimize the management and prevention of waste in the N2000 areas.**

Monitoring of marine litter via the OSPAR protocol to provide local knowledge, and the creation of a group bringing together the various local participants to work together to better identify sources of waste and solutions for their reduction.

B8: 3 local marine litter repositories/2 interoperable databases/At least 1 OSPAR monitoring per beach site followed in Spain (3 sites, 4 times per year)/3 beaches testing new OSPAR protocol in France/12 samples analysis by CEDRE.

B9: Guide for identifying waste sources and solutions distributed to 150 managers and public Authorities/5 workshops and meetings including field workshops, 10 stakeholders each/Action plan for PNM EGMP/6 marine litter bins installed.

**SO4. Raise awareness amongst the general public on the issue of marine litter and seabirds in the Natura 2000 areas.**

The objective is to develop information sharing, management and consideration of marine litter at the local level, by raising awareness and through the involvement of local communities and populations.

B10: 1000 printed maps, 10,000 downloads/Information stand and distribution of 5000 goodies (beach ashtrays, water bottles, organic cotton bag)/200 goodies for schools (lunch box and small bottles)/100 schoolchildren participating in beach clean-ups.

B11: Training courses and workshop videos online tutorials, disseminated to 90 managers of natural areas and 50 other Natura 2000 sites/5 short Videos/10,000 people made aware/Two youth magazines (2,000 readers).

## 5. Administrative part

### 5.1. Project coordination

The LIFE SeaBiL was coordinated from France by LPO France, the official BirdLife representative, given its experience in managing European LIFE programs. It was implemented by the associated beneficiaries in the other countries, in particular in each pilot site, experienced in seabirds a conservation issues linked to plastic pollution in their respective regions. At LPO France, the project coordinator was assisted by a management control assistant and the head of team, who ensured project monitoring and budgetary control. Overall project coordination was carried out remotely, through regular videoconferences, as well as through ad hoc coordination missions throughout the project.

In each of the 5 pilot sites, the project is coordinated by one or two local coordinators who organized project management around local steering committees and monitoring committees. Every six months, the associated beneficiaries sent their financial statements to the LPO France with all supporting documents (timesheets, invoices, etc.) in order to ensure the smooth running of the project:

- 2 coordinators for SEO/BirdLife (for Urdabaï, Santoña, Ebro Delta),
- UCA was replaced by UAL as associated beneficiaries, but the coordinator remained the same person (for Cabo de Gata)
- 2 coordinators for SPEA (for Berlengas)
- 1 coordinator at LRUniv (LIENSs)

SEO/BirdLife is initially working only on two pilot sites, Urdabaï and Ebro Delta. At early stage of the project, SEO/BirdLife wanted to add a new pilot site: Santoña's natural park, which is right next to Urdabaï. This pilot site is bigger than Urdabaï and SEO/BirdLife duplicated some actions there. It also allowed to deploy some actions when they were not possible at Urdabaï.

### 5.2. Communication with CINEA and the external NEEMO and ELMEN design office team

The external agency NEEMO (now ELMEN) carried out five project visits during the LIFE SeaBiL programme:

- the first visit in 05/2022, at the headquarters of LPO France
- by visioconference in 11/2022
- for financial elements in 09/2023 by visioconference
- the mid-term visit in Spain, in 10/2023 at a technical workshop organized by UCA in Cabo de Gata Natural Park with the participation of project CINEA advisor, Maria-José Aramburu
- the final visit in 09/2024, in La Rochelle hosted by LRUniv

NEEMO and then ELMEN referents for the LIFE SeaBiL project, regularly informed the project coordinator of important events and new documents put in place by CINEA (European Climate, Infrastructure and Environment Executive Agency). In addition, the coordinator and the management control assistant also contacted ELMEN when problems were encountered, to ensure that the corrective measures taken were appropriate.

NEEMO/ELMEN referent changed during the project: Ellen REKOWSKI-DELGOTT from the beginning until 03/2023, Manon LINCKER was present until 01/2024 and Frédéric BROCHIER was the referent until 02/2025. During the final step of the project, Marco Tosihas been the ELMEN referent for the project Life SeaBiL (since 02/2025).

The feedback sent by CINEA following the project visits by the ELMEN design office was systematically considered in the development of the project.

### **5.3. Proposed amendments**

The LPO France sent an amendment request to the CINEA on 09/02/2023. The main objective of the amendment request was to change associated beneficiary from UAL to UCA due to a change in the structure of the reference person. The amendment request was accepted on 07/04/2023.

The LPO France sent a second amendment request to CINEA on 26/06/2024 to ask for the project to be extended until 31/12/2024. CINEA agreed to this extension of the project by letter dated 02/08/2024.

Following the extended sick leave of the LIFE SeaBiL project coordinator from 02/2025, requests for 2 then 3 additional months for the submission of the report were made to CINEA in 29/04/2025 by email (with the second amendment request, the final report was scheduled for 31/03/2025). It was accepted the 30/04/2025 by email and extended the deadline to 01/09/2025 (5 months). Pierre-André FARQUE, head of sea & shore team, became the project LIFE coordinator.

## 6. Technical part

### 6.1 - Technical progress, per Action

All planned actions (18 actions) have been implemented since the project began in 10/2021. The technical progress of each of these actions is presented below. Each action that was implemented is presented as follows:

Pilot sites		Structure(s) in charge		
Pilot sites concerned by the action		Structure (s) responsible for the implementation of the action among the beneficiaries. In bold the main structure.		
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real	
Date indicated in the application file	Real starting date of the action	Date indicated in the application file	Real ending date of action or adjusted date	On going Completed Cancelled
Financial record				
Total provisional budget		Expenditures incurred up to 30/12/2024		
Total budget of the action as indicated in the application file.		Expenditures incurred from the start of the programme until 30/12/2024		
Deliverables				
Name	Provisional date		Real or adjusted date	
Name of deliverable as indicated in the application file	Date of deliverable as indicated in the application file		Real date of deliverable production	
Expected results				
Expected results		Results obtained		
Expected results at the end of the programme as indicated in the application file.		Real results obtained as of 30/12/2024		



### 6.1.1.Action A1: Obtaining derogations and authorizations

Concerned sites			Structure(s) in charge	
ALL			All – <b>LPO France</b>	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/10/2021	03/01/2022	30/12/2022	29/12/2023	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
13 298 €			11 618.18 € (87.37 %)	
Deliverables				
Name			Provisional date	Real or adjusted date
Permits/derogations/CERFA			10/2021	12/2023
Milestones				
Obtention of the first administrative exemption			10/2021	02/2022
first request sent			10/2021	01/2022
Results				
Expected results			Results obtained	
LPO France/LIENSs: max <b>17</b> derogations for transport/storage			<b>5</b> derogations for transport/storage	
SPEA: <b>1</b> derogation per year including areas of interest, species and identification of officers involved			<b>3</b> set of derogations (1 per year and per person)	
UCA/SEO: 2 derogations per year/permits for tidal bins			UCA: <b>4</b> derogations (2 per year for Cabo de Gata) SEO: <b>2</b> authorizations for tidal bins	

## **Action goal**

Each AB will have to obtain permits and derogations to start some of their actions involving:

- Monitoring, collection, transportation and analysis of stranded seabirds
- Low footprint beach clean-ups
- Implementation of tidal bins

The methodology for this action is to limit the number of administrative documents.

## **Activities undertaken and outputs achieved**

In France, the initial request was done to the Regional Directorate for Environment, Development and Housing (DREAL) in 02/2022. The process took a long time, and it took many mails, meetings and phone calls. In the end, 4 authorisations were delivered during first collection winter from 4 different department/regions covering all the French Atlantic coastline for the duration of the project until 30/12/2024. This delay did not have any consequences for the collection/storage of seabirds as the DREAL orally confirmed that we could proceed while waiting for the administrative authorisations. The authorisations included the list of seabirds that could be collected, the care centers allowed to store those seabirds, and a list of volunteers was sent for people responsible for the transportation (referent people only but non-listed volunteers can still transport stranded seabirds as long as it is SeaBiL framework). LRUniv was also allowed to transport and store designated seabirds by these authorisations. For the international part, import permits were required by LRUniv to transport bird samples and carcasses from Spain and Portugal to LIENSs laboratory (LRUniv). The authorization was signed for 2024.

In Portugal, permits to collect, transport and store wildlife individuals or samples must be requested to the national authority (ICNF) in a yearly base. Permits for SPEA's team were asked on 01/2022, 2023 and 2024. Also, a report on the 2022 and 2023 permits were delivered to ICNF. This includes the number of individuals/samples collected, species and end use. Due to this legal obligation, this action was extended until the end of the project.

For UAL/UCA the permits to collect stranded seabirds from beaches were requested to the National ministry of environment in Spain in 2022 and delivered at the beginning of 2023 for the whole period of the project. To collect specimens from Andalusian care centres, a regional permit was requested to the Junta of Andalusia council in 2022 and covered 6 months until 22/06/2023. For beach clean-ups, the local permit was requested for the activity and authorized by the local authority of Cabo de Gata Natural Park. In 2024, new permits were requested and authorized for both the collection of specimens in care centres and the collection of stranded seabirds in beaches. No administrative authorisation was needed for tidal bins.

SEO/BirdLife applied for permits for all the pilot sites to local authorities for both tidal bins (B9) and collection and storage of seabirds (B6). Due to avian flu, the Cantabrian government did not allow the collection and storage of seabirds during winter 2022/2023 at Urdaibai and Santoña's natural park. For tidal bins, Catalonia authorities refused to install tidal bins in Ebro Delta, considering that they would create accumulation of marine litter. They were installed on the other pilot sites (Urdabai and Santoña). Regarding beach boards (D10), authorizations were approved by mail or call phone in Cantabria and Catalonia, but it was refused by the Ibarrangelu Town Hall (Urdaibai, Biscay).

All authorisations and derogations are available on request; a short report about these administrative procedures was available under the deliverables Drive (see Table 11 in part 10).

### **Technical and/or financial changes to the application file**

Due to 2022 avian flu crisis, which was the heaviest reported since the last 8 crisis, SEO/BirdLife could not obtain authorisations to collect stranded seabirds on their pilot sites which were strongly impacted. This did not have too much impact on the project as they could still collect the stranded seabirds stored in their network's care centers, only volunteers were not allowed to collect seabirds on the beach.

Transnational permits were not obtained until 2024. To avoid "wasting" death seabirds to analyze or create delays, the UCA took responsibility for Spanish's necropsies.

Beach clean-ups did not require written authorisations, only clear communication with local authorities.

### **Evaluation of the progress of the action compared to the original schedule**

As the project coordinator was recruited early 12/2021, this action started in 01/2022.

This contributed to delaying the reception of the formal administrative documents but did not have impact on the project as the seabird's collections could still take place during winter 2022/2023. The avian flu crisis also delayed the action, as the authorisations were not delivered for SEO/BirdLife.

The process took really long time in France, but administration orally authorised the collection by the time authorisations would get delivered. Regarding collection/transportation/storage of seabirds, the action is completed.

*6.1.2.Action B1: Select and adapt a beach cleaning and stranded seabird monitoring tool for transnational use*

Concerned sites			Structure(s) in charge	
ALL			All – <b>SEO/BirdLife</b>	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/10/2021	03/01/2022	29/02/2024	29/02/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
47 840 €			47 002.8 € (98.25%)	
Deliverables				
Name			Provisional date	Real or adjusted date
Transnational Mobile Application for stranded birds and linked to marine litter in 7 languages (FR, PT, EN, Basque, Catalan, Galician)			09/2022	06/2023
User guide (on the app) in each language			09/2022	06/2023
Milestones				
Identification of needs (0-3 months) Workshop 1			10/2021	03/2022
Identification of needs (0-3 months) Workshop 2			11/2021	04/2022
Identification of needs (0-3 months) Workshop 3			12/2021	05/2022
Launching app			09/2022	06/2023
Results				
Expected results			Results obtained	
1 mobile application for the survey of stranded birds usable on the atlantic and mediteranean coast and in relation with marine litter tools = <b>300</b> downloads			1 mobile application for the survey of stranded birds usable on the atlantic and mediteranean coast and in relation with marine litter tools = <b>1 619</b> downloads	

## Action goal

The aim of this action is to have citizen science digital tools consisting in mobile applications linked to visualiseran online database to collect and visualize data on stranded seabirds and marine litter. It will be used during beach monitoring activities about marine litter, stranded seabirds, marine mammals counts, beach clean-ups and other events organised within the project, as well as being available for any other similar event outside the project and for the general public to report stranded seabirds when they visit the coast.

The methodology for this action is to:

- Diagnosis an existant applications and run a first workshop with partnership and main stakeholders (**SA1**)
- Run a second workshop locally in each country with stakeholders, and a final workshop within the partnership to validate the changes. Hire a developper for the app and translate it (**SA2**).
- Promote the application and create a user guide in 7 languages (**SA3**).

### a) SA1: diagnosis

## Activities undertaken and outputs achieved

Before running the first workshop with main stakeholders, ABs thought that it would be better to run a first meeting with only the partnership early 03/2022.

From the first discussions and this meeting, several things were identified.

First, ABs considered that because they did not have a large budget to develop a full application, and considering that other tools already existed, the best would be to develop and improve those tools.

ICAO is an already existing app for stranded seabirds, and it was managed by SEO/BirdLife. At first impression, ICAO weaknesses were that the user needed to be an ornithologist expert to complete a survey and lots of information were asked, more the application was not intuitive to use. SEO/BirdLife did a common document in which partnership could work on the common Google Drive, so each beneficiary could give their opinion on which fields should be improved/removed.

It made sense to improve this existing tool by making it more user-friendly and adding Portuguese and French regions. A link would then be made to a marine litter monitoring application, the ones of which pre-identified were:

- **Marine litter watch:** An app managed by European Environment Agency (EEA) that aims to centralize precise beach cleaning data. Ideally, ABs want an application that is interoperable with this app.
- **Quadrige:** French information system developed by IFREMER (Public french institute for sea exploitation). It is a database interoperable with European databases but it is not a mobile application possible to adapt to fill the goal of this action.
- **DALI:** French database dedicated to data relating to waste in the marine environment for professionals/specialists developed by IFREMER in a partnership with French public office for biodiversity (OFB) and CEDRE to satisfy the specifications of the MSFD and more particularly the descriptor D10 "Marine litter". Like Quadrige, it is not a mobile application itself, so it did not seem like an adequate candidate.

- **Fish & Click:** French website developed by IDREMER from a citizen science programme with the objective to collect data on abandoned, lost and discarded fishing equipment. Not a mobile application either.
- **Plateforme Zero déchets sauvages:** French website and database developed by Mer Terre. Used mainly to report beach clean-ups results.
- **MARNOBA:** Spanish mobile application, interoperable with Marine litter watch, which looked quite user-friendly.
- **LIXO MARINHO:** Portuguese app to report marine litter but did not appear very user-friendly.

During the first workshop that took place on 22/03/2022 with partnership and main stakeholders, it was decided to invite MARNOBA representative and Marine litter watch representative, as they looked like the more promising apps to be adapted or to work with.

Through the discussions, it was clearly established that MARNOBA was interoperable with Marine litter watch, therefore with European data bases. It was then discussed that the link between both apps could be done at the end of an ICAO/MARNOBA survey with a pop-up suggesting to the user to utilize the other app. EEA agreed to promote ICAO once the app adaptation is completed.

## **b) SA 2: adaptation and translation**

### **Activities undertaken and outputs achieved**

One workshop was organised in France on 12/04/2022 by LPO France. Surfrider Foundation Europe (SFE), CEDRE and IFREMER representatives were invited. ICAO and MARNOBA choices were agreed by the stakeholders. It was also confirmed with stakeholders that other french marine litter monitoring apps/websites listed before were not adapted for public utilisation. Regular contacts were then made with Marine Litter Watch to confirm that MARNOBA would be the best option and that they would help promote both applications once ICAO adapted.

SEO/BirdLife organized a national workshop in Spain with stakeholders on the 21/04/2022 with the participation of the national organization Vertido Cero that created and managed MARNOBA app. After this workshop and several meetings, it was agreed to link the app ICAO and MARNOBA, collaborate, and promote each other apps (ICAO and MARNOBA) in events that SEO/BirdLife organize (online and on place meetings, workshops, training courses, ...).

The third workshop to validate the changes within the partnership took place online on 25/05/2022. Using the common document provided by SEO/BirdLife on the Google Drive project, ABs confirmed the sections of the application that they wanted to change. SEO/BirdLife confirmed with all partnership that SeaBiL project would finance the adaptation of ICAO to France and Portugal.

After the workshops quotations for improving app ICAO were requested and the software developer to carry out the work started to work on the improvements in 11/2022. All the changes that were made required a considerable amount of time and several versions of the app and testing on the field of each version. The improvement of languages and the completely new version for France extended the time needed to have it ready. SPEA translated the application and website into Portuguese and LPO France into French. SEO/BirdLife manage the list of species of fauna in all languages (French, Portuguese, Spanish, English, Basque, Catalan, Galicia). In 02/2023 a new version was available with all changes, but the final version with French translation and last improvement of errors was released in 06/2023.

Both applications have now a message advertising to each other, then when a survey for stranded birds and other fauna is sent in ICAO, a pop-up message appears informing about MARNOBA with a link to download it and send plastic and litter survey data. The same happens in MARNOBA when you send a marine litter survey. In the section about help and information of each application there is a besides and advert about the other application. MARNOBA now has uploaded a list of beaches from Spain, France and Portugal. Further collaboration between entities has included the promotion of both applications in public presentations of both SEO/BirdLife and Vertidos Cero.

All data registered is stored in a common database for Spain, France and Portugal accessible for SEO/BirdLife, SPEA and LPO France that manage the data in the respective countries. The public website allows search data by country and species and plotted in a map.

### c) SA 3: Implementation

#### Activities undertaken and outputs achieved

SPEA tested an early version of the application during a massive wreck of Puffins occurred in 01/2023 and 02/2023 in the Portuguese project site. Also, the same version was tested during the beach surveys taken under the scope of Life Ilhas Barreira (LIFE18 NAT/PT/000927). SPEA encouraged the use of ICAO during the training sessions in 2023-2024 (action B3) as well as outside of the project scope (during a beach clean-up and training session that occurred during the Bird Watching Festival, in South Portugal by 10/2023). Also, a link to the ICAO is available at the seabird stranding section of SPEA website, instead of the past simple form available to citizens submit their observations of strandings

In Spain, UAL/UCA and SEO/BirdLife promoted the application to all Andalusian birds' associations and SEO/BirdLife Andalusian network. Along the process the team helped the members of the network to deal with the application and encouraged them to use it. SEO/BirdLife tested the different versions of the application in project sites and other locations in Spain, especially during a massive wreck of Puffins occurred in 01/2023 and 02/2023 in the North-West atlantic coast.

Between the end of 2023 and 09/2024, the last point of the action was done. After several updates of the application ICAO released in 2023, mainly during the winter 2023-2024 the application was widely used in the three partner countries. SEO/BirdLife, LPO France and SPEA tested and noted any error and modification needed in the app. Several meetings between partners were done to evaluate the performance of ICAO and propose final modifications after 2 years using the application in the context of the project. Final changes to develop were agreed in the in-person meeting in Peniche during the workshop "Monitoring the impact of marine litter on seabird colonies" of the 18-19/04/2024.

A developer was hired to update the app with the modifications agreed and worked on ICAO in spring 2024 to release the last update on the 25/06/2024. The modifications consist in the improvement of the GPS positioning, some



Figure 2: ICAO welcome page

minor modifications in some fields, the addition of and identifying code to each specimen reported during the surveys while doing the survey to facilitate identification of reported fauna and link it to necropsies, correction of language errors. But the major modifications were made in the back of the app to improve the website and data manager of the app and database. A template in excel to allow data managers to import data in bulk was developed to facilitate adding large datasets provided by users like non-governmental organisations (NGOs) doing their own surveys or old data.

MARNOBA has more than 3 000 users and all the data collected each year following the simplified OSPAR protocol is sent to Marine Litter website regularly making the data available for the european administration.

In each country, the applications were already promoted through the communication to other programs, to public and to the stakeholders. An article published on the Mer Terre website (platform zéro déchets sauvages) also promoted the use of ICAO in France.

In Spain the SeaBil project and app ICAO was presented by Paulo Lago from SEO/BirdLife on the 27/01/2024 during the “X Jornadas del Grupo de Trabajo de Aves Marinas” in Galicia (North Spain). The use of the app was explained and data of 2022 presented. This event was attended by more than 60 researchers, naturalists and marine users that are key users to report data on stranded marine fauna.

SEO/BirdLife and its seabird group task force (GTAM) developed a campaign in Spain to report stranded seabirds (and other marine fauna) between 7/02/2024 and 18/02/2024, coinciding with a high number of stranded guillemots. More than 90 volunteers participated surveying more than 200 beaches in Spain and reporting more than 200 seabirds stranded.

At the end of the project, ICAO has 1 619 users and 3 973 surveys registered for 4 326 seabirds recorded.

### **Technical and/or financial changes to the application file**

The action involved numerous meetings between project partners and stakeholders starting from the beginning of the project. The different types of data that needed to be collected through citizen science platforms / apps made it difficult to have only one app for all and a technical challenge. All workshops and development of the app were slightly delayed but the objectives were achieved. Only changes are the delay of the release of the app.

### **Evaluation of the progress of the action compared to the original schedule**

As the project coordinator was recruited early 12/2021, SA1 started in 01/2022. The first workshops were held in 03/2023, time for us to diagnosis the apps and contact their owners/developers.

It did contribute to delaying the adaptation of the tools in the end but did not have an overall impact on the project actions.

Partnership had delays with the adaptation of ICAO as it was released in 06/2023 instead of 09/2022. This is due to the later arrival of project coordinator, therefore a later start of the actions. Moreover, the changes to be made by the developer were heavier than expected, resulting in a longer development time.

At the end of the project, there are no delays in reporting the development of final modifications to the app. The last update was released on 25/06/2024.

Both ICAO and MARNOBA are ready to be used in Spain, France and Portugal. The list of species is also available in English, French, Portuguese, Spanish, Catalán, Galego and Euskera. The apps will be



promoted through stranding network, beach clean-ups, trainings and other applications (such as Marine Litter Watch).

### 6.1.3.Action B2: Low footprint cleaning guide and bird-risks maps

Concerned sites			Structure(s) in charge	
ALL			SPEA/SEO/BirdLife/UCA – LPO Fance	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/10/2021	03/01/2022	30/09/2023	11/10/2023	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
19 158 €			11 635.22 € (60.73%)	
Deliverables				
Name			Provisional date	Real or adjusted date
Low footprint guide for each pilot site, translated in each language (1 PT, 1FR, 3 SP/Basque)			09/2022	10/2022
Risks maps for each pilot site			06/2022	06/2022
Milestones				
Adaptation with the workshops feedback			06/2022	06/2022
First working version done			03/2022	03/2022
Date of national workshops			04/2022	04/2022
Results				
Expected results			Results obtained	
5 final maps & guides available on the website			5 final maps & guides available on the website	
500 downloads of the guide			235 downloads of the guide	

## **Action goal**

The aim of this action is to raise awareness among beach clean-up organisers. A guide will provide the necessary information to the beach clean-up organizers and managers with a general and local "birds" approach. This is to raise awareness of the importance of the coastal environment for these species.

The bird-risks maps will enable mapping the important spaces to avoid. These tools will be used to train the stakeholders in B3.

## **Activities undertaken and outputs achieved**

For this action, ABs ran a first workshop on 22/03/2022 within the partnership during which ABs discussed guide's content, map's format and content and upcoming common document. A common document, based on several existing guides (such as Rivages de France's or CEDRE's guide) was put on the Drive in which ABs could add their suggestions. It was also commonly agreed that the risks maps should be online on the website and interactive, highlighting Kentish plovers nesting areas on all pilot sites and sensitive areas at Urdaibai since there are no Kentish plovers there.

Using the common document, stakeholders were consulted in each country and counts of Kentish plover nest and breeding pairs (C1) provided maps' datas.

On 11/04/2022, a French workshop took place with LPO Fance, SFE, CEDRE, Rivages de France. SPEA ran their workshop on 28/04/2022 with the Fundação Oceano Azul (FOA).

The final guide's content was then done step by step with ABs and local stakeholders, maps were released on 16/06/2022 online, and guide was edited on 09/2022, full translation was done the next month, and guide was put online on 11/10/2022. The guide was printed and sent or distributed to main stakeholders who use it now for their beach clean-ups (800 printed). MerTerre association published it on their website, PNM EGMP and Arcachon Bassin Marine Natural Park (PNM BA) promote it to local associations willing to organise beach clean-ups.

Guide contains the QR code redirecting to interactive risks' maps on the website.

## **Evaluation of the progress of the action compared to the original schedule**

The only delay was the translation of the guide, otherwise no delays. The French workshops were considered sufficiently efficient to validate the guide's contents, so associated beneficiaries only consulted with local authorities outside of workshops. SEO/BirdLife had struggles finding local competences for Kentish plovers as they are not so numerous on their pilot sites. An update (format of mapping the areas) from PNM EGMP who hosts the French Kentish plover's datas occurred during 09/2023, but complete maps were back online in 10/2023.

The maps are updated when needed and both maps & guides were promoted throughout the project. Guide was readapted based on the feedback received from the field (action B3).

#### 6.1.4.Action B3: Training and demonstration of low footprint beach clean-ups

Concerned sites			Structure(s) in charge	
ALL			LPO France/SEO/BirdLife/SPEA – UCA	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
03/10/2022	11/11/2022	28/06/2024	28/06/2024	Completed Objectives partially achieved
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
109 894 €			83 707.18 € (76.17 %)	
Deliverables				
Name			Provisional date	Real or adjusted date
Final guide (B2 guide adapted with feedback survey results)			09/2023	01/2024
Online training			03/2023	10/2023
Feedback survey results			09/2023	11/2023
Milestones				
First training session			11/2022	10/2023
Feedback surveys sent			02/2023	11/2023
First beach clean-up			12/2022	12/2022
Results of survey			06/2023	12/2023
Results				
Expected results			Results obtained	
150 users for online training			139 stakeholders trained	
5 physical trainings			8 training courses	
3 Natura 2000 managers and 7 local organisers and associations of beach clean-ups per pilot site = 50 persons trained			29 Natura 2000 managers and 38 local organisers and associations of beach clean-ups change their practices after training	

<b>200</b> managers and organisers of beach clean-ups change their practices and use SeaBiL tools	
<b>10</b> low footprint beach clean-ups per site & <b>200</b> volunteers per site = <b>50</b> beach clean-ups gathering <b>1 000</b> volunteers	<b>56</b> beach clean-ups in total <b>1 263</b> volunteers

### Action goal

This action was to improve awareness of beach clean-up organizers and Natura 2000 managers and their ability to conduct beach clean-ups minimizing impact on birds, as well as the citizens and associations who organized beach cleaning activities.

Using B2 tools, and ICAO application, physical and online training was to be provided at each pilot site with the participation of beach clean-up companies, associations and natural area managers (SA1). Beach clean-ups were to take place in France, Spain and Portugal, in pilot sites (SA2). Survey was to be conducted among trained people, and tools were adapted depending on the trainings' and survey's feedback (SA3).

#### a) SA1: Training sessions

Online and face-to-face training with participants from several countries were organised by each AB. The dissemination of the events was done through social networks and mailing lists to the different target groups of the training.

The online sessions were recorded and can be found in the resources tab of Life Seabil website ([in France](#) (29/11/2023), [in Spain](#) (20-21/11/2023), [in Portugal](#) (14/12/2023)).

Activities were designed to foster debates and discussions during both online and physical training sessions. Participants were encouraged to actively share their thoughts, experiences, and suggestions regarding the "Low Footprint" tools and beach clean-up activities. Facilitators utilized interactive tools such as polling features and voting tools to collect instant feedback and ideas. Dedicated time slots were allocated during each session to provide participants with real-time opportunities to offer improvements on the tools (methodology and illustrations in [the B3 feedback surveys and results report](#)).

In terms of the total number of people who attended the online training, the number of participants was almost 140. Breaking down participation by country, there were 45 participants from France, 40 from Portugal and two sessions in Spain (54), with 26 and 28 participants, respectively. 28% of the 22 respondents to the post-training survey were N2000 managers. The number of participants is therefore estimated at 40.

Face-to-face trainings were done between 02/2023 and 04/2024 (attendance sheets available on request). SPEA gave 5 training sessions in person with a total of 46 participants. Those training sessions included the use of ICAO as a tool to collect stranding data, seabirds ID and stranding network. UCA organized a physical training session on 6/10/2023, LPO FRANCE on 25/02/2023, but trainings were not limited to that date, they continued integrating on-site training into their beach cleanup activities.

#### b) SA2: low footprint beach clean-up demonstration

A total of 1 263 volunteers were mobilized and made aware during 56 beach clean-ups organised by ABs.

9 beach clean-ups took place in France, mobilizing and raising awareness 292 volunteers, in PNM EGMP, using LIFE SeaBiL tools. These beach clean-ups were organized between 04/12/2022 and 11/07/2024. All those beach clean-ups were included one beach clean-up association “Tous à la ramasse”, association “Les ânes d’Oléron” (doing regularly beach clean-ups), and “Reserve Naturelle Nationale de Moëze Oléron” natural area manager. LPO France was also participate in the Adopt’ 1 spot, a program developed by MerTerre for NGOs to quantify the marine litter collected.



Figure 3: beach clean-up at Moëze-Oléron ran by LPO France

In Spain between 17/12/2022 and 21/07/2024, ABs were organized beach clean-ups.

SEO/BirdLife was organized 24 beach clean-ups (8 in Basque country, 10 in Cantabria, 6 in Cataluña) with 484 volunteers (children and adults). Those beach clean-ups were involved people from local associations, N2000 managers and companies (EnNojate 365, a local youth association, Noja’s town hall collectivity, local school de Poble Nou del Delta, the Institute of Professional Aquaculture and Environmental Studies of Catalonia (IEPAAC), local school Els Muntells, JABIL entreprise (JABIL Packaging Solutions), one of the biggest packaging company in the world with a headquarters in Tortosa, near Ebro Delta)



Figure 4: Beach clean-up ran by SEO/BirdLife at Noja

UCA and UAL were ran 13 beach clean-ups with 181 volunteers. The activity involved people from local associations, Natura 2000 managers, schools and individuals.

In Portugal, SPEA coordinated 11 beach clean-ups with local groups/organizations of Peniche and schools at the Portuguese site, Algarve and Sesimbra, involving 312 participants. Activities took place between 4/11/2022 and 30/04/2024.

### c) SA3: taking into consideration the feedback

To ensure the effectiveness of the tools, training initiatives and beach clean ups, the project emphasizes continuous improvement through stakeholders' feedback received on the "Low Footprint" tools for beach clean ups developed under the LIFE SeaBiL project.

SA1 and SA2 activities were designed to foster debates and discussions during both online and physical training sessions. Participants were encouraged to actively share their thoughts, experiences, and suggestions regarding the "Low Footprint" tools and beach clean-ups activities. Facilitators utilized interactive tools such as polling features and voting tools to collect instant feedback and ideas. Dedicated time slots with interactive tools were allocated during each session to provide participants with real-time opportunities to offer improvements on the tools.

Participants were also directed to post-training surveys distributed after the completion of each training program: 22 persons responded, representing different type of stakeholders (Figure 5).

A report carried out a comprehensive analysis of the feedback received through different actions (beach clean ups and trainings; action B3) on the "Low Footprint" tools (actions B1 and B2).

Overall, the feedback was generally positive, emphasizing the guide's completeness and usefulness, highlights the positive impact and utility of the risk maps and it was positive for ICAO mobile app, for its user-friendly interface and ease of recording nesting seabirds during clean-up activities.

Adjustments were made or were planned to all the tools according to respondents' suggestions (see actions B1, B2).

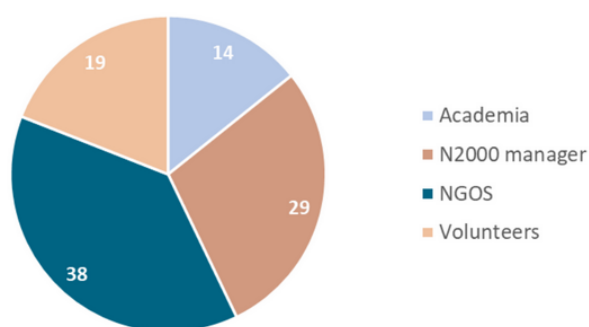


Figure 5: Percentage of profile of participants who completed the survey

### Evaluation of the progress of the action compared to the original schedule

At first, in France, because of a very high presence of Kentish plovers' nests, no beach clean-ups were organised between March and August, which is Kentish plovers breeding season.

Regarding training, partnership was agreed to wait for ICAO update to start its. But since it was delayed, they could not start training before. Also, due to the change of beneficiary from UAL to UCA, it took until end of 05/2023 for relevant UCA personnel to be contracted, which explains some delays on actions piloted by UCA. Trainings were done starting 10/2023, and their delay didn't have impact at all on a technical point of view.

Because of training delays, the SA3 surveys action was also delayed, but surveys were sent on autumn 2023 to the different stakeholders, for an adaptation of the guide by 01/2024.

*6.1.5.Action B4: Create a transnational and 5 local networks for monitoring and collecting stranded seabirds*

Concerned sites			Structure(s) in charge	
ALL			All – LPO France	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real adjusted or	
01/10/2021	03/01/2022	29/03/2024	29/03/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
32 263 €			29 380.03 € (91.06 %)	
Deliverables				
Name			Provisional date	Real or adjusted date
Repertory of contacts involved in the network (contacts and skills book)			10/2021	01/2022
Convention agreement between the structures involved in the network (charters)			05/2022	10/2022
Guidelines "structuring an efficient network to improve the analysis of the impact of waste on birds (for other sites/ countries) in English and translated (SP, PT, FR)			01/2024	01/2024
Milestones				
Charter network first version / meeting one			10/2021	03/2022
Contact & skillsbook			10/2021	01/2022
Meetings to validate charters			04/2022	05/2022
Results				
Expected results			Results obtained up	
1 contact & skillbook			1 contact & skillbook	
5 networks charters			5 networks charters signed in France, 3 in Spain, 1 in Portugal	
3 national networks monitoring local and national stranded birds’ charters			3 national networks monitoring local and national stranded birds’ charters	
1 transnational network			1 transnational network	



At each pilot site: <b>1</b> manager, <b>1</b> beach cleaning organizer, <b>1</b> research centre and <b>1</b> care center will be networked	<b>88</b> networked structures ( <b>27</b> care centers, <b>14</b> N2000 managers, <b>20</b> scientific partners, <b>27</b> volunteer's structures) – 24 in France, 31 in Portugal, 33 in Spain
<b>50</b> networked structures, <b>300</b> people (managers, beach-cleaning organizers, scientists, volunteers)	

### Action goal

By this action, a formal stranded seabirds network had to be created, based on a common skillsbook between ABs listing referent structures and individuals that will help constitute the network and protocols (B5) and will be updated day-to-day (SA1), the co-construction between ABs of network's charters to build coherence of stakeholders of the network around common project and protocols (SA2) and guidelines for creating an efficient network by the end of the project (SA3).

#### a) SA1: Assessment of all stakeholders

##### Activities undertaken and outputs achieved

A skillsbook was created on the common Drive on the 17/01/2022. During all the project, it was filled and is updated with all useful structures contacted for the stranded seabird's network. At the end of the project, it lists 88 structures actively working in the stranded seabird's network (including care centers, volunteers organisations, scientifics, local authorities, Natura 2000 managers). It is still updated when new actors come up.

#### b) SA2: Co-construction of networks charters – networks schemes

##### Activities undertaken and outputs achieved

Regarding the charters, ABs ran a workshop within the partnership on 11/03/2022 during which they discussed the process and main points they wanted to include in the charters and a first template was presented. A common document was then produced by LPO France and shared through the Drive with partners on 27/04/2022. The document was discussed through workshops in France with stakeholders. The first one took place on 28/04/2022 with public and local authorities (mainly OFB and North Sea and Channel network representatives). In France, ABs built a similar network as the one that existed in North Sea and Channel, financed by OFB. Therefore, both OFB and North Sea and Channel network were involved as much as possible on the French Atlantic network's development. The second workshop took place on 16/05/2022 with some of the care centers involved. Financial terms were then discussed with care centers by mail and phone.

In France, the network was developed not only at PNM EGMP scale, but on the whole french Atlantic coast, with several structures involved from southwest to south brittany.

In Spain, UCA mainly discussed by phone and mail with the coordinator of all Andalusians care centers, as they lacked time to run full workshops. Same process was done with SEO/BirdLife, in regular touch by phone and mail with local care centers, but it was complicated to have a formal meeting with all of them, which changed the methodology a bit.

In Portugal, SPEA encourage people on recording strandings through ICAO and people can find how to act in case of finding a stranding (dead or alive) on SPEA website. Collaborations were set with 2 universities to do necropsies. Portugal has only 2 care centres and SPEA worked in a collaborative way with no formal protocols or charters. SPEA also did some seminars with veterinary and biology students about seabird id and stranding reporting through ICAO.

In the end, a common template was set up, and each partner adapted a local context charter (French network involved financial terms, which Portuguese and Spanish network did not need). 5 care centers signed the LPO France charter in France. In Spain, 2 were signed between UCA and Centers for the Recovery of Endangered Species (CREAS) coordinator (in Andalusia and Cantabria) and 1 between SEO/BirdLife and Bizkaia care center. In Portugal, 1 charter was signed between SPEA and University Institute of Psychological, Social, and Life Sciences, through its MARE-ISPA research center (ISPA). All signed charters are available on request.

### **Technical and/or financial changes to the application file**

Many care centers and other structures work in the project's framework even though they did not sign the charters. Many care centers did not take the time to sign the charters but still stored and transmitted dead seabirds to associated beneficiaries and are cooperating.

Following negotiations with care centers, some financial arrangements were done from LPO France side, including freezers (already planned in the budget), but also items like gauntlets or kraft paper bags (to transport seabirds). Also, a 15 € per seabird stored was proposed to care centers for their contribution to the network. This was a formal request from the network.

Guideline for an efficient network was integrated into the B5 protocol for easier use.

### **Evaluation of the progress of the action compared to the original schedule**

Due to a later start of the action because of a later coordinator recruitment, ABs got delayed for the creation of the charter which then had to be readapted country by country. There was no impact on the network functionality and the network under LIFE SeaBiL project is relatively well spread with very various structures interested on the project.

6.1.6.Action B5: Procedures for ongoing transmission of biological material to research laboratories

Concerned sites				Structure(s) in charge	
ALL				All – LRUniv	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real adjusted or		
01/10/2021	03/01/2022	31/10/2022	31/01/2024	Completed	
Financial record					
Total provisional budget			Expenditures incurred up to 30/12/2024		
64 324 €			69 910.45 € (108.68 %)		
Deliverables					
Name			Provisional date		Real or adjusted date
N/A			N/A		N/A
Milestones					
Online Workshop with the scientific community interested in plastic analysis in stranded birds as well as by the creation of a seabird tissue bank to identify the needs (which tissue, sample size and mass...)			02/2022		05/2022
Workshop with national care centres at Urdabaï to discuss the storage procedures prior to seabird necropsies and tissue sampling			04/2022		06/2022
Colonies protocol tested from 05/2022 to 09/2022			09/2022		09/2022
Transport and import permits for all countries are acquired			05/2022		01/2024
Protocols for sampling seabird samples in care centres and at breeding colonies and for their transport to the transnational tissue bank are finalized			06/2022		05/2023
A tissue bank is set-up at LIENSs			10/2022		01/2024
Results					
Expected results			Results obtained		

1 transportation & necropsies' protocol, 1 protocol for sampling seabirds in breeding colonies	1 transportation & necropsies' protocol, 1 protocol for sampling seabirds in breeding colonies
1 tissue bank and findable, accesible, reusable and interoperable databases	1 <b>tissue bank available online</b> through a specific interface

### Action goal

The aim of this action was to developped procedures for operating and routing biological material collected in the field to research laboratories at the national scale (**SA1**) and to a transnational tissue bank (**SA2**).

#### a) SA1: Define the needs for transmission to research laboratories and for the implementation of a transnational tissue bank.

### Activities undertaken and outputs achieved

The breeding colonies protocol was done by SPEA as soon as the action started. It was built in 01/2022 thanks to a collaboration with Mediterranean Science Commission (CIESM) to census of marine litter items in shags nests in the Mediterranean area. The protocol was then expanded to include the collection and lab analysis of litter contents on shags (through pellet analysis), Cory's Shearwater and Band-rumped Storm-petrel (through stomach content analyzes) diets. Protocols were tested in European shag population during 2022 and 2023 breeding seasons (January to June). Cory's Shearwater sampling and lab analysis were tested in 05/2023 and 06/2023. More than 100 and 25 samples were collected for Shag and Cory's Shearwater, respectively. Microplastics were found in ~92% of Cory's Shearwater samples.



Figure 6 : Urdaibai workshop

In order to create general necropsies & transportation protocols, SeaBiL's partnership had to consult with scientific community and care centers first. An online workshop was held on 27/05/2022 with scientific community during which was discussed which samples should be collected and ways to get those samples. An online and presential meeting was then organised by SEO/BirdLife at Urdaibai on 16/06/2022, with care centers and scientifics. Participants set key elements for the protocols. During those workshops, partnership realised that care centers lacked time to run necropsies, and moreover it was not so safe to let various actors run necropsies because the laboratories' environments were often not adapted to avoid plastic bias during the necropsies. It was decided that necropsies and analysis would be done at UCA and LRUniv only for the time being.

The general transportation and necropsies' protocols were done by LRUniv on 21/11/2022. They then got consolidated with UCA and a final version has been transmitted on 30/05/2023 to the partnership. The protocols were also transmitted to a Greek association part of BirdLife network, Hellenic Ornithological Society (HOS), in 07/2023, as they were intersted in running necropsies on seabirds.

A protocol for monitoring and collection was created, and a field table was also done early project on 04/01/2023, providing instructions for volunteers that would attend LIFE SeaBiL monitorings. Those protocols were then improved in french language for the 2022/2023.

## **b) SA2: Creation of the database and tissue bank**

### **Activities undertaken and outputs achieved**

Due to staffing and recruitment problems, this sub-action has been delayed. However, given that sample/tissue requirements were clearly discussed and identified between ABs and with scientific experts, samples were safely stored at LRUUniv (frozen or dried) until the tissue bank was operational.

The database used to list the stored tissue samples includes all the data collected from the necropsies and operates using FAIR logic (Findable, Accessible, Interoperable, Reusable). It was developed by two LIENSs research engineers under PostgreSQL License (open source).

It lists and identifies all the birds stranded and analyzed as part of this project and allows for the measurement of mesoplastic as well as the biological elements taken and analyzed on each bird. Ultimately, it is intended to allow mapping of strandings, but it can also serve as a tissue bank. The idea is to be able to offer other research teams the opportunity to "order" remaining tissues (muscle, liver, etc.) to carry out their own analysis. It is also active and can be modified and enriched with new analysis following new bird strandings

The database is also available through a web application, [BioBank application](#).

Database and BioBank application are managed by LIENSs laboratory in La Rochelle University and will remain available to the scientific community for the long term. Some screen captures of the tissue bank online interface are available on appendix 2.

The LIFE SeaBiL project also showcases innovation and practical value by collaborating with prior Horizon 2020 projects, especially the [ARCTOX initiative](#), led by LIENSs. ARCTOX, focused on assessing contamination and its effects on Arctic seabirds, operates a global tissue bank collecting over 3,000 samples annually from more than 25 species.

Notably, the physical proximity of both tissue banks and databases offers the potential for extensive research collaborations, enabling comparisons between arctic and temperate marine ecosystems and shared investigations into common species. This strategic partnership enhances SeaBiL's innovative approach and its capacity for demonstrating effective solutions.

### **Technical and/or financial changes to the application file**

No questionnaire was spread to scientific community after the workshop, as main informations were already known. However, a regular contact with care centers and North Sea and Channel French network allowed us to build protocols step by step.

SEO/BirdLife paid for the Urdaibaï workshop instead of LRUUniv (budget line external assistance) and paid 4 224 € (not including VAT, details in financial part), which resulted on overexpenses of more than 2 000 € as not enough was planned for the conference room and the translations.

### **Evaluation of the progress of the action compared to the original schedule**

LRUUniv actions got delayed, as the university froze their expenses until they could ensure co-financing of LIFE SeaBiL. An agreement was found between LPO FRANCE and LRUUniv on 03/10/2022.

Also, an engineer expert in the development of databases at LRUniv was initially involved in the project. Unfortunately, a few months after the start of SeaBiL, this person left LRUniv for another university. It took several months to find again this expertise at LRUniv. In addition, a technician should have been hired for 6 months to develop (under the supervision of the engineer) the database and associated tissue bank. Because of the engineer's departure, and because of budget constraints described above, the recruitment of this technician has been postponed until 06/2023.

### 6.1.7.Action B6: Demonstrate the implementation of network mobilization

Concerned sites				Structure(s) in charge	
ALL				All – <b>LRUniv</b>	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real adjusted or		
03/01/2022	03/01/2022	28/06/2024	28/06/2024	Completed Objectives partially achieved	
Financial record					
Total provisional budget			Expenditures incurred up to 30/12/2024		
178 096 €			185 265.19 € (104.03 %)		
Deliverables					
Name			Provisional date		Real or adjusted date
Guidelines to use seabirds as indicators of marine litter impact on biota			01/2024		Postponed
First autopsy report			09/2023		09/2023
Second autopsy report			12/2023		12/2024
Milestones					
First monitoring in Berlengas colonies			10/2022		09/2022
First mobilization test for survey on the beach			02/2022		01/2022
Second mobilization test for surveys/sampling on the beach			02/2024		12/2022
First samples analyzed			06/2023		05/2023
Results					
Expected results			Results obtained		
180 seabirds collected/analyzed – 60 individuals per country (10 per species from care centers and beach surveys)			>500 seabirds collected, 405 analyzed – 128 in Portugal, 195 in Spain, 82 in France		

## Action goal

The aim of this action was to test the network implementation through:

- demonstration of the efficiency of protocols developed in B5 for collecting and transporting seabird tissue and stomach for the monitoring of marine litter (**SA1**)
- analysis of samples collected for microplastics to define a new indicator species within the framework of MSFD for the Bay of Biscay and the Iberian coast sub-region and feeding of a database gathering information on sample availability in the transnational tissue bank and on results obtained regarding marine litter in seabirds (**SA2**)
- Guidelines to use seabirds' breeders as indicators of marine litter impact on biota from the Bay of Biscay and the Iberian Coast subregion were also to be created (**SA3**)

### a) SA1: Demonstrate the implementation of network mobilization.

#### Activities undertaken and outputs achieved

During winter 2021/2022, LPO France ran stranded seabird's monitoring (one weekend in 01/2022, one weekend in 02/2022), without collection (no authorisations yet) and only in PNM EGMP. This allowed us to test the protocols and adapt them later on through the project. During this survey, 16 seabirds were observed stranded on the beach. During 2022/2023 winter, the mobilization in France was extended to the whole Atlantic coast. As previously stated, LPO France and LRUniv worked with North Sea and Channel stranded seabird's network and OFB to be able to have an Atlantic french stranded network after the project.

Finally, during the winter of 2023/2024, the French network was mobilized every two weeks, from 15/12/2023 to 15/03/2024 (7 monitoring).

In total, network has covered 8 departments aimed to prospect a selected coastline sample of 300 km. The french network mobilized more than 180 volunteers. 1 184 stranded seabirds were observed in this weekend but over the whole of the winters 2022 and 2024 it was 1 324 stranded seabirds observed. 82 were collected and stored (from beach monitoring and dead seabirds from care centers).

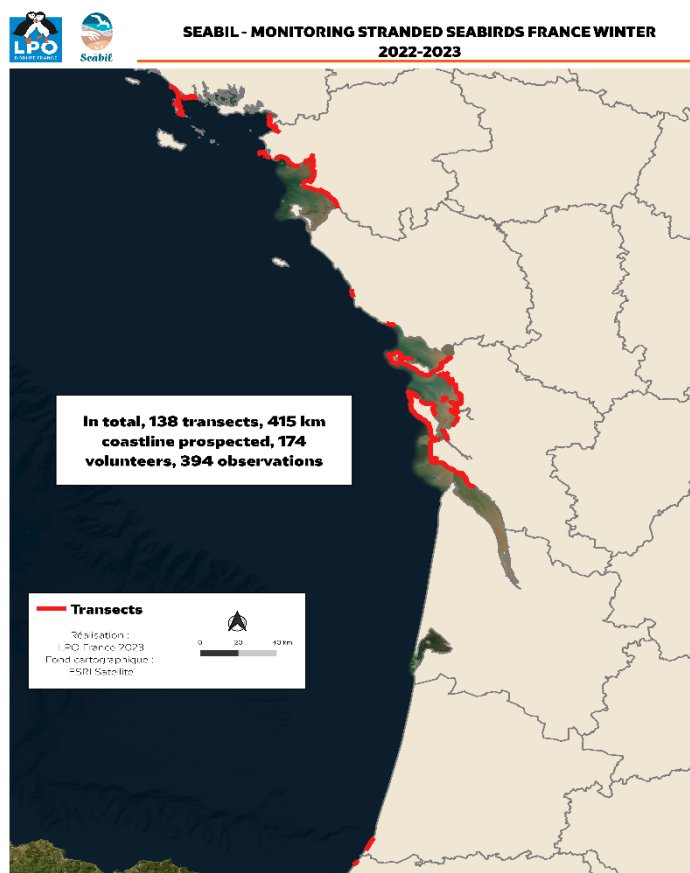


Figure 7 : repartition of SeaBiL monitored areas in France during winter 2022/2023

In Portugal, monitoring took place while testing the B5 protocols in 2022, 2023 and 2024 breeding



seasons. Protocols were tested in European Shag population during 2022 and 2023 breeding seasons (January to June). Cory's Shearwater laboratory analyses were tested in 05/2023 and 06/2023. More than 100 and 25 samples were collected for Shag and Cory's Shearwater, respectively. 25 dead seabirds were collected in Berlengas colonies, including 22 Cory's Shearwater, 1 European Shag and 3 Band-rumped Storm-petrels, from 2022 to 2023. 26 volunteers were helping with monitoring and sampling activities. Razorbills and other species stored by the RIAS care centre in Portugal were sent to UCA laboratory for necropsy. Also, samples of 4 dead Cory's Shearwater (feathers, skin and claws) found in Berlengas were delivered to UCA for analysis. A non-formal collaboration was set among SPEA and both laboratories, University of Lisbon and University of Coimbra, to perform necropsies and assess marine litter ingestion by seabirds.

In Spain, as stated before, SEO/BirdLife could not collect stranded seabirds due to avian flu; but stranded seabirds have been monitored by ICAO surveys through the whole project. UCA ran monitorings and collections during 2022, 2023 and 2024. 4 volunteers were helping UCA team with necropsies and sampling activities, but specimens were mainly collected by citizens included in the networking and technicians' collaborators of the project from TRAGSA (a group of public companies that is part of the State Industrial Holdings Company).

Both SEO/BirdLife and UCA also worked with care centers to gather the stored samples and seabirds. SEO/BirdLife has stored 43 seabirds and UCA 196 at this time, which are quite impressive numbers, way

higher than what initially expected, underlined how well these networks are working.



Caracterização do arrojamento  
massivo de papagaio-do-mar no  
inverno de 2022-23 em Portugal  
Continental  
Lisboa, abril, 2023



Moreover, massive strandings were reported in both Portugal and Spain at Atlantic coasts during winter 2023, and specific surveys took place to monitor the damages. In Portugal, 1 723 puffins were found stranded during the 2022-2023 monitorings, 1 488 of them found during the period of 15/01/2023 to 28/01/2023. In Spain, SEO/BirdLife reported 891 stranded seabirds in Cantabria during the same period. Both SPEA and SEO/BirdLife produced a SeaBiL monitoring stranded short reports about these events.

These documents [are available online](#).

In total, 405 seabirds were used for analysis, (82 in France, 195 in Spain and 128 in Portugal). Indeed, some of the seabirds stored were thrown away because of their bad general state.

Figure 8: SPEA monitoring report on stranded seabird events

## b)SA2: Analysis of microplastics in seabirds and proposition of MSFD indicator species

405 carcasses for plastics, from the three countries of the partnership (82 in France, 195 in Spain and 128 in Portugal) have been analyzed.

In Portugal, microplastic were found in ~92% of the Cory's Shearwater samples. Seven in 53 (11%) and three in 50 (2%) of European Shag nests were found with plastic contents in 2022 and 2023, respectively. In 2024, one out of the 28 occupied nests of European Shag were found with marine litter.

The analysis of microplastics ingestion among seabird species revealed significant variation in the frequency of occurrence (%FO) across different species. Alca torda (Razorbill) exhibited a %FO of

28.21%, with 33 out of 117 individuals showing evidence of microplastic ingestion. In contrast, *Fratercula arctica* (Atlantic Puffin) and *Morus bassanus* (Northern Gannet) showed higher %FO values of 65.00% and 59.46%, respectively, indicating a greater prevalence of microplastic ingestion in these species. Some species showed an alarming 100% frequency of occurrence, meaning that all sampled individuals had ingested microplastics. This was the case for *Calonectris diomedea* (Scopoli's Shearwater), *Rissa tridactyla* (Black-legged Kittiwake), *Gulosus aristotelis* (European Shag), and *Uria aalge* (Common Murre), suggesting that these species may be particularly susceptible to plastic pollution.

All analysis and recommendations are available in the final necropsies report and online ([First](#) and [final](#) autopsy reports).

### **c) SA3: Guidelines to use seabirds as indicators of marine litter impact**

#### **Activities undertaken and outputs achieved**

Due to the necropsies results, it was decided to postpone this sub-action.

Indeed, partnership observed a strong variation among sites and partners in the plastic contamination of stranded seabirds, suggesting high spatial variability in seabird exposure to plastics. However, the small sample sizes from some species preclude drawing final conclusions and proposing one or two indicator species as initially planned. In addition, obtained results also contrast with a previous study which (Franco *et al.* 2019) where plastic prevalence was high on carcasses collected on French beaches, suggesting inter-annual variations in bird contamination.

As detailed in the [Final Necropsy Report](#), (1) the important spatial variability found in plastic prevalence at the different pilot sites and for some species, and (2) the small sample sizes for some of the targeted species preclude to draw some final conclusions to propose one or two indicator species of marine litter and its impacts as initially planned in this sub-section.

Nevertheless, results obtained provide essential information for the future definition of such indicators and suggest extending the analyzes on Atlantic puffins, black-legged kittiwakes and northern gannets in France, puffins, kittiwakes, gannets and razorbills in Spain, and European shags and Corry shearwaters in Portugal. Results also suggest – based on very preliminary analyzes – that considering visual clues only for the extraction of plastics in bird digestive track could lead in an underestimation of their plastic contamination and that further analyzes of micro (invisible) plastic particles should be considered (see Necropsy report for details).

Once these additional analyses are performed, ABs are confident that an index to measure the impact of marine litter on the health of marine birds could be proposed, but the definition of such an index would be premature given data collected to date.

An updated document outlining the progress made during the SeaBiL project is [available online](#).

#### **Technical and/or financial changes to the application file**

In France, the defrayal was proposed to volunteers, but only two of them applied to get a refund. However, due to avian flu situation, some materiel was provided to Loire-Atlantique volunteers, for safety reasons, to avoid any contamination. Ebro Delta is not possible to compile because the resource person for SEO/BirdLife at this site did not compile this data and left SEO/BirdLife in 01/2023.

The definition of an index was postponed to further analysis.

### **Evaluation of the progress of the action compared to the original schedule**

Due to avian flu in France, ABs could not collect many seabirds during 2022/2023 in France, and SEO/BirdLife was not allowed to collect any seabird at all. However, care centers provided a lot of the carcasses, which are generally in a better state than the ones provided by volunteer's mobilization.

The French network is due to extend in France (Finistère department), with more structures aimed to join us during the mobilization. The number of seabirds collected was very high compared to what was planned and the necropsies were very disappointed, but the network is working and recommendations for the next years were made to finally propose one or two MSFD indicators species through the network mobilization.

6.1.8.Action B7: Organize transnational training and experience-sharing workshops

Concerned sites				Structure(s) in charge	
ALL				All – <b>SPEA</b>	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real or adjusted		
03/07/2023	03/07/2023	02/09/2024	02/09/2024	Completed	
Financial record					
Total provisional budget				Expenditures incurred up to 30/12/2024	
40 773 €				39 137.45 € (95.99 %)	
Deliverables					
Name			Provisional date		Real or adjusted date
Summaries of the transnational workshops available on project website			09/2024		09/2024
Milestones					
Workshop 1			09/2023		10/2023
Workshop 2			03/2024		04/2024
Workshop 3			06/2024		11/2024
Results					
Expected results			Results obtained		
3 transnational workshops, 90 participants			3 transnational workshops, 109 participants		
4 presentations from outside the project partnership per workshop			14 presentations from outside the project		

## **Action goal**

All the knowledge and experience gathered so far, in both previous actions and before the SeaBiL project by all project partners and network members, are shared through three transnational workshops organised during the second half of the project.

## **Activities undertaken and outputs achieved**

Three hybrid and transnational workshops (in english, spanish and french) were organised to share experience:

- Workshop 1 took place in Cabo de Gata, Spain, in 04/10/2023. It was shared 1) the importance of collecting data on seabirds during beach clean-ups, and 2) the importance of collecting data on impact of marine litter in breeding seabirds. Methodologies, protocols and metrics developed in B5 were shared. The target audience included organizers of beach clean ups, natural area managers, seabird researchers developing work at breeding colonies and government authorities. This workshop was held with the participation of 48 attendees from 12 organizations. Three presentations from outside the project partnership were shared.

- Workshop 2 took place in Peniche, Portugal, in 18/04/2024. It focused on the impact of marine litter on seabird colonies. Methodologies to use seabirds as indicators of marine litter impact on biota from the Bay of Biscay and the Iberian Coast sub-region were discussed. The target audience included natural area managers, seabird researchers developing work at breeding colonies and government authorities of Portugal, Spain, France and Italy. This workshop counted with the participation of 21 attendees in person plus 14 online, from 20 organizations. Six presentations from outside the project partnership were shared. It also included a field trip to Berlenga Island to see in place the monitorings trailing during the B5 and B6 actions.

- Workshop 3 took place in La Rochelle University, in 26/11/2024. It focused on the importance of necropsies providing information on marine litter impacts on seabirds. Protocols and difficulties with care centers were discussed in order to identify common solutions. This workshop was counted with the participation of 12 attendees in person plus 14 online, from 15 organizations. Five presentations from outside the project partnership were shared.

All reports summarizing the exchanges of these workshops are available [on the project website](#).

## **Evaluation of the progress of the action compared to the original schedule**

This action was due to start in 07/2023, but although ABs had planned the first workshop with SEO/BirdLife since 05/2023, it took place in Spain in Cabo de Gata only on the 04/10/2023.

*6.1.9.Action B8: Implement transnational marine litter monitoring to improve source identification*

1. Concerned sites			Structure(s) in charge	
Cabo de Gata ; Urdaibai ; Ebro Delta, PNMEGMP			LPO France/UCA – <b>SEO/BirdLife</b>	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/10/2021	03/02/2022	31/01/2024	31/01/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
42 858 €			39 775.85 € (92.81 %)	
Deliverables				
Name			Provisional date	Real or adjusted date
Analysis report of MSFD/OSPAR marine litter data			12/2023	12/2023
3 local marine litter repositories			01/2024	01/2024
Milestones				
First meso and micro plastic sampling in France			12/2021	02/2022
Start training for the MSFD/OSPAR operators			01/2022	05/2022
First MSFD/OSPAR survey			04/2022	05/2022
Collect feedback (before second MSFD/OSPAR survey)			06/2022	06/2022
Associated beneficiaries meeting to prepare the adapted MSFD/OSPAR protocol			07/2022	07/2022
Start the adapted-to-local-context OSPAR protocol			09/2022	09/2022
Meeting between operators to present the new protocol (sheet and photoguide)			11/2022	03/2023
Meso and micro plastic analyzes started			01/2023	01/2023
Results				
Expected results			Results obtained	
1 operator per beach followed with OSPAR protocol in Spain (3 at least)			6 operators trained (2 per beach)	

1 beach per pilot site monitored with MSFD/OSPAR protocol (in Spain, so 3 beaches)	1 beach per pilot site monitored with MSFD/OSPAR protocol (in Spain, so 3 beaches) and 4 beaches monitored outside the project in France
3 beaches in French pilot site to test a new protocol	3 beaches in French pilot site to test a new protocol (Gatseau, Moëze-Oléron, Ile de Ré)
12 samples analyzed by CEDRE	9 samples sent to CEDRE
2 interoperable databases (1 SP 1 FR)	OSPAR protocol harmonised in Spain and France
At least 1 MSFD/OSPAR monitoring (4 surveys in 1 year) per pilot site	9 monitoring, 30 surveys done

### Action goal

This action aims at:

- identifying local sources of marine litter to provide elements for local and national authorities in order to facilitate taking waste reduction measures (**SA1**)
- adapting the MSFD/OSPAR protocol to the local context, to be sure that marine litter classification is done correctly independently of the location (**SA2**)

To do that, three steps were planned:

- Training of operators in the MSFD/OSPAR protocol
- Adaptation of marine litter identification reference system to local contexts and for stranded seabirds
- Transnational sharing of knowledge on the local territory's type of waste and classification

Protocol improvements were to be shared transnationally, and common format sheet validated with online discussions and document (**SA3**)

#### a) SA1: Training of operators in the MSFD/OSPAR protocol and implementation of new CEDRE protocol

### Activities undertaken and outputs achieved

In French pilot site, where MSFD/OSPAR protocol is already implemented in 10 beaches, a new protocol was tested to evaluate meso and micro-plastic in collaboration with the CEDRE as this fraction is known to represent a higher risk of ingestion by birds. In Spain an adaptation of MSFD/OSPAR was done.

A training with CEDRE in France took place on 03/02/2022, where a new protocol for sampling meso and micro-plastic was tested. The methodology consists in drawing 50 cm wide transects in the sand and collecting the plastic only at the surface. After the training, three sites were followed to collect 12 samples. 1 site at Gatseau (monitored by LPO France), 1 site at Moëze-Oléron (monitored by natural area Moëze-Oléron) and 1 site at île de Ré (monitored by île de Ré municipality). 9 out of 12 samples were sent to CEDRE for analysis (no micro and meso-plastics found in Moëze-Oléron natural reserve at three of the four monitoring). An analysis report was done by CEDRE and [available online](#) (extracts available on appendix 3).



Figure 9: CEDRE protocol training

In Spain, after a first workshop in Cabo de Gata Natural Park, the implementation of OSPAR/MSFD marine litter protocol was carried out during the spring 2022 survey scheduled by OSPAR protocol with a first monitoring on 07/05/2022. The implementation MSFD/OSPAR beach litter protocol (with SA2 adaptation) was carried out from winter, 12/2022 to 04/2024. The trained operator was Carlos Adolfo Urueta who participated in the surveys and started the training in summer 2022. A total of 10 surveys were done. For the item's identification, along with the adapted OSPAR protocol, UCA used the MARNOBA identification system, which allowed to test the application for action B1.

At Urdaibai, due to the small size of the sandbanks and daily mechanical clean-ups, it did not make much sense to run OSPAR surveys, which is why they were done at Santoña instead. The implementation of OSPAR protocol started in early spring 2022 at Santoña (04/2022) until 10/2024 (11 surveys). From 03/2022, SEO/BirdLife trained a local operator Désiré Pellon.

At Ebro Delta, due to an important volunteer's turnover, 4 young volunteers were trained, and surveys took place as planned in 04/2022 until 07/2024 (9 surveys).

[An analysis report](#) was done with data between 04/2022 and 01/2023 from french and spanish MSFD/OSPAR surveys.

## **b) SA2: Adaptation of a waste identification reference system to local context and for stranded seabirds**

ABs had the first partnership's workshop on 06/07/2022 to propose the first version of an adapted OSPAR protocol so they reduce the bias during the monitoring. The french OSPAR field sheet was then translated and tested in pilot sites in Spain. A section for seabirds was added in the sheet in agreement with OSPAR operators in France and was also integrated in spanish OSPAR monitorings.

Reports and pictures were shared on the common project Google Drive. It turned out that most of marine litter found was the same, France has some more specific marine litter, mainly because of oyster farming, which is a big issue in PNM EGMP.

A second workshop took place between partnership on 30/03/2023 during which LPO FRANCE



presented the french marine litter repository version. The first version was provided in 04/2023 and the final version is [available online](#) at the beginning of 2024.

### **c) SA3: Sharing knowledge on the local territory's type of waste and data**

In between the workshops done through SA2, online discussions and adaptation to common protocol sheet were made within partnership.

A WhatsApp group was created on 20/10/2022 so that partnership's operators would be able to share marine litter pictures found and discuss their authentication, resulting in multiple exchanges between operators on items identification and local specificities. Partnerships also used Marnoba methodology for identification and OSPAR guide on-line. This allowed us to set up a common sheet based on those exchanges. Also, SEO/BirdLife exchanged with a local association "Centelinas Cantabria" who carry OSPAR surveys in Cantabria, Centenilas being a European program working in different places and countries.

### **Evaluation of the progress of the action compared to the original schedule**

ABs had some delays at the beginning of the action due to a late project coordinator project recruitment, but the French protocol was transmitted at early stage, UCA and SEO/BirdLife speaking good French, they were able to test it before the first workshop and before the common sheet protocol adaptation so ABs worked on a common identification template since the beginning of the action.

6.1.10. Action B9: Territorial evaluation and sharing experience for a local reducing waste action plan

Concerned sites			Structure(s) in charge	
Cabo de Gata ; Urdaibai ; Ebro Delta, PNM EGMP			SEO/BirdLife/UCA – LPO France	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/04/2022	01/04/2022	31/10/2023	28/06/2024	Completed Objectives partially achieved
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
22 568 €			27 305.96 € (120.99 %)	
Deliverables				
Name			Provisional date	Real or adjusted date
Action plan			02/2023	07/2024
Final technical guide			10/2023	08/2024
Milestones				
2 first workshops done			09/2022	03/2024
2 second workshops done			02/2023	07/2024
First technical guide version			05/2023	06/2024
Last workshop			06/2023	04/07/2024
Tidal bins meeting done			04/2023	08/2022
Results				
Expected results			Results obtained	
1 action plan			1 action plan to reduce marine litter at local level	
1 technical guide for identifying waste sources and solutions to reduce waste at a territory-level distributed to 150 managers and public local authorities			1 technical guide, 12 stakeholders involved	
6 marine litters bins installed in Spain (2 per pilot site)			5 marine litter bins installed in Spain	

## Action goal

Working meeting and fields workshops were to be organised in one local municipality of the French pilot site to link all local stakeholders around the same subject: how to reduce our waste? The aim was to identify all the local sources of waste, specifically marine litter, and work together to find local solutions to reduce it and define locally adapted actions to implement. A technical guide was to be produced and shared, with all the feedback from the work, and entitled “Identification of waste sources and solutions to reduce them on my territory” (SA1)

French stakeholders were to be shared their experience and their knowledge about “tidal bins” with Spanish pilot sites. Tidal bins are marine litter bins put on beaches during winter so people can collect marine litter easily during their walks (SA2).

### a) SA1: territorial evaluation for an action plan to reduce marine litter at a local level

#### Activities undertaken and outputs achieved

For this sub-action, it was initially planned to work along with PNM EGMP and the collectivity of Royan (CARA). However, the CARA withdrew from the action, and PNM EGMP did not have another test territory solution. LPO FRANCE looked for potential test territories (the Oléron island community of municipalities (CDC Oléron) and the agglomeration community of La Rochelle for instance (CDA La Rochelle)) but none were interested to be the test territory, although they still wanted to participate to the workshops. Finally, LPO FRANCE had a first meeting with Rochefort collectivity (CARO) on 28/11/2022 to see if it was possible to involve their littoral municipalities for this sub action, and CARO agreed with the idea and asked their municipalities if they wished to attend this action.

However, during the first stakeholders’ workshop that took place on 15/03/2023, CARO cancelled at last minute. The workshop was still really interesting with various actors and allowed participants to start identifying solutions to tackle plastic pollution.

LPO FRANCE still did not have a test territory, a common document was set up listing the different existing initiatives. Discussing it again with CARO, LPO FRANCE asked them if they could attend the second workshop with some local representatives so LPO FRANCE could define the test territory. They accepted, but then again cancelled their attendance one week before this workshop.

Without the chance to identify a territory test at the second workshop, it did not make sense to run it. Initially planned on 06/06/2023, LPO France decided to cancel it. LPO FRANCE tried to make direct contact with local CARO collectivities, without success.

The LPO FRANCE was asked help from TEO, a local player in La Rochelle, to reach out to local authorities for this action and finally, the local authority of Royan really involved in the project.

Two workshops were organized (25/03/2024 and 28/05/2024) and a survey for the population was reached in spring 2024. A final one was organized the 04/07/2024. 12 stakeholders attended the four workshops, almost all of them team leaders, who were able to pass on considerations from the field and disseminate the action plan that had been co-constructed internally within their organisation. [Action plan](#) and [technical guide](#) for replicability were available online.

## **b) SA2: Implementation of tidal bins at pilot areas in Spain**

Several actors in PNM EGMP having a great experience to share with Spanish beneficiaries.

SEO/BirdLife, LPO France and UCA had a first workshop with Oléron municipality on 24/08/2022 and a second one with TEO on 29/08/2022. Both of those stakeholders use yearly tidal bins, TEO quantifies roughly their contents. SEO/BirdLife and UCA learned a lot about how to build them, how to advertise them, how to maintenance them. They also learned from those stakeholders that tidal bins should be removed for high touristic period, so they are not used as regular bins.

After those workshops, both SEO/BirdLife and UCA consulted with their local authorities.

Following the workshops and the discussions with local authorities, by phone, it was agreed that the tidal bins should be removed for the touristic season, which is from late March to October in the Spanish pilot sites.

By the end of 10/2023, a total of 5 tidal bins were installed.

- At Ebro Delta, the authorities completely refused to implement any tidal bins as they thought they would be an accumulation of waste spot, despite our efforts to change their mind.
- At Santoña, 2 tidal bins were installed for Cantabrie, in 28/03/2023 and removed in 04/05/2023. They were weighed monthly.
- At Urdaibai in Basque country, 1 tidal bin was installed in 01/03/2023 and removed in 04/05/2023. Urdaibai authorities were a bit hard to convince and decided to implement only one tidal bin. It was checked every 15 days.
- At Cabo de Gata Natural Park, 2 tidal bins were installed in Playa del Arco (Escullos) and Playa de Mónsul (San José) as part of the LIFE Seabil project. However, the initiative faced significant challenges due to the misuse of the bins by visitors. Shortly after installation, the tidal bin at Playa de Mónsul was filled with approximately 160 kg of regular garbage, which was also left scattered around the tidal bin. This misuse prompted the management of the natural park to request its removal, and the bin was relocated to Playa del Embarcadero.

From 10/2023 to 04/2024, the tidal bins were monitored bimonthly. During the monitoring visits, it was common to find the tidal bins filled with regular, non-marine waste, such as picnic leftovers and household garbage, rather than marine debris. To address this problem, additional signage was installed to complement existing posters, aiming to reinforce the intended purpose and proper use of the tidal bins. Despite these efforts, the misuse persisted, and the tidal bins were not utilized as intended. This indicates that while educational measures like signage are important, they were insufficient to change visitor behavior in this context.

In conclusion, while the tidal bins were designed to improve the collection of marine litter, their implementation did not achieve the expected results due to widespread misuse by the public. Most of the waste collected was regular garbage rather than marine debris, underscoring the need for more effective awareness campaigns, stricter supervision, and possibly alternative strategies to ensure the proper use of these tidal bins, as it works in France.



*Figure 10: Ludovico from SEO/BirdLife standing next to newly installed tidal bin in Cantabria*

A document was made by UCA to monitor the amount of marine litter deposited in the tidal bins which was shared on the drive for Spanish pilot sites (C2 reports).

### **Technical and/or financial changes to the application file**

SEO/BirdLife could not find a way to freely craft the tidal, but they found an ecofriendly craftsman who was able to build them for a total of 750€ which were not initially planned in the budget but were necessary for this action. As there are no operators in Spain to gather the tidal bins' contents, SEO/BirdLife has to do the maintenance and quantification by themselves, which makes it sometimes difficult to characterize all the marine litter contained in tidal bins.

### **Evaluation of the progress of the action compared to the original schedule**

Regarding tidal bins, though UCA got the authorisation from local authorities to install two tidal bins at Cabo de Gata, it was not possible to install its during the change of beneficiary process. The resource person (Monica Exposito Granados) could indeed not be recruited before 04/2023, which is in the frame of the touristic period. Both tidal bins were finally installed in Cabo de Gata in 10/2023.

Regarding SA 1, as described above, the action got strongly delayed due to the series of events described, but was finally successfully completed thanks to the involvement of a local stakeholder. This delay did not allow the guide to be widely distributed during the project, but it will be (After-Life plan).

*6.1.11. Action B10: Raise awareness amongst the general public on the issue of marine litter and seabirds in the N2000 areas*

Concerned sites			Structure(s) in charge	
ALL			LPO France/UCA/SEO/BirdLife – <b>SPEA</b>	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real adjusted or	
03/01/2022	03/01/2022	02/09/2024	02/09/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
92 297 €			69 024.33€ (74.79 %)	
Milestones				
Schoolchildren low footprint beach clean-ups			05/2024	05/2024
First informative stand			06/2022	05/2022
Results				
Expected results			Results obtained up	
15 panels with information regarding the impact of marine litter on seabirds			21 sensibilization panels installed	
1000 printed birds risk maps for beach clean-up organizers/volunteers			800 printed beach clean-up guides with risks maps	
Risk maps with QR Code on panel, 10 000 downloads (QR codes + website)			235 downloads (only website)	
9 Information stand: 4 days/summer/sites			57 information stands	
Interactive installation on the beach with 5000 tokens			Cancelled	
100 schoolchildrens participating in beach clean-ups			676 schoolchildrens participating and sensitized	
5 000 goodies (beach ashtrays, water bottles, organic cotton bag)			1 700 goodies	

## Action goal

The aim of the action was to raise public awareness of plastic pollution and the need to clean up beaches in a way that respects biodiversity.

Stands, actions on the beach with schools and educational tools were planned to raise awareness.

### a) SA1: Raise awareness of the general public

## Activities undertaken and outputs achieved

At least 3 032 people (schoolchildrens, childrens and adults) were reached by stands and activities.

### *Stands and awareness activities*

Regarding the sensibilization on the beach, 57 stands was organized by ABs between 27/05/2022 and 25 02/2024 (17 in France, 30 in Spain and 10 in Portugal).

A portable stand was produced in portuguese language and used in nine activities occurring in the



Figure 11: SPEA beach stand and SEO/BirdLife stand at EcoNoja

portuguese site during the summers of 2022, 2023 and 2024. A tenth activity took place, but due to bad weather conditions it had no participants, and the team had to desert the place soon after it started.

A whale decoy was produced to visually show the issues related to marine litter. The stand was used on beaches. SPEA staff together with volunteers and two entertainers presented the problem of marine litter impact on seabirds and other marine fauna to beach users.

A total of 262 people directly interact with the stand or were directly addressed, but a much bigger number of people pass through the stand.

A shorter version of this stand was also presented at the World Ocean Day commemorations in the Lisbon Oceanarium (08/06/2024) with the attendance of at least 40 participants. A side event on the beach was included in the programme of the Birdwatching Festival of Sagres, where the issue of marine litter impact on seabirds was tackled. This side event took place on 7/10/2023 and counted with 12 participants.

In Spain, UAL then UCA staff outreached tourists about the impact of marine litter through talks as they accessed the beach. Families with children participated in identifying different types of marine litter. Additionally, a brief 15-minute beach cleanup was conducted before setting up the stand. The collected marine litter was weighed and presented at the stand to raise awareness among visitors. The collection of marine litter was weighed and presented at the stand to raise awareness among the people who



approached the stand. Four activities were conducted in Cabo de Gata Natural Park during 08/2022 (on the 9<sup>th</sup>, 12<sup>th</sup>, 26<sup>th</sup>, and 31<sup>st</sup>) and were repeated in 08/2023 (on the 16<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup>, and 25<sup>th</sup>) and 07/2024 (on the 19<sup>th</sup>, 21<sup>st</sup>, 27<sup>th</sup>, and 28<sup>th</sup>). The events took place at Playa del Arco, Escullos beach. Out of 20 people interacted with the stand during these events in 2022. More than 60 people interacted in 2023 and around 65 interacted in 2024. Additionally, UCA conducted an interactive stand with children on the 25/02 in Almeria city, in which around 60 children and 10 adults took part in the activity.

Every summer since the beginning of the project, a stand has been installed at the entrance of the Trengandín beach, Noja, S.V.J. Marshes N.P. by SEO/BirdLife staff (18 stands since summer 2022). There's a wide entrance area with very good accessibility to all people (disabilities, reduced mobility, seniors etc.) and there are no dunes at that point, so SEO/BirdLife didn't disturb the ecosystem installing the stand. SEO/BirdLife has recreated a beach ecosystem with a natural side and a littered side, to create a visual impact on the public.

Around 300 people were affected by the stand. People have been really impacted seen together both representations mainly the childrens. SEO/BirdLife has also provided some SeaBiL cotton bags and has encouraged the children to pick up some rubbish in exchange for a cotton bag. They put the waste in green boxes SEO/BirdLife put in the stand and at the end of the journey the boxes were full of marine litter. SEO/BirdLife has also organised this stand at EcoNoja, a convention for ecotourism during 9-11/06/2023.

In Ebro Delta, authorities didn't allow to have stands on the beaches, but a permanent exhibition was installed at the entrance of "Riet Vell", a SEO/BirdLife ornithological reserve, with an office building and a visitor center. This allows us to inform people about the plastic pollution issue and its impact on seabirds (at least 1 477 people).

In France, LPO France has carried out 16 stands between spring 2022 to summer 2024 on the Atlantic coast beaches and 1 in Presqu'île de Giens, Mediterranean coast. Those stands included 3 little boxes inside which people would try and identify the content (1 with marine litter, 1 with oysterfarm's litter, 1 with natural elements from beach including fake Kentish plover's eggs). At least 526 people were affected by the stands. A stand was also held at 'Festival des soeurs jumelles' in Rochefort.

An exposition on marine litter was also installed at LPO France's "espace nature", with more than 200 people sensitized. The pieces were built with local marine litter by a Senegal artist, Laye Ndiaye. They were first exposed at Corderie Royale in Rochefort, but the artist accepted to lend them to LPO France in LIFE SeaBiL framework.



Figure 12: Laye NDiaye exposition at LPO FRANCE



## Panels

In Portugal, three layouts for the panels to implement in Portuguese beaches were firstly prepared. The initial plan was to set 5 units of those layouts at the Portuguese site, in Peniche beaches. However, beaches are crowded with panels for several subjects: advertising biodiversity, security, natural areas, safety in beaches, etc.

Instead of adding a new panel, SPEA took advantage of a good collaboration with Peniche Municipality and Blue Flag initiative to join their already in place panels. One of the layouts previously prepared by Life SeaBiL team was incorporated in 7 different panels of Blue Flag and placed on 7 different beaches in Peniche surroundings. This layout included messages to alert the issue of marine litter and its impact on seabirds. By being incorporated into other panels, awareness-raising information linked to Life SeaBiL should be in place for the long term, in the years to come.

In Spain, the layouts for the panels to install in Spain by SEO/BirdLife were made during summer 2024. After that, they were sent to Urdaibai and Ebro Delta team to be translated into Euskera and Catalan languages. That way, those panels are made bilingual and the one for Cantabria (Santoña, Victoria and Joyel Marshes Natural Park) only in Spanish. At the same time, SEO contacted the municipalities in order to get the permits to install the panels. Beaches are already crowded with panels advertising about different issues and that's the reason SEO only have been authorised to install 2 panels in Cantabria and 2 in Catalonia. The Urdaibai municipality didn't allow SEO to install any panel but instead, they told SEO that they will upload the panel layout to their website. Panels were installed at the beach in 12/2024.

UCA has also installed a total of five wooden panels. After obtaining the necessary permits from the park management, the panels were installed at the end of 04/2024 on various beaches within Cabo de Gata- Nijar Natural Park, specifically at Amoladeras beach, Rambla Morales, and Charco beach.



Figure 13: panel installed at the entrance of Gatseau peak beach in Oléron island, France

In France, 5 panels were installed thanks to the Oléron municipality communities in beaches: at Boyardville, L'Ecuissière, Gatseau peak, Sables Viginier and Chaucre peak.

### b) SA2: Engage local schools

Eight activities for students of Peniche (located in the portuguese site) and other site schools were taking place in 2022, 2023 and 2024. A total of 228 students from the 5th and 8th degree participated in those activities. Sessions took place in classroom environment and/or at the beaches including a beach clean-up practical session. Also, the two B3 beach clean-up activities run by SPEA count with the participation of some students from the classroom activities.

From UCA side, the activities for students from primary and secondary schools (located in the province of Almeria) were carried out in 09/2023 and 02/2024. Both classroom talks (two days with a total of 7 talks) and beach cleanups (total of four) were carried out. UCA has also participated with an interactive stand in an activity organized on 25/02 with other associations in the city of Almeria.

In the classroom talks, the young people were introduced to the problem of plastic pollution in general and how it affects seabirds and fauna specifically. UCA staff also presented the project and the actions of Life SeaBil. They have interacted with students through interactive games of questions. The talks have ended with discussion and reflection in groups about the habits to reduce the consumption of plastics and good habits. A total of 187 students and 7 professors participated.

Secondly, during the month of 02/2024 four beach cleaning sessions were held with children from the Cabo de Gata school. These four activities were organized so that each group cleaned one of the four areas delimited within the extensive beach line that runs from the beach of the salt flats to the end of the beach of El Charco. It began with a talk about good practice and the problem of plastics. A total of 75 children and 4 professors participated and collected a total of 75kg. At the end of the cleanup, a reflection on the importance of plastic waste was made.

Finally, the 25/02/2024, UCA staff was participated in Barrio Amable event in Almeria capital. They aimed to raise awareness among children, teenagers, and parents about plastic pollution and the impact of marine debris on seabirds. The activity included various activities such as games, crafting with reused materials, and providing information about our project and the guide to eco-friendly practices for beach cleaning.

#### **Technical and/or financial changes to the application file**

Sensibilization stands had different contents and supports depending on partner's preferences, which however did not have impact on the overall sensibilization.

Instead of Urdaibai, where the beaches are mechanically cleaned every day and some of them get completely covered by the sea at high tide, SEO/BirdLife put their stands at Santoña where the impact would be greater.

#### **Evaluation of the progress of the action compared to the original schedule**

In France, due to Kentish plover's reproduction (which ends in late July), it was decided to not collect marine litter, as it could be contradictory with the beach clean-up guidelines.

### 6.1.12. Action B11: Raise awareness widely by mass media

Concerned sites			Structure(s) in charge		
ALL			UCA/SPEA/SEO/BirdLife – <b>LPO France</b>		
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real adjusted or		
01/10/2021	03/02/2022	02/09/2024	02/09/2024	Completed Objectives partially achieved	
Financial record					
Total provisional budget			Expenditures incurred up to 30/12/2024		
37 514 €			24 425.48 € (65.11 %)		
Milestones					
Online and mass media strategy including social networks			11/2021	05/2022	
Online tutorials			10/2023	02/2024	
Results					
Expected results			Results obtained		
10 000 people made aware through social networks, videos, online exhibition			15 008 people reached on social media 3 shorts videos to present the project and plastic impact 1 special magazine (2 200 readers) 1 article in Spain’s leading ornithology magazine (15 000 readers)		

#### Action goal

The aim of this action is to raise awareness widely using mass media through online information for the general public and stakeholders to increase information and knowledge on the issues targeted. This action is based on the dissemination of the collected data throughout the project (in complementary to D communication actions).

#### Activities undertaken and outputs achieved

The online and mass media strategy including social networks was agreed on 04/05/2022 by ABs. Specific socials were made for the LIFE SeaBiL project, as a Facebook page and an Instagram page (205

followers). All partners except LRUniv and UCA created a special link to the project on their websites and articles have been regularly shared through all those means ([LPO France](#) , [SEO/BirdLife](#), [SPEA](#)) . All educational tools and resources from LIFE SeaBiL are accessible on the SeaBiL website like the online tutorials for ICAO and low footprint cleaning guide.

At least 17 200 people were reached by print publications through “L’Oiseau Mag”, “Quercus” and “A vos do mar”. Furthermore, a lot of articles (printed or online) and radio interventions were made by partners and publications on social media have been affecting 15 008 people.



Figure 14 : Quercus article and summary of Oiseau magazine junior

A global monitoring document about communication is [available online](#).

### Technical and/or financial changes to the application file

Unable to publish a special numero of Adventuros as planned, SEO/BirdLife managed to get an article published in Quercus magazine.

### 6.1.13. Action C1: Monitor the impact on seabirds targeted

Concerned sites			Structure(s) in charge	
ALL			SPEA/UCA/SEO/BirdLife – LPO France	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/04/2022	01/04/2022	01/09/2024	01/09/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
62 460 €			66 538.37 € (106.53 %)	
Deliverables				
Mid-term report			04/2023	09/2023
Final report			12/2024	12/2024
Milestones				
Plovers protocol agreement			02/2022	05/2022
Care centres sharing data validate			02/2022	04/2022
First communication from care centres			02/2022	02/2022
First plovers’ surveys started			05/2022	04/2022
Results				
Expected results			Results obtained	
3 plovers spring’s surveys in each pilot sites			3 plovers spring’s surveys in each pilot sites	
1 rate per country based on care centre data about birds’ arrivals/death causes			1 rate in France (3.5% of all seabirds received), other countries could not get consistent data	

### Action goal

This action was intended to monitor the impact of the project on seabirds with three monitoring:

- Kentish plovers' surveys: Kentish plovers whose eggs are layed directly on the sand. With better integration and understanding of this species by beach clean-ups organisers and natural area managers, the disturbance should be lowered and numbers of pairs and nests higher (SA 1).
- Seabirds from care centers monitoring: the number of seabirds found injured or with an issue

related to marine litter and beach clean-ups on the targeted pilot sites received in care centers (SA 2).

- Monitoring the stranded seabirds recorded in the participatory application (SA3)

### **a) SA1: Plovers surveys**

#### **Activities undertaken and outputs achieved**

The first monitorings sessions took place on all pilot sites from 04/2022 to 07/2022.

In France, monitorings were took place during springs and summers 2022, 2023, 2024 (reports for each years are available on [PNM EGMP site](#)). During 2022, in Charente-Maritime, 61 couples were observed, 25 nests and 31 chicks. In 2023, 181 couples, 54 nests and 118 chicks were observed in the all PNM EGMP (65 couples in Charente-Maritime). In 2024, it was 209 couples (80 in Charentes-Maritime), 81 nests and 183 chicks. It seems that the Kentish plover's population increased over these three monitoring years.

In Spain, there is no Kentish plover's population at Urdaibai or in Cantabria. So, SEO/BirdLife had to monitor only Ebro Delta site. In 2023, in Ebro Delta, 98 females, 134 males, 27 juveniles, 23 chicks, 5 nests and 2 specimen whose sex could not be determined were observed. In 2024, 91 females, 131 males, 51 juveniles, 34 chicks, 21 nests and 8 specimen whose sex could not be determined were observed. It seems that the Kentish plover's population is equivalent over these two monitoring years.

UCA did the counts of Kentish Plover nests and breeding pairs took during 2022, 2023 and 2024 breeding season in Cabo de Gata Natural Parc. The areas were monitorized through four visits during reproductive seasons. Five to ten breeding pairs/nests were recorded in 2022. In 2023 more than 20 breeding pairs/possible reproductive events were recorded. Finally, in 2024 more than 30 breeding pairs/ possible reproductive events were recorded. It seems that the Kentish plover's population increased over these three monitoring years.

In Portugal, SPEA counts of Kentish Plover nests and breeding pairs took place during the 2022 breeding season. These counts included three visits to the beaches of the PT site. 10 breeding pairs/nests were recorded.

All reports of these surveys were [available online](#).

### **b) Wildlife care centers surveys**

Only LPO France received consisant data from 4 care centers:

- LPO France Hérault care center
- LPO France Aquitaine care center
- LPO France Ile Grande/Bretagne care center
- LPO France PACA (Provence-Alpes-Côtes d'Azur) care center

The reports state the following:

- For the period from 01/01/2019 to 31/12/2021: 5,1 % of seabirds admitted were confirmed victims of marine litter, of a total of 529 seabirds taken in by LPO France care centers.

During this period, 27 seabirds were identified as victims of marine litter, 6 were identified as accidental catch while 117 were undetermined reasons. If we consider the “undetermined reason” for admission as a potential plastic pollution, this increases to 27,2% of seabirds admitted.

- For the period from 01/01/2022 to 31/05/2023: 1,4% of seabirds admitted were confirmed victims of marine litter, of a total of 71 seabirds taken in by LPO France care centers.

During this period, only 1 seabird was identified as victims of marine litter, 1 was identified as accidental catch while 21 were undetermined reason. Those lower numbers can be explained because of avian flu; care centers would restrict the admission of seabirds during the whole 2022 year. If we consider the “undetermined reason” for admission as a potential plastic pollution, this increases to 31% of seabirds admitted.

- For the period from 31/05/2023 to 31/12/2024: 1,9 % of seabirds admitted were confirmed victims of marine litter, of a total of 460 seabirds taken in by LPO France care centers.

During this period, 9 seabirds were identified as victims of marine litter, 5 were identified as accidental catch while 75 were undetermined reason. If we consider the “undetermined reason” for admission as a potential plastic pollution, this increases to 18,3% of seabirds admitted.

In total, between 01/2019 and 12/2024, 1 060 seabirds were admitted alive: 37 seabirds were admitted to LPO France care centres with plastic pollution identified as the cause of admission, i.e. 3,5%. If we consider the undetermined reason for admission as potential plastic pollution, this could concern 250 birds, i.e. 23.6% of the causes of admission.

Data from French care centers are available on request.

### **c) Participatory application**

At the end of the project, ICAO has 1 619 users and 3 973 surveys registered for 4 326 seabirds recorded.

### **Technical and/or financial changes to the application file**

This was way easier for LPO France than for other partners to collect data because LPO France care centers are affiliated to LPO France and provide electronic data since years, through a dedicated portal. Others care centers in France did not provide consistent data, as the Spanish and Portuguese care centers, they did not have time or the data provided was incomplete. Even if associated beneficiaries insisted with local care centers, they didn't be able to centralize enough datas.

A summary report present the situation for that data collection from care centers ([online](#)).

### **Evaluation of the progress of the action compared to the original schedule and next stages**

The struggle point for this action is the care centers data. ABs must think a way to better collect consistent and regular data outside of France. That will be a next step after the project.



#### 6.1.14. Action C2: Monitor the impact on marine litter management and prevention

Concerned sites				Structure(s) in charge	
ALL				LPO France/SEO/BirdLife – <b>UCA</b>	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real or adjusted		
03/07/2023	01/06/2023	29/03/2024	29/03/2024	Completed	
Financial record					
Total provisional budget				Expenditures incurred up to 30/12/2024	
19 183 €				17 728.67 € (92.42 %)	
Deliverables					
Mid-term report			04/2023	09/2023	
Final report			12/2024	12/2024	
Milestones					
KPI filled			03/2024	03/2024	
Results					
Expected results				Results obtained	
6 marine litters bins				5 marine litters bins	
1 report about Monitoring of the marine litter deposited in the bins per pilot sites in SP				1 report about Monitoring of the marine litter deposited in the bins per pilot sites in SP	
Number of surveys / of volunteers / of waste in tidal bins / of beach clean up litter collected				56 beach clean-ups / 1 263 volunteers/1 722 kgs of marine litter during beach clean ups/563.5 kg, including 85.3 kg of marine litters in tidal bins	

#### Action goal

Through this action, ABs want to quantify and monitor the efforts on marine litter prevention and management and its impact on reduction of marine litter at the pilot sites through the evaluation of different indicators: use of the SeaBiL tools, number of volunteers involved in beach clean-ups, amount of waste collected in tidal bins, amount of marine litter collected during beach clean-ups.

#### Activities undertaken and outputs achieved

UCA analyzed all the data enabling the various project actions relating to marine waste prevention and management to be evaluated ([reports](#)). Two reports were produced summarising the results of the



beach clean-ups (B3) and the tidal bins (B9): 56 clean-ups involving 1,263 volunteers (22.5 volunteers on average per clean-up) collected 1,722 kg of waste. For tidal bins, 5 were installed in Spain, enabling the collection of 563.5 kg of waste, including 85.3 kg of marine litter.

Beyond the quantitative results, the cleanups had a profound impact on participants, fostering a deeper connection between volunteers and the marine environment. Activities involving schools and local communities were particularly effective in engaging younger generations and raising awareness about the importance of protecting marine ecosystems. The participation of Natura 2000 managers, local NGOs, and other stakeholders further strengthened the collaborative nature of these efforts.

Conversely, tidal bins have been misused, highlighting the need to raise awareness among beach visitors and raise communication campaigns by local authorities.

### **Evaluation of the progress of the action compared to the original schedule**

The reduction in marine litter at sites that have been monitored or cleaned up was truly ambitious. Data over at least 10 years is needed to estimate the reduction in litter.

#### 6.1.15. Action C3: Evaluation of the socio-economic impact of the project

Concerned sites			Structure(s) in charge	
ALL			SEO/BirdLife/SPEA – <b>LPO France</b>	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
03/01/2022	03/01/2022	02/09/2024	02/09/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
35 445 €			15 023.53 € (42.39 %)	
Deliverables				
3 internships reports end			06/2024	Cancelled
Summary report on evaluation of socio-economic impacts of LIFE			09/2024	09/2024
Milestones				
Internships			06/2024	Cancelled
Coordination workshops			09/2024	Cancelled

#### Action goal

The goal of this action is to evaluate the socio-economic impacts of LIFE SeaBiL project. To do so, ABs will:

- Identify the challenges in the targeted territories
- Establish a link between the coordination of clean-up operations and the preservation of identified species
- Estimate the economic impact of the structural and operational adjustments made by stakeholders
- Describe the socio-economic changes that occurred or may occur as a result of the program, particularly in the perceptions of stakeholders and the public.

#### Activities undertaken and outputs achieved

To begin with, the partnership set up satisfaction surveys among participants and stakeholders to assess the effectiveness of the tools, training initiatives and beach clean-up operations. The results of this feedback are analyzed in a report written by the UCA.

Next, as the LPO France was unable to mobilize the expert planned to supervise three students in charge of this socio-economic study in the three countries, the partnership decided to engage a service provider.

[The report](#) is based on surveys conducted by partners, a literature review, a desktop study, interviews with stakeholders and three questionnaires targeting stakeholders, the public, and volunteers involved in the initiatives.

In terms of results, the study demonstrate that beach clean-ups could limit negative effects on tourism, the economy and biodiversity. The project activities could indirectly influence perceptions and behaviours over time by enhancing ecological knowledge and providing visible improvements in coastal and marine environments. According to the assessment, more and more people are interested in activities like beach cleanup and are even more aware of the problem of plastic pollution. Both project partners and volunteers mentioned the effectiveness of the awareness-raising actions, and with more communication, the impact on the general public could be more detectable. The project had beneficial impacts on its stakeholders, as they gained knowledge, capacity, new skills, and new connections due to the project. The tools implemented by the project were seen as extremely useful, and using the beach cleanup guide also increased some of the partners' knowledge and gained more awareness. The stranded network protocol also contributed to an effective process for collecting stranded birds. It could also contribute to having more and better data on marine pollution.

This aligns with research by Hartley *et al.*<sup>1</sup> showing that personal experience with litter, such as beach clean-ups, leads to higher awareness and willingness to act. Through these efforts, the project supports long-term socioeconomic and ecological benefits by addressing the root causes and public perceptions of marine litter.

### **Technical and/or financial changes to the application file**

Given that LPO France did not have the necessary staff available to carry out this study and that SPEA's budget for this action was very limited, it was preferable to outsource this action and not to use interns. Confirmation from ELMEN and the European Commission enabled a service provider to be approved for this study.

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<sup>1</sup> Hartley, B. L., Pahl, S., Veiga, J., Vlachogianni, T., Vasconcelos, L., Maes, T., Doyle, T., Metcalfe, R. D., Öztürk, A. A., Di Berardo, M., & Thompson, R. C. (2018). Exploring public views on marine litter in Europe: Perceived causes, consequences and pathways to change. *Marine Pollution Bulletin*, 133, 945–955. <https://doi.org/10.1016/j.marpolbul.2018.05.061>

### 6.1.16. Action D1: Communication on the project

Concerned sites				Structure(s) in charge	
ALL				UCA/SEO/BirdLife/SPEA – <b>LPO France</b>	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real adjusted or		
01/10/2021	03/02/2022	02/09/2024	02/09/2024	Completed Objectives partially achieved	
Financial record					
Total provisional budget			Expenditures incurred up to 30/12/2024		
57 156 €			29 853.86 € (52.23 %)		
Milestones					
1 communication plan			10/2021	05/2022	
Layman's report			07/2024	07/2024	
Results					
Expected results			Results obtained		
1 website developped during the first 6 months of the project with 30 000 visitors by 2027			Website set online on 06/2022, 2 488 visitors and 12 500 visits		
3 000 brochures distributed			300 brochures distributed		
12 half-yearly newsletters			4 half-yearly newsletters		
20 kakemonos			7 Kakemonos		
3 scientific publications			5 scientific publications		
1-4 minutes awareness film			3 shorts videos		
20 notice boards			21 panels (B10 action)		

### Action goal

Goal of this action is the global project communication, like mandatory tools (website, LIFE graphic charter and logo, Layman's report, notice boards) and other tools following advancement of the project. Printable productions should be distributed mainly in digital version downloadable from the website, the app as well as from the websites of associated beneficiaries, technical, scientific, institutional and financial partners.

## Activities undertaken and outputs achieved

The logo and graphic charter were adopted early in February with the partnership. A brochure was edited in 11/2022, initially in French, and was shared to the partnership in English for adaptation, 300 were distributed.

In a general way, all communications support (whether they are documents, physical communication tools) visuals and contents are shared in between partnership and in respect of graphic charter.

Website was created in 06/2022 reached 2 488 people (4 newsletters were distributed to the subscribed people and various publications on social media were done by partners, see B11 (Instagram, TikTok, Twitter, Facebook). All the supportive communication actions and publications are detailed in the [monitoring communication document](#).

Sustainable goodies were provided during events, beach clean-ups and all activities involved volunteers or public (450 tote bags, 900 beach ashtrays, 300 stainless steel water bottles and 50 lunch boxes).



Figure 15: Steel bottle and SeaBiL flag

Scientific publications and conference have also been done by ABs like two posters for the XXVI Spanish Ornithological Congress run in Valencia the 12-16/02/2025. One of them is about ICAO results and the other about Kentish plover surveys in Ebro Delta. Five other posters were presented at international and national conferences : at the 3rd Mediterranean Symposium on Ecology and Conservation of Marine and Coastal Bird Species (13-15/02/2024, Djerba, Tunisia), the 16th International Seabird Group Conference (2-6/09/2024, Coimbra, Portugal) and the XI Congress of Ornithology (22-26/11/2023, Ponta Delgada, Azores, Portugal), with results of marine litter impact on Cory's Shearwater and European Shag gathered under the Life SeaBiL.

[A Layman's Report](#) produced at the end of the project is available and summarizes the project and its results. It has been structured to promote the project as a whole in the long term, to capitalise on the actions carried out by the partners.

## Technical and/or financial changes to the application file

Due to a later start of the project, it took a bit more time to create the communication's tools basis,

but in the end, the communication is going well. Less communication supports were created, as ABs considered it would be more logical to limit them in zero waste logic. But each of them was more complete, integrating global information about the project if possible.

Originally the XXVI Spanish Ornithological Congress was run in 12/2024, but because the climatological disaster of the Valencia DANA, with enormous rains and more than 200 people dead, the Congress changed the dates to 02/2025.

#### **Evaluation of the progress of the action compared to the original schedule**

Some expected communication results could not be achieved or are weaker than expected due to a lack of time caused by the investment required for other actions. In addition, specific communication (B10 and B11) was prioritised.

### 6.1.17. Action D2: Ensure the dissemination of the results of the project

Concerned sites			Structure(s) in charge	
ALL			LRUNIV/UCA/SEO/BirdLife/SPEA – LPO France	
Timing				
Start		End		Progress
Programmed	Real	Programmed	Real or adjusted	
01/07/2022	03/02/2022	02/09/2024	02/09/2024	Completed
Financial record				
Total provisional budget			Expenditures incurred up to 30/12/2024	
54 744 €			45 872.40 € (83.79 %)	
Milestones				
Final seminar			09/2024	11/2024
Results				
Expected results			Results obtained	
1 transnational conference to spread the results to 150 participants			1 final seminar online and in presential, 106 participants	
1 after-Life workshop			1 after-Life workshop	
1 networking workshop			6 LIFE networking workshops	
Participation and presentation in 2 meetings per country each year to present the project			29 presentations done outside the project for a total of 33 conferences attended outside the project	

### Action goal

This action aims at disseminating the results of the project to the people who could benefit the most from it, in addition to the communication action (D1).

### Activities undertaken and outputs achieved

LPO France attended the INTERLife meetings during the years 2022 and 2023. A presentation of the project was also done in France to the RESOM, the french seabird's network. Other conferences and meetings were done with programs linked to SeaBiL, and with other LIFE projects, mainly LIFE Conceptu Maris, potential strategic partner for LIFE SeaBiL project, and LIFE Safelines for Birds at the launching meeting. In total, 25 LIFE SeaBiL presentations were done during conferences outside of the project, and partnership attended 9 conferences.

LPO France also participated in Zevent, a great fundraising online streaming event, and LPO France's director talked about LIFE SeaBiL among other projects in live of this event, in front of 50 000 viewers.

This was not a conference itself but a fundraising event where the coordinator represented SeaBiL project among famous streamers when offline. LPO France coordinator met with The Sea Cleaners, a beach clean-up NGO, and distributed the project's resources to them.

SPEA also ran stranded seabirds monitorings with ICAO application under the scope of LIFE Ilhas Barreira (LIFE18 NAT/PT/000927).

The final seminar took place in La Rochelle on the 27/11/2024. 106 people attended online or in person. The rich programme featured presentations by seven experts from different organisations (see appendix 4 for the program). This allowed for a comprehensive discussion of the impact of plastic on different scales (european, national, local). The presentations and recordings of the seminar are available online on the project website.

The next day after the final seminar, a networking and after-Life workshop was organized in La Rochelle University.



### 6.1.18. . Action E1: Project management

Concerned sites				Structure(s) in charge	
ALL				LRUniv/UCA/SEO/BirdLife/SPEA– <b>LPO France</b>	
Timing					
Start		End		Progress	
Programmed	Real	Programmed	Real or adjusted		
01/10/2021	01/12/2021	02/09/2024	02/09/2024	Completed	
Financial record					
Total provisional budget				Expenditures incurred up to 30/12/2024	
76 067 €				201 629.27€ (265.07 %)	
Deliverables					
After LIFE plan		09/2024	12/2024		
Milestones					
Opening comitee			10/2021	10/2021	
First consultative comitee			10/2022	01/2022	
Closing comitee			09/2024	09/2024	
Results					
Expected results			Results obtained		
3 steering committees			4 steering committees		
9 progress meetings			5 progress meetings		
3 consultative meetings			4 consultative meetings		
2 committees (opening and closing)			1 opening committee		

### Action goal

The LPO France, the coordinating beneficiary structure, provides technical and financial coordination for the whole project. Its responsibility is to conduct the project on time and to meet technical and financial commitments. Also, programme partners manage the administrative and financial management of their participation in the project.

### Activities undertaken and outputs achieved

The opening committee of the project was held on 10/2021, but the coordinator of the project was

only recruited on 01/12/2021. Consequently, the first steering committee was held on 11/01/2022. 3 more steering committees were done through the project with all associated beneficiaries each time. Informal meetings were arranged with partnership, and regular mail and phone contact was made through the whole project.

Consultative meetings were held with stakeholders through the workshops (B1/B2/B4), and all stakeholders are being updated by mail and phone of the action's progress. ABs also consult other stakeholders for B1 adaptation and B3 feedback.

The coordination was mainly done remotely with partnership, but ABs took advantage of every opportunity (such as B7 workshops) to run steering committees on presential.

All partnership's agreements were signed by 15/03/2022. Partnership produced and submitted the mid-term report and completed LPIs tools in 09/2023.

A closing committee was organised during the final event.

A final meeting was organized the 23/01/2025 but had to be cancelled due to the coordinator's sick leave.

### **Technical and/or financial changes to the application file**

A Google Drive was created by LPO France early project so that whole partnership would be able to share their files, pictures, etc. This was particularly useful for common documents on which partnership had to work on. LPO France provided an Excel sheet early project, in which all actions were detailed with their respective budget, and a full calendar of the project with dates of deliverables and timeline.

Because the project had not spent 100% of the first LIFE grant instalment by the foreseen mid-term Report due date (initially scheduled for 01/04/2023), it has been postponed to 30/09/2023.

The late recruitment of a project coordinator (01/12/2021) impacted the delays and the beginning of the project as ABs started to employ own coordinators.

The sick leave of project coordinator (from 02/2025) led to difficulties in the final reporting and the proper management of the reporting but thanks to the additional time validation, this made it possible to finalize the reporting by mobilizing two LPO France people.

## 6.2 - Main deviations, problems and corrective actions implemented

The project encountered several difficulties, for which corrective measures were implemented to enable the project to be completed (Table 1).

Table 1 : Difficulties encountered, corrective actions and impacts on LIFE objectives and results

Difficulties encountered	Corrective actions taken	Impact on project objectives and results
<b>A1 and B6 action in Spain and France</b>		
Due to 2022 Avian Flu crisis, which was the heaviest reported since the last 8 crisis, SEO/BirdLife could not obtain authorisations to collect stranded seabirds on their pilot sites which were strongly impacted. France could not collect much stranded seabird because of legal restriction for volunteers	They can still collect the stranded seabirds stored in their network's care centers; only volunteers were not allowed to collect seabirds on the beach.	The objectives were nevertheless exceeded, with 195 stranded birds collected in Spain, 128 in Portugal and 82 in France
<b>B5 in France</b>		
La Rochelle University froze their expenses until they could ensure co-financing of LIFE SeaBiL. Also, an engineer expert in the development of databases at LRUniv was initially involved in the project. Unfortunately, a few months after the start of SeaBiL, this person left LRUniv for another university. It took several months to find again this expertise at LRUniv. In addition, a technician should have been hired for 6 months to develop (under the supervision of the engineer) the database and associated tissue bank. Because of the engineer's departure, and because of budget constraints described above, the recruitment of this technician has been postponed to autumn 2023.	An agreement was found between LPO France and LRUniv through which LPO France accepted to participate cofinancing LRUniv under several conditions (convention signed on 03/10/2022).	Because samples/tissues requirements have clearly been discussed and identified through discussions between ABs and with scientific experts, samples were safely stored at LRUniv (frozen or dried) until the tissue bank was operational.

Difficulties encountered	Corrective actions taken	Impact on project objectives and results
<b>B5 in France</b>		
Illness stoppage of LRUniv coordinator (from 07/2023 to 10/2023)	Very regular exchanges through mails, phone calls and visio conferences were made with LRUniv and to keep track of the actions piloted by LRUniv and ensure their completion	Delay was the only impact; the database and analyses were done.
<b>B9 in France</b>		
It was initially planned to work along with PNM EGMP and the collectivity of Royan (CARA). However, CARA withdrew from the action, and PNM EGMP did not have another test territory solution.	LPO France spent a lot of time in meetings and contacts with others local collectivities to find another territory test in PNM EGMP. Against all odds, it was CARA that finally got involved in the project	Delay was the only impact; the action plan and technical guide were produced and shared.
<b>B10</b>		
Agreeing on the type of supports/tools for the awareness-raising stands was difficult, as each partner had their own preferences.	The partnership decided to offer different content and materials for the stands, allowing for greater consistency with local specificities and without impacting the level of awareness.	Adapting the equipment allows us to meet local needs as closely as possible and therefore consumes less of the planned budget.
<b>B11</b>		
Publish a special issue of The Adventuros in Spain	SEO/BirdLife managed to get an article published in Spain's leading ornithology journal	A publication in Quercus magazine gave the project significant visibility (more than The Adventuros)
<b>C1</b>		
Outside LPO France's affiliated care centers, others did not have time or database to provide information to ABs.	ABs spent a lot of time and discussions with care centers to find a way to simplest and least time-consuming solution for care centres.	Only a few additional data were collected during the project. The subject of feedback from care centers is one of the aspects of the After-Life plan that the partners wish to develop.

Difficulties encountered	Corrective actions taken	Impact on project objectives and results
<b>C3</b>		
LPO France was unable to mobilize the expert planned to supervise three students in charge of this socio-economic study in the three countries.	The partnership decided that it would be preferable to hire a service provider for this action.	As the partnership set up satisfaction surveys among participants and stakeholders to assess the effectiveness of the tools, training initiatives and beach clean-up operations as actions progress, and because the service provider produced a complete report, the only impact was the non-recruitment of the three interns. In the absence of appropriate supervision, this is a minor issue.
<b>E1 in France</b>		
The late recruitment of a project coordinator (01/12/2021)	ABs started to employ own coordinators. With the early project inertia, it took a few weeks to start working on the actions, but coordinator and ABs managed to compensate for those delays.  LPO France nevertheless had to request a three-month extension of the project to finalise the actions in the best possible way.	The quality of the work done was not impacted (no impact on objectives and results, only delays)
Sick leave of project coordinator (from 02/ 2025)	LPO France has requested additional time to finalise the project report (five-month extension)  Two LPO France's employees resumed coordination work to finalise the reporting.	Given the scale of the task for staff who had not been involved in the project coordination, the five-month extension was essential in order to complete the necessary reporting.

Partnership underestimated B1 amount of work, and the release of the application was delayed due to a long translation process as well. Some unexpected bugs forced partners to work again on the application after 06/2023, but it was ready to be used at the mid-term report. This did not impact the data gathered through the first stranded seabird monitorings.

Because of the change of beneficiary from UAL (withdrawing on 01/2023) to UCA (joining during 04/2023), the actions piloted by UAL got slightly delayed. However, the heads of coordination at UAL,

Marga L Rivas and Monica Exposito Granados, continued to work on the project for UCA, which allowed a very smooth transfer of actions.

**Finally, the difficulties encountered since the start of the project have been addressed and managed by the LIFE SeaBiL teams. The resulting delays were absorbed before the end of the project, thanks to CINEA's approval of requests to extend the project by an additional eight months.**

### 6.3 - Project implementation

After more than three years of intense work implementing the LIFE SeaBiL project, significant progress has been made in terms of cooperation and improving knowledge to ensure that seabirds are better taken into account in waste reduction measures. This has been achieved through:


- The establishment of a network of 'sentinels' specialising in the monitoring of stranded seabirds on the Atlantic coast of France and along the entire coastline of Spain and Portugal. This has significantly improved knowledge about these strandings and enabled specimens to be sent to laboratories for long-term analysis. 405 seabirds could have been analyzed, and more than 500 samples were stored for future research.
- The launch of a citizen science application enabling everyone to contribute to the census of stranded seabirds, ICAO. ICAO is both a knowledge and awareness-raising tool that helps consolidate the stranding monitoring network, enabling all stakeholders to take birds into account more effectively in their daily activities (Natura 2000 managers, citizens, beach clean-up organisers). 1 619 users realised 3 973 surveys registered 4 326 stranded seabirds.
- The involvement and training of Natura 2000 managers and local authorities in thinking about how to reduce waste at source and how to clean beaches without impact on seabirds.
- The awareness among public and schoolchildrens about the fragility of coastal ecosystems and the bird species that depend on them

Communication and dissemination activities have ensured widespread awareness among people through a range of media and various tools deployed.



Finally, even though beneficiaries changed during the project and coordination was disrupted by the absence (at the beginning and end of the project) of the coordinator (late recruitment and sick leave), the vast majority of the project's objectives and results were achieved.



The results obtained and their evaluation by action are presented below (Table 2).




Table 2: Summary of objectives and expected results, results achieved and evaluation of the action at the end of the project



Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action
<p><b>Objectives:</b> obtain permits and derogations in order to start actions involving:</p> <ul style="list-style-type: none"> <li>- Monitoring, collection, transportation and analyzes of stranded birds</li> <li>- Low footprint beach cleans-up</li> <li>- Implementation of tidal bins</li> <li>- Installation of sensibilization boards</li> </ul>	<p>LPO FRANCE/LIENSs: 5 derogations for transport/storage</p> <p>SPEA: 29 authorisations (1 per person and per year) 2022; 2023; 2024</p> <p>UCA: 2 derogations per year (total of 4) for transport/storage of seabirds, 1 for tidal bins and 1 for beach boards</p>	<p><b>Objectives achieved</b> All associated beneficiaries have obtained the necessary authorisations except for SEO/BirdLife, who did not obtain transport/storage authorisation due to avian flu, but it is not such a big issue as they could still store 43 seabirds from care centers. They also did not obtain tidal bin permit at Ebro Delta, which is partially compensated by an additional tidal bin at Noja;</p>	
<p><b>Expected results:</b> LPO FRANCE/LIENSs 8 department derogations/ SPEA 2 derogations (1 per year)/SEO/BirdLife/UCA 2 derogations &amp; tidal bins permits</p>	<p>SEO/BirdLife: no derogations granted for collection of seabirds due to avian flu. 2 permits for tidal, 1 for beach board</p>		







Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
B1	<b>Objectives:</b> Develop an optimised mobile quadrilingual application for the census of stranded birds and marine litter.	1 mobile application for the survey of stranded birds usable on the atlantic and mediteranean coast and in relation with marine litter tools = 1 619 downloads	<b>Objectives achieved</b> Despite our delay to optimise ICAO tool, the adaptation is a success, as well as the cooperation with MARNOBA for linked to marine litter.	
	<b>Expected results:</b> 1 mobile application for the survey of stranded birds usable on the atlantic and mediteranean coast and in relation with marine litter tools = 300 downloads			
B2	<b>Objectives:</b> "Low footprint" guide for natural area managers and organisers of beach clean-ups and risk-maps for pilot sites.	5 final maps & guides available on the website  235 downloads of the tools (guide and map) via the website and 800 distributed on the field	<b>Objectives achieved</b> Although the guide was downloaded only 235 times, around 800 were directly distributed on the field and printable versions were sent by mail to stakeholders. So beach clean-ups organizers have been made well aware by the partnership.	
	<b>Expected results:</b> Over 500 downloads of the tools/5 final maps & guides available on the website			



Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
B3	<b>Objectives:</b> Provide online and physical trainings to local stakeholders on ICAO/MARNOBA and beach clean-up guide and collect feedback. Run beach clean-ups with local associations and volunteers.	8 training courses  3 online training courses  139 stakeholders reached (majority of N2000 managers and organizers of beach clean-up)	<b>Objectives partly achieved</b>  Despite organising training sessions and beach clean-ups, it has been difficult to get N2000 managers involved (not readily available). They represent only 28 % of participants. The partnership has focused on current and future beach clean-up organisers in order to have the greatest possible impact.	
	<b>Expected results:</b> 5 training courses for natural area managers and beach clean-up organisers/ <b>150</b> users follow online training/ <b>200</b> managers and organisers of beach clean-ups change their practices and use SeaBiL tools/ <b>50</b> beach clean-up initiatives adapted, <b>1000</b> volunteers.	56 beach clean-ups / 1 263 volunteers  2 analysis reports about impact of tools and training and beach clean-ups characterization		
B4	<b>Objectives:</b> Build a transnational seabird stranding network	3 national networks linked in one transnational	<b>Objectives achieved</b>  Guidelines for an efficient network have not been produced during the project but the networks for stranded seabirds are well structured, notably thanks to the use of ICAO. Many various structures involved, and a good volunteer's mobilization existed. Coordination and facilitation of this community is still ongoing following the end of the project. These working principles and work bases were disseminated through the project's networking during the various partnership interventions.	
	<b>Expected results:</b> 3 national stranded birds monitoring networks, <b>one</b> transnational network/ <b>5</b> networks charters/ <b>50</b> networked structures, and <b>300</b> actors involved	9 charters signed  88 networked structures and volunteers for collection  1 619 actors involved in ICAO app		



Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
B5	<b>Objectives:</b> Develop protocols for transportation and necropsies of seabirds. Write guidelines to use seabirds' breeders as indicators of marine litter impact on biota.	1 transportation & necropsies' protocol, 1 protocol for sampling seabirds in breeding colonies.	<b>Objectives achieved</b>  The network's protocols are finalised and operational. Despite delays the tissue bank and database are now operational and online for better accesibility	
	<b>Expected results:</b> 1 transportation & necropsies' protocol, 1 protocol for sampling seabirds in breeding colonies & 1 tissue bank <b>with</b> findable, accesible, reusable and interoperable databases	1 tissue bank with findable, accessible, reusable and interoperable databases		
B6	<b>Objectives:</b> Demonstrate the efficiency of the stranding network and analyze stranded seabirds to define a new indicator species.	>500 seabirds collected, 405 stored by partnership for analysis – 128 in Portugal, 195 in Spain, 82 in France	<b>Objectives mainly achieved</b>  The network has clearly proven its effectiveness. The number of individuals collected was higher than expected. This reflects the high level of activity of all the structures involved, ensuring the smooth running of the network for years to come. Although the analysis did not identify any indicator species, they are encouraging and provide very important long-term knowledge.	
	<b>Expected results:</b> 180 seabirds collected/analyzed – 60 individuals per country (10 per species from care centers and beach surveys)			
B7	<b>Objectives:</b> Organize transnational training and experience-sharing workshops	3 transnational workshops	<b>Objectives achieved</b>  The participants particularly appreciated the opportunity to share experiences and get to know each other.	
	<b>Expected results:</b> 3 transnational workshops in Spain, France and Portugal. 90 participants.	109 participants		

Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
B8	<b>Objectives:</b> Identifying local sources of marine litter to provide elements for local and national authorities in order to facilitate taking waste reduction measures and adapting the MSFD/OSPAR protocol to the local context, to be sure that marine litter classification is done correctly independently of the location	6 operators trained to follow beaches with OSPAR protocol in 3 spanish beaches  3 beaches in French pilot site to test a new protocol (Gatseau, Moëze-Oléron, Ile de Ré)  9 samples sent to CEDRE	<b>Objectives achieved</b>  No problem with this action, the implementation of OSPAR protocol in Spain is going great with a good cooperation between France and Spain. Only 9 samples were sent to CEDRE because of microplastics absence in Moëze-Oléron beach.	
	<b>Expected results:</b> 1 operator per beach followed with OSPAR protocol in Spain (3 at least)/3 beaches in French pilot site to test a new protocol/12 samples analyzes by CEDRE/2 interoperable databases (1 SP 1 FR)/ At least 1 MSFD/OSPAR monitoring (4 surveys in 1 year) per pilot site	OSPAR protocol harmonized in Spain and France with field sheet including seabirds' information  4 surveys done first year  1 analysis report on MSFD/OSPAR monitoring		
B9	<b>Objectives:</b> Co-build a French action plan for waste reduction at source with local authorities and test territories. Produce a technical guide to transpose this work to other territories. Install tidal bins in Spain thanks to France experience-sharing.	1 action plan for waste reduction at source (12 stakeholders)  1 technical guide to provide guidelines for other territories	<b>Objectives partly achieved</b>  Despite a lot of delays, to involved french local authorities in the action plan action, LPO FRANCE, who has invested a lot of energy and time in that action, successfully facilitated a relevant co-construction process for the action plan. With the huge delay, the distribution of the guide to disseminate the action wasn't possible during the project but it scheduled after.	
	<b>Expected results:</b> 1 technical guide for identifying waste sources and solutions to reduce waste at a territory-level distributed to 150 managers and public local authorities/6 marine litters bins installed in Spain (2 per pilot site)	5 marine litter bins installed in Spain  1 report on tidal bins experience		

Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
B10	<b>Objectives:</b> Raise awareness amongst general public and schools.	21 sensibilization panels  235 downloads of the tools (guide and map) via the website and 800 printed and distributed on the field  57 stands, actions with schools and exhibitions: 2 356 persons /676 schoolchildrens  Goodies: 1 700	<b>Objectives mainly achieved</b>  Although downloads were not as high as expected, awareness among beach clean-up organisers and schoolchildren was substantial thanks to the mobilization of partners.	
	<b>Expected results:</b> <b>15</b> sensibilization panels  <b>1000</b> printed birds risk maps for beach clean-up organizers/volunteers - Risk maps with QR Code, <b>10 000</b> downloads (QR codes + website)/ <b>9</b> Information stand: <b>4</b> days per summer per sites/ <b>5 000</b> goodies (beach ashtrays, water bottles, organic cotton bag)			
B11	<b>Objectives:</b> Disseminate the collected data throughout the project and inform general public thanks to mass medias (SeaBiL socials, magazines, partners socials)	15 008 people reached through social networking (Instagram, Facebook, Twitter, TikTok, LinkedIn)  3 shorts videos to present the project and plastic impact  1 special magazine – Oiseau Mag Junior (2 200 readers)  1 article in Spain's leading ornithology magazine (15 000 readers)	<b>Objective mainly achieved</b>  The social media accounts of partners are highly visible, and posts related to Life SeaBiL have reached a wide audience. Unable to publish a special issue of Aventuros as planned, SEO/BirdLife managed to get an article published in Spain's leading ornithology journal, which is just as good, if not better.  The project has also achieved the target as the invitation to participate to the online training has been sent to more than 90 site managers and 50 Natura 2000 sites (participant list are <a href="#">available here</a> ).	
	<b>Expected results:</b> <b>10 000</b> people made aware through social networks, videos, online exhibition/ <b>5</b> short videos / special magazines  Online tutorials were sent to 90 site managers and 50 Natura 2000 sites			

Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
C1	<b>Objectives:</b> Monitor the impact of the project on seabirds with Kentish plovers surveys, seabirds from care centers monitoring, stranded seabirds from ICAO pp.	2 plovers spring's surveys in Spain (2023 and 2024)  3 surveys in France (2022, 2023, 2024)	<b>Objective partly achieved</b>  The kentish plover's counts went smoothly, and the results confirm the recent tendency that the species' population is stabilising at better levels, thanks to sensibilization, partly due to SeaBiL but also divers initiatives  The care center data was way harder to obtain than ABs thought, and they only get the France's data	
	<b>Expected results:</b> 3 plovers spring's surveys in each pilot sites/1 rate per country based on care centre data about birds arrivals/death causes	3,5 % of seabirds alive admitted in LPO FRANCE care centers in France are confirmed plastic's victims		
C2	<b>Objectives:</b> Monitor the number of surveys/of volunteers/of waste in tidal bins/of beach clean up litter collected	2 reports by UCA  1 115 marine litter (85.3 Kg) removed from Spanish beaches because of the 5 tidal bins installed  22.5 volunteers on average per beach clean-up  1 722 kg collected during beach clean-ups	<b>Objective mainly achieved</b>  UCA reports show a great diversity of public sensitized, and the use of tidal bins is encouraging with a lot of marine litter deposited. The decrease of marine litter collected at beach clean-up is a very ambitious result, if not impossible to achieve over a three-year period; protocol-based monitoring will need to continue in order to identify any real effect. After almost 10 years of surveys, CEDRE in France just began to understand the marine litter dynamic.	
	<b>Expected results:</b> 1 report about Monitoring of the marine litter deposited in the bins per pilot sites in Spain  Decrease of marine litter through the implementation of bins  Report of the temporal trends in the number of volunteers mobilized at each pilot site  Result of the marine litter collected at beach clean-ups  Decrease of marine litter collected due to the prevention effect of the project (action B10, B11, D).			

Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
C3	<b>Objectives:</b> Evaluate the socio-economic impact of the project	1 socio-economic report	<b>Objective achieved</b>  Through this deliverable, the partnership and his service provider have succeeded in demonstrating the positive economic and social impact of the project on beneficiaries, service providers and all project stakeholders.	
	<b>Expected results:</b> <ul style="list-style-type: none"> <li>- Survey for each pilot site about socio-économique impact (25 stakeholders interviewed)</li> <li>- A summary report</li> </ul>			
D1	<b>Objectives:</b> Global project communication	Website set online on 06/2022, 2 488 visitors during the project  <b>300</b> brochures distributed  4 half-yearly newsletters  6 Kakemonos	<b>Objectives partly achieved</b>  Some expected communication results could not be achieved or are weaker than expected due to the lack of time caused by the investment required for other actions. In addition, specific communication (B10 and B11) was prioritised. The after-life plan already provides for amplifying communication by reusing a number of media and tools from the SeaBiL project (kakemono, website).	
	<b>Expected results:</b> <b>1</b> website : <b>30 000</b> visitors by 2027/ <b>3 000</b> brochures distributed/ <b>12</b> newsletters/ <b>20</b> kakemonos/ <b>3</b> scientific publications/ <b>1</b> awareness short video/ <b>20</b> notice boards / <b>1</b> layman's report			

Actions	Objective and provisional results	Resultats obtained up to 31/12/2024	Evaluation of the action	Action progress indicator
D2	<b><u>Objectives:</u></b> Disseminate the results of the project	1 final seminar (27/11/2024) with 106 participants  6 direct networking with other programs	<b>Objectives achieved</b>  Some interesting links were made not only with other LIFE projects, but also with unrelated projects and programs.	
	<b><u>Expected results:</u></b> <b>1</b> final and transnational seminar; <b>150</b> participants / <b>1</b> networking workshop/ <b>1</b> After-Life workshop/ Participation and presentation in <b>2</b> meetings per country each year to present the project	29 presentations done outside the project for a total of 33 conferences attended outside the project  1 after-Life plan		
E1	<b><u>Objectives:</u></b> Manage the project and write the post-Life action plan	4 steering committees 5 progress meetings 4 consultative meetings	<b>Objectives mainly achieved</b>  Apart from a smaller than expected but more effective number of monitoring committees, the LPO FRANCE and the project beneficiaries succeeded in ensuring the proper management of the project at the national and local levels.	
	<b><u>Expected results:</u></b> <b>3</b> steering committees/ <b>9</b> progress meetings/ <b>3</b> consultative meetings/ <b>2</b> committees (opening and closing)/ <b>1</b> after LIFE plan/ <b>1</b> midterm report and <b>1</b> final report/ KPI completed	1 opening committee 1 after-Life Plan 1 mid-term report 1 final report LPI completed		



## 6.4 - Analysis of the programme's benefits

### 6.4.1. Environmental's benefits

Although Life SeaBiL did not carry out a complete beach clean-up of pilot sites, various actions made it possible to remove 1807.3 kg of waste from the environment (85.3 Kg thanks to tidal bins and 1 722 Kg thanks to beach clean-ups actions). Marine litters are recognized by stakeholders involved in the projects and by public made aware by project actions as a problem for seabirds and biodiversity. We observed behaviour changes from stakeholders who participated in LIFE SeaBiL beach clean-ups events, but also on the volunteers and especially the youngsters, mainly through the schools and youngster associations sensitized in Portugal and Spain.

Mainly, we observed that the negative impacts on biodiversity during beach clean-ups are due to a lack of knowledge, as expected, from stakeholders. Life's actions such as training and the distribution of the guide for low-impact beach cleaning had beneficial impacts on its stakeholders, as they gained knowledge, capacity, new skills, and new connections due to the project. The tools implemented by the project were seen as extremely useful, and using the beach cleanup guide also increased some of the partners' knowledge and gained more awareness.

300km of coastline were covered by the seabirds stranded network in France and we estimate that 2 800 m<sup>2</sup> of shoreline were monitored with the MSFD protocol. These monitored (so cleaned 4 times a year) beaches are also home to Kentish plovers (*Charadrius alexandrinus*), which, like most birds, are impacted by plastic (at least 291 breeding pairs live in project pilot sites according to C2 surveys).

Collecting data on marine pollution through beach clean-ups or MSFD monitoring and monitoring seabird mortality with ICAO app improved scientific knowledge on marine litter problems and may have an impact on seabird habitats. Sharing this knowledge that involved citizens and organising awareness-raising actions had led to behaviour changes and less impact on ecosystems. 1 619 people provided information through ICAO, 139 stakeholders were trained, 1 263 volunteers were made aware of how to conduct a low impact beach clean-up. This aligns with research, showing that personal experience with litter, such as beach clean-ups, leads to higher awareness and willingness to act. Through these efforts, the project supports long-term ecological benefits by addressing the root causes and public perceptions of marine litter (34 696 peoples were already reached by awareness actions of the project).

### 6.4.2. The socio-economic benefits

The LIFE SeBiL project has had a significant impact on the organisations included as beneficiaries in the project, since it has made it possible to support and create jobs. One permanent contract was created at LPO FRANCE for coordination but, with the sick leave of the project coordinator at the end of the project, LPO FRANCE only supports a fixe-term contract (18 months) to continue the seabirds stranded network coordination. Stakeholders and associated beneficiaries also benefited from training courses to improve their skills, techniques and know-how, implemented thanks to Life SeaBiL actions. This impact has also been felt by the many companies involved as service providers, who have benefited from LIFE. We can notice that the LIFE SeaBiL project offers a better visibility for care centers (who participate in the project) and sometimes provide them with financial support (for instance, in France with the freezers and material), enhancing their economical state and autonomy which is very fragile

for some of them. More detailed elements are developed in the assessment of the project's socioeconomic impact corresponding to deliverable C3.

#### *6.4.3. Replicability and transferability strategy.*

Several actions implemented as part of the LIFE SeaBiL project have enabled the knowledge and know-how acquired during the project to be transferred and replicated.

Associated beneficiaries participated and contributed to a lot of conferences, congress and other types of events. 5 scientific publications, 6 direct networking with other programs and 29 presentations outside the project were done enabling the dissemination of the project results. ICAO app and stranded seabird networks already planned to be replicate in French mediterranean coast. The management of tidal bins, already well known in France was tested in Spain with 2 meetings to transfer skills; the contacts made can be reactivated to continue setting up tidal bins. Protocols and guide to help territories in waste reduction management (B9 action) are available and already spread to partnership's contacts.

#### *6.4.4. Sharing best practices*

B2 guide about low footprint beach clean-up already provides the best practices to N2000 managers and local associations in and out of pilot sites. Protocols also constitute good basis for good practices on seabird's scientific research level and the three experience-sharing workshops (B7) were designed to share best practices (summaries available on website). Reports on tidal bins (C2) test showed how the best practices in France could be used in Spain and how is it possible to do better after this test, taking into account local context.

#### *6.4.5. Innovation and demonstration value.*

The actions undertaken as part of the project have made it possible to improve and develop several techniques that are and will continue to be shared widely in France and internationally (Table 3).

Table 3 : Innovations deployed as part of the LIFE project and associated demonstration elements

Action	Innovation	Action	Demonstration
B1	Developing a quadrilingual mobile application for the census of stranded seabirds (ICAO) engaging citizens	B3	-1 639 volunteers used ICAO during the stranded seabirds network tests
B4	Create a transnational seabird stranding network	A1 B4 B5 B6	- Identifications and asks for mandatory permits - Chartes signed, skillsbooks updated - Protocols for collecting, transportation, necropsies developed - Mobilization of network to provide data and stranded seabirds to scientifics
B5	Create a biological tissue bank and associated database available online	B6	- Reception and storage of stranded seabirds collected by the network - Analyzes done during the project
B8	Testing a micro and mes-plastic protocol for marine litter on the beach	B8	- Protocol and report done during the project - Protocol now used in a lot of sites in France by the French marine litter network (monitored by CEDRE)

Notably, the physical proximity of both tissue banks and databases offers the potential for extensive research collaborations, enabling comparisons between Arctic and temperate marine ecosystems and shared investigations into common species. This strategic partnership enhances SeaBiL's innovative approach and its capacity for demonstrating effective solutions.

#### 6.4.6. Policy impact

The LIFE SeaBiL project serves as a comprehensive and dynamic contributor to several vital European Union policies and directives. Its primary focus lies in understanding and mitigating the impact of marine litter on seabirds, a mission that aligns with the 8th Environmental Action Programme's priorities and the objectives of the Waste Framework Directive and the Plastic Strategy. In this endeavor, the project actively engages in beach clean-up initiatives. These actions directly contribute to reducing marine litter, fostering cleaner shores, and promoting the goals of waste management and environmental protection.

However, the project's significance extends far beyond clean-up efforts. It delves into the realm of scientific research, specifically focusing on seabirds and their interactions with marine litter. By analyzing data from stranded seabirds, including species like the Common murre and Northern Gannet, the project actively supports the Birds Directive. This research not only enhances our understanding of marine litter's impact on seabirds but also informs critical conservation strategies, aligning with EU biodiversity protection goals.

Education and capacity-building activities form a core component of the LIFE SeaBiL project. Through outreach efforts, it reached already thousands of individuals, spreading awareness about the effects of waste on seabirds and marine ecosystems. These initiatives align harmoniously with EU education policies, promoting environmental literacy and responsibility among citizens.

In a pioneering step, the project goes beyond traditional marine litter management by having as goal the identification of an indicator seabird species for marine litter pollution. Even if the analysis results can't be able to identifying that specy yet, this research directly supports the objectives of the MSFD, a cornerstone of EU water quality and environmental policy. By assembling a transnational stranded bird network and conducting in-depth studies based on the tissue bank created, the after-life goal is to identifying two or three indicator species to assess marine environmental quality. This innovative approach addresses the need for comprehensive indicators in the context of the MSFD, where such data is essential for evaluating the overall environmental health of European marine ecosystems.

## 7. Key Project-level Indicators

The project indicators were entered on the European Commission's platform in 08/2025 and are appended to the final report (Appendix 5).

The indicators show that the project has achieved its objectives in terms of improving the coordination of beach cleaning actions and monitoring stranded seabirds, consolidating the acquisition of knowledge on the impact of plastic waste on seabirds, improving the identification of marine litter sources to optimize management and prevention.

Lastly, the communication and awareness-raising initiatives carried out show that local stakeholders have taken on board the issue of marine litter pollution on seabirds. The indicators put in place (number of people reached on social media communication, number of visits to the website, number of stakeholders trained, etc.) highlight the commitment of the project's beneficiaries and the involvement of stakeholders.

## 8. Comments on the financial report

### 8.1 - Expenditure by budget category and action

The Excel file containing expenditure details is attached to this final report. The breakdown of expenditure incurred since the start of the project by budget category (Table 4) and by action (5) is presented below:

Table 4 : LIFE SeaBiL estimated and actual expenditure by budget category

Budget categories	Provisional budget in €	Total expenditure in €	% of provisional budget
Personnel	€ 778 126	€ 834 759.81	107.28 %
Travel and subsistence	€ 54 467	€ 31 744.75	58.28 %
External assistance	€ 92 200	€ 101 233.83	109.80 %
Equipment	€ 8 200	€ 3 353.28	40.89 %
Consumables	€ 37 210	€ 13 368.33	35.93 %
Other costs	€ 35 735	€ 30 374.24	85.00 %
Overheads	€ 70 414	€ 71 036.97	100.88 %
<b>TOTAL</b>	<b>€ 1 076 352</b>	<b>€ 1 085 871.22</b>	<b>100.88 %</b>

Expenditure incurred was 100.88 % of the forecast budget, representing a difference of € 9 519,22.

The under-spending in travel and subsistence category could be explained in particular by the fact of:

- no trip was made to the European commission (Brussels) by LPO FRANCE's staff (€960 not spent due to late recruitment of project coordinator at the beginning).
- few volunteers were compensated for the network prospectations in France (€197 have been paid out of a planned €9672) and this expense have been reallocated to "Other costs".
- SPEA budget allocated for the monitoring of Berlenga's colonies was overestimated, and in majority declared on "Othercosts" category (because of people involving for these trips were non-employees of SPEA).

- a majority of workshops was organized by visioconference to reduce carbon footprint.

The under-spending in Equipment category could be explained in particular by the fact of:

- one telescop was budgeted (€1000) but not bought.
- The printer for tissue bank database (€4200) was not bought due to subcontracting of this task (QUALYSE).

The under-spending in Consumables category could be explained in particular by the fact of:

- LPO FRANCE has manufactured less goodies than expected to minimize his plastic pollution contribution (bottles).
- LR University has underspent all the budget allocated for laboratory equipment, principally due to subcontracting (QUALYSE for external assistance), and in reason of lower number of birds for necropsy.
- SPEA have overestimate the necessary material for laboratory and for climbing gear.

Table 5 : LIFE's projected and actual expenditure per action

ACTION	Provisionnal budget €	Expenses €	Différence €	% of provisional budget
A01	13 298,00	11 618,18	1 679,82	87,37%
B01	47 840,00	47 002,80	837,20	98,25%
B02	19 158,00	11 635,22	7 522,78	60,73%
B03	109 894,00	83 707,18	26 186,82	76,17%
B04	32 263,00	29 380,03	2 882,97	91,06%
B05	64 324,00	69 910,45	-5 586,45	108,68%
B06	178 096,00	185 265,19	-7 169,19	104,03%
B07	40 773,00	39 137,45	1 635,55	95,99%
B08	42 858,00	39 775,85	3 082,15	92,81%
B09	22 568,00	27 305,96	-4 737,96	120,99%
B10	92 297,00	69 024,33	23 272,67	74,79%
B11	37 514,00	24 425,48	13 088,52	65,11%
C01	62 460,00	66 538,37	-4 078,37	106,53%
C02	19 183,00	17 728,67	1 454,33	92,42%
C03	35 445,00	15 023,53	20 421,47	42,39%
D01	57 156,00	29 853,86	27 302,14	52,23%
D02	54 744,00	45 872,40	8 871,60	83,79%
E01	76 067,00	201 629,27	-125 562,27	265,07%
Overheads	70 414,00	71 036,99	-622,99	100,88%
Total	1 076 352,00	1 085 871,22	-9 519,22	100,88%

Over the course of the project, beneficiaries managed to use 100% of the planned budget. It should be noted that actions B2, B3, B10, B11, C3, D1 are underspent.

For action B02, cost of traduction has been overestimated and was not necessary. Furthermore, costs of travel were not affected to this action. Finally, previsional staff time expenses have been not consumed integrally.

For action B03, the low difference between previsional and expenditure can be explained by an underestimated staff time (employees and volunteers) for this action.

For action B10, B11 and D01, the same constat of overestimating on the staff time can be made (employees and volunteers). This could be explained by the overdeclaration of staff, especially for E1 (see below).

For action C03, the same constat can be made on staff time, justified by subcontracting this task (Polilingua for translation and GreenFormation for final socio-economic assessment).

It should be noted that actions B9 and E1 are over-spent.

For action B09, some difficulties in installing and collecting tidal bins can justify this overspent, principally on staff time.

For action E01, some details are delivered below:

*Table 6 : Detailed budget per beneficiary concerning action E1*

	LPO France	La Rochelle University	SEO/BirdLife	SPEA	UAL	UCA	All beneficiaries
E01 planned	27 474	4 221	24 255	6 030	2 837.7	11 219.3	76 067
E01 realised	52 449.79	2 103.06	128 147.13	6 324.79	2 867.7	9 736.8	201 629.27
%	191%	50%	528%	105%	100%	87%	265%

The unused budget for these actions above was reallocated to action E01, which was underestimated for the LPO FRANCE France (management control assistance, head of team, coordinator). La Rochelle University, in contrast to LPO FRANCE, has underconsumed this budget on E01, as its trend to underconsumption staff time on all actions (82% on all the project). Furthermore, SEO/BIRDLIFE significantly overspent on action E01, which can be explained by the fact that the LIFE coordinator at SEO/BIRDLIFE declared all of his time on E01 as we can see above (some actions underconsumed in staff time). As such, this overspending is not significant at scale of the project, as we can see below (Figure 16).

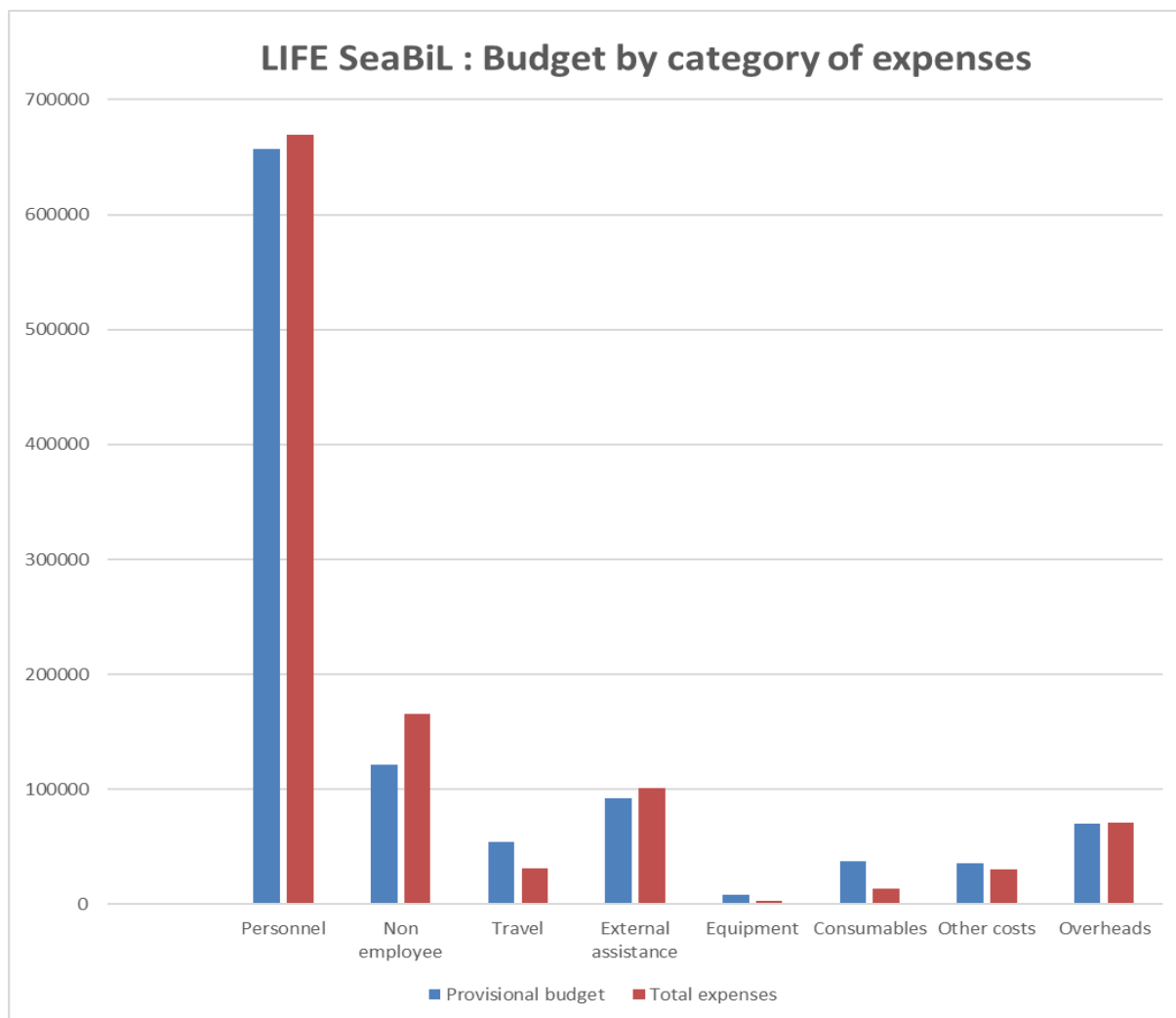


Figure 16 : Comparison between provisional and effective budget

## 8.2 - Accounting system

The following table presents, for all the project beneficiaries, the accounting systems employed and the codes identifying the project costs in the analytical accounting system.

Table 7: Project code references in ABs administrations

Beneficiary	Accounting system employed	Code identifying the project costs in the analytical accounting system
LPO France	Analytical accounting	LIF3902
LRUniv	Analytical accounting	OPE-2022-0646 LIFE SeaBiL
SEO/BirdLife	Analytical accounting	222110
SPEA	Analytical accounting	LSEAB



Beneficiary	Accounting system employed	Code identifying the project costs in the analytical accounting system
<b>UCA</b>	Analytical accounting	18.IN.PE.2303
<b>UAL</b>	Analytical accounting	UAL quickly left the project and did not communicate its analytical references

The following table gives a brief presentation of the procedure of approving costs

*Table 8: Internal procedures for costs' approbations in ABs structures*

Beneficiary	Procedure of approving costs
<b>LPO FRANCE</b>	<p>In LPO FRANCE, for purchases greater than or equal to €500, employees have to ask and compare a minimum of 3 quotes (Internal purchase procedure).  For expenses over €135,000, open tendering procedures are implemented for Life projects and can be implemented for other projects.  Before the accounting department makes the payment, signatures of managers are required on the selected quote and later on the invoice:</p> <ul style="list-style-type: none"> <li>- from €500, the service head's signature;</li> <li>- from €3000, the pole director's signature;</li> <li>- from €30,000, the Executive Secretary General's signature;</li> <li>- from €30,000 the General Director's signature.</li> </ul>
<b>SPEA</b>	For services or equipment with a value of less than €50 000, three quotations are requested and receive permission from the director.
<b>SEO/BirdLife</b>	<p>The whole process is carried out following the regulations and manuals:</p> <ul style="list-style-type: none"> <li>• Manual of contracting procedures for LIFE+ projects (European Commission).</li> <li>• Public Sector Contracts Law</li> </ul>
<b>UCA</b>	N/A. No comparison needed as UCA only has personnel costs, travel and consumables costs.
<b>LRUniv</b>	Application of the French Code of Public Procurement contracts "Code de la commande publique"

The following table show the type of time recording system used and briefly the registration, submission and approval procedures of the time registration system.

Table 9: Time registration procedures in ABs structures

Beneficiary	Type of time recording system used	Registration, submission and approval procedure/routines of the time registration system
<b>LPO FRANCE</b>	Electronic using a software (Logeproj)	The LPO FRANCE employees who are working on the Life SEABIL project enter regularly their time into a software called Logeproj. At the end of every month they print out their timesheets, sign them and have them signed by the Executive Secretary General or the General Director.
<b>LRUniv</b>	Electronic using a software	LRUniv uses a software called Tempo. At the end of every month they print out their timesheets, sign them and have them signed by the Executive Secretary General or the General Director. LRUniv will soon upgrade a specific tool "Sinchro", for timesheets management.
<b>SEO/BirdLife</b>	Manual	<p>The worker makes the time sheet the first week following the reference month. He/she dates, signs and sends it to the project coordinator (Felipe González), who dates and signs it. In case of absence, it can be signed by José María Sánchez (Director of Internal Strengthening) or Gonzalo García (Project Management Coordinator).</p> <p>In the case of the time sheets of the project coordinator (Felipe González), these will be signed by the Director of Internal Strengthening or by the Project Management Coordinator.</p> <p>In the case of the time sheets of the Project Management Coordinator (Gonzalo Garcia), these will be signed by the Director of Internal Strengthening.</p>
<b>SPEA</b>	Manual	SPEA employees who are working on the Life SEABIL project fill MS Excel based timesheets by the end of each month. Timesheets are signed and have them signed by their direct supervisor, who might be the head of the department or the Executive Director. In the case of volunteers, timesheets are signed by them and by the conservation officers or the head of the department.
<b>UCA</b>	Manual	Currently, time registration is managed by the research participants in the project with the support of the Research Support Office. Timesheets are completed by the research group and revised by the responsible researcher. An IT tool is under development

The project reference of the LIFE SEABIL-LIFE 20GIEFR000114 is written on every invoice of the project.

We ask all the service provider, shops or external assistants to clearly write this reference on the invoice, generally under our addresses.

If, despite our best efforts, the project reference is not written on the invoice, we stamp the reference on it as the last resort.

### 8.3. Agreements and financial transfers with associated beneficiaries

At the start of the project, the LPO FRANCE, as the coordinating beneficiary of the LIFE SeaBiL project, drafted and signed partnership agreements with each of the associated beneficiaries, specifying the terms and conditions of financial transactions between the coordinating beneficiary and the associated beneficiaries. The LPO FRANCE receives subsidies from the European Commission (CINEA) and redistributes by transferring them to the bank accounts of the associated beneficiaries.

Associated beneficiaries submit financial reports to the LPO FRANCE every six months by sending their financial information (timesheets, invoices, expense reports, etc.) to the financial coordinator. The financial coordinator verifies the information and prepares the consolidated report.

The main part of the budget is personnel expenses. Because LRUniv lacked personnel and they recruited later on, they did not spend much on personnel, which will be partly compensated with the recruitment of an engineer for the necropsies and another engineer for the database but also by external assistance (7 000 € from personnel expenses budget were transferred to external assistance budget). Also, due to the fact that the database has been structured more efficiently than expected, some expenses linked to those actions (printers 4 000 € action B5 for instance) were not made yet by LRUniv.

Due to several delays, the project, which was supposed to end in 09/2024, was extended to 12/2024. As a consequence, some extra costs are foreseen for University of Cadiz, mainly due to the extension of the contracts of Monica Exposito Granados and Yada Trapletti. In order to compensate those over expenses, it was agreed within the consortium that the global LIFE SeaBiL budget will be redistributed with 12 000 € more going to UCA, as long as the global budget of the project is not exceeded. Same for SPEA extra costs. It was necessary to add staff time for 3 months from October to December for Monica Costa et Nuno Oliveira due to the project extension (for B3, B6, B7, B10 et B11 actions).

The amount of 3 000 euros intended for the organization of a workshop was transferred from the LRUniv budget to that of the SEO/BirdLife because they were the ones who organized this Workshop in Spain (Urdabai; B7 action)

A few unplanned expenses occurred during the project, such as :

#### **External assistance:**

- B3: LPO FRANCE paid for “Anes d’Oléron”(other costs) society for the three beach clean-up that occurred at Oléron on 04/12/2022 AM, 04/12/2022 PM and 25/02/2023. Due to a large quantity of marine litter expected by the natural manager, LPO France paid for donkeys to follow the volunteers and carry the marine litter. It showed very useful as the quantities were indeed very heavy. The total cost was 600 €
- B10: For the Laye Ndiaye exposition, due to LPO France’s edition service unavailability, LPO France asked to an editor to produce explicative posters for the exhibition including the project. Total cost was 750 €
- B9: To build the tidal bins, SEO/BirdLife had to ask a wood worker to help them. They had to pay him 750 € for his work
- B5: The scientific workshop was organised by SEO/BirdLife, instead of LRUniv, and they had to pay 4 224 € on external assistance and 651,76 € in consumables for its organisation.

### Consumables:

- B6: Due to avian flu, LPO FRANCE bought some sanitary equipment for the stranded seabirds' collections for a grand total of 495,86 €. Mainly, those were gauntlets, sanitary masks, combinaisons etc...

On a more general note, LRUniv bought the necessary materials for the project through a society called UGAP, which compares quotes, so LRUniv did not compare quotes themselves but the UGAP did before sending them the best quote.

SEO/BirdLife went on direct treaty with three different company:

- NEXUS it is the only company they found that carries out workshop organisation in Bizkaia, where the workshop was held,

- Serisan is a company they have been working with for many years, the costs are low and SEO/BirdLife is very happy with their work.

- Rear Machine, who worked on ICAO, is the only company SEO/BirdLife found that could do the asked work.

### 8.4. Estimation of person-days used per action

The following table gives an overview of the use of budgeted person-days by group of actions.

*Table 10: Estimation of person-days used per action*

Action type	Budgeted person-days	Estimated % of person-days spent up to 31/03/2025
A. Preparatory actions	83	106 %
B. Core actions	4 085	102 %
C. Monitoring of the impact of the project actions	750	72 %
D. Public awareness and dissemination of results	405	113 %
E. Project management	444	234 %
TOTAL	5 767	109 %

We notice a consumption of 93% for the LPO FRANCE of the estimated number of person days, 83% for La Rochelle University, 105% for SEO/BirdLife, 127% for SPEA, and 129% for UAL and UCA. This corresponds to what had been envisaged after the mid-term review. The redistribution of the provisional budget was carried out after discussion with the partners and complies with the rules for budget transfers.

The preparatory actions were almost complete at the mid term report. In order to complete these actions, 106% of the estimated number of person-days was required. A lot of time was spent on action E01 because the time needed for project coordination have been underestimated by some of the associated beneficiaries.

## 9. Reply to the European Commission's correspondence

### 9.1. Reply to the European Commission's correspondence of 17/10/2024

#### Technical issues:

- Issue 11: Action B4 - Create a transnational and 5 local networks for monitoring and collecting stranded birds

*In the Final Report, please elaborate further on the sustainability of the transnational and local networks after the end of the project.*

- ➔ The structuring of the networks, both local and national, will be maintained through coordination by the associated beneficiaries. The LPO FRANCE has already provided two years of funding for this coordination position. Exemptions and authorizations have been renewed. The ICAO monitoring application will also help maintain the mobilization of volunteers. At the transnational level, the online database, easily accessible through the interface created, allows all researchers to access and enter the data they wish to share. Partnership members will thus be able to continue sharing their data, and new researchers will be able to join them. The connections within BirdLife are regular and lasting. The work begun during the Life SeaBiL project is already the subject of a joint project for its continuation.

- Issue 12: Action D1 - Communication on the project

*The production of the project's notice boards appears to be behind schedule. These boards are essential for disseminating information to a broad audience, particularly at local level. Please confirm in your Final Report, with photographic evidence, that the planned 20 noticeboards have been produced and installed at the project's pilot sites. Otherwise, the corresponding costs could be deemed non-eligible.*

- ➔ The planned notice boards were merged with the panels scheduled in Action B10 (21 panels). Indeed, the most appropriate solution was to install these notice boards and panels at the entrances to the pilot site beaches, as these beaches are very busy. However, there are already a large number of panels and information displays. It seemed to us, in collaboration with the site managers, that installing just one additional panel per beach (rather than two) would be just as effective in terms of visibility for the project. Example in *appendix 1: exemple of panels installed on the beach*.

#### Financial and administrative issues:

- Issues raised in the letter of 24 11/2023 following the Mid-term Report  
Issue 7: personnel (reminder)

*UCA: We take note of your statement that the employees were not on sick leave in the first incomplete year and you used their contractual working time to calculate the daily rate. Please note that such approach is not in line with the LIFE reporting requirements. Therefore, we reiterate our request and kindly ask you to adjust the annual productive hours in 2023 based on the guidance provided in the aforementioned letter.*

- ➔ The beneficiary reviewed the personal tab of the financial statement and adjusted the timesheets to comply with the rule.

- Issues raised in the letter following the 3rd monitoring visit

Issue 12: Personnel

*SEO/BirdLife: The actual productive time of Sofia Rivaes in 2022 does not correspond to the hours reported in the financial statement. Apparently, the productive hours for January were not considered as the employee did not work on the project while the personnel costs were based on the annual values. Please revise the financial statement and ensure that the daily rates are correctly calculated at the Final Report stage.*

The financial statement has been revised and the daily averages have been recalculated in the final report.

**9.2. Reply to the European Commission's correspondence of 08/10/2025 – additional information request on Final Report**

A specific document was made to provide additional information after the delivery of the Final Report.

This document is available [online here](#), under the name “Annex\_deliverable an C2 form”.

## 10. Deliverables and milestones

Table 11: List of deliverables and milestones

### DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Number of the associated action	Expected date	Effective date	file name in <a href="#">Drive</a>
permits/derogations/cerfa	A 1	31/10/2021	01/12/2022 to 05/02/2024	permits_derogations_cerfa_A1
Transnational Mobile Application for stranded birds and linked to marine litter in 7 languages (FR, PT, EN, Basque, Catalan, Galician)	B 1	30/09/2022	06/2023	Transnational Mobile Application for stranded seabirds_B1
User guide (on the app) in each language	B 1	30/09/2022	06/2023	User guide in each language_B1
Risks maps for each pilot site	B 2	30/06/2022	06/2022	Risks maps_B2
Low footprint guide for each pilot site, translated in each language (1 PT, 1FR, 3 SP/Basque)	B 2	30/09/2022	10/2022	Low footprint guide_B2
Online training	B 3	31/03/2023	10/2023	Online training_B3
Feedback surveys and results	B 3	30/09/2023	11/2023	Feedback surveys and results_B3
Final guide (B2 guide adapted with feedback survey results)	B 3	30/09/2023	01/2024	Final guide_B3
Repertory of contacts involved in the network (contacts and skills book)	B 4	31/10/2021	01/2022	Repertory of contacts_network_B4
Convention agreement between the structures involved in the network (charters)	B 4	31/05/2022	10/2022	convention agreements_B4
Guidelines "structuring an efficient network to improve the analysis of the impact of waste on birds (for other sites/ countries) in English and translated (SP, PT, FR)	B 4	31/01/2024	30/11/2025	Guidelines_network_B4

First autopsy report	B 6	30/09/2023	09/2023	First autopsy report_B6
Guidelines to use seabirds as indicators of marine litter impact on biota	B 6	31/12/2023	30/11/2025	Guidelines seabirds indicators_B6
Second autopsy reports	B 6	31/08/2024	12/2024	Second autopsy report_B6
Summaries of the transnational workshops available on project website	B 7	30/09/2024	09/2024	Summaries transnational workshops_B7
Analysis report of MSFD/OSPAR marine litter data	B 8	31/12/2023	12/2023	Analysis report_B8
3 local marine litter repositories	B 8	31/01/2024	01/2024	Marine litter repositories_B8
Action plan	B 9	28/02/2023	07/2024	Action plan_B9
Final technical guide	B 9	31/10/2023	08/2024	Final technical guide_B9
Final report	C1	30/12/2024	12/2024	Final report_C1
Final report	C2	12/2024	12/2024	Final report_C2
Monitoring report/ Mid-term report	C2	04/2023	09/2023	Monitoring report_C2
3 internship reports end	C 3	30/06/2024	cancelled	NA
Summary report on evaluation of socio-economic impacts of LIFE	C 3	30/09/2024	09/2024	Summary report socio eco_C3
Layman's report	D1	07/2024	07/2024	Layman_D1
After-LIFE plan	E 1	30/09/2024	12/2024	After Life plan_E1

#### MILESTONES OF THE PROJECT

Name of the Milestone	Number of the associated action	Deadline	Effective date
first request sent	A 1	15/10/2021	01/2022



obtention of the first administrative exemption	A 1	31/10/2021	23/02/2022
Identification of needs (0-3 months): Workshop 1	B 1	31/10/2021	03/2022
Identification of needs (0-3 months): Workshop 2	B 1	30/11/2021	04/2022
Identification of needs (0-3 months): Workshop 3	B 1	31/12/2021	05/2022
Developer March/April 2022 for 6-7 months	B 1	30/09/2022	11/2022
Launch of the app	B 1	30/09/2022	06/2023
First informative stand	B 10	30/06/2022	05/2022
Schoolchildren Low footprint beach clean-ups	B 10	31/05/2024	05/2024
Online and mass media strategy including social networks	B 11	30/11/2021	05/2022
Online tutorials	B 11	30/10/2023	02/2024
First working version done - 6 months (March 2022)	B 2	31/03/2022	03/2022
Date of workshops (April 2022)	B 2	30/04/2022	03/2022 and 04/2022
Adaptation with the workshops feedback (June 2022)	B 2	30/06/2022	06/2022
First training session	B 3	30/11/2022	10/2023
First beach clean-up	B 3	31/12/2022	12/2022
Feedback surveys sent	B 3	28/02/2023	11/2023
Results of survey	B 3	30/06/2023	12/2023
Contact and skillsbook	B 4	31/10/2021	01/2022
First version of the Networks charter	B 4	31/10/2021	03/2022
Meetings to validate the charter in each country	B 4	30/04/2022	05/2022
Workshop with the scientific community interested in plastic analyses in stranded birds as well as by the creation of a seabird tissue bank to identify the needs (which tissue, sample size and mass...	B 5	28/02/2022	05/2022
Workshop with national care centres to discuss the storage procedures prior to seabird necropsies and tissue sampling	B 5	30/04/2022	06/2022
Transport and import permits for all country are acquired	B 5	31/05/2022	01/2024
Protocols for sampling seabird samples in care centres and at breeding colonies and for their transport to the transnational tissue bank are finalized	B 5	30/06/2022	05/2023
Colonies protocol tested from May to September 2022	B 5	30/09/2022	09/2022
A tissue bank is set-up at LIENSs	B 5	31/10/2022	01/2024

First mobilization test for surveys on the beach	B 6	28/02/2022	01/2022
First monitoring in Berlengas colonies	B 6	31/10/2022	09/2022
First samples analysed	B 6	30/06/2023	05/2023
Second mobilization test for surveys on the beach	B 6	29/02/2024	12/2022
First workshop takes place	B 7	30/09/2023	10/2023
Second workshop takes place	B 7	31/03/2024	04/2024
Third workshop takes place	B 7	30/06/2024	11/2024
First meso and micro plastic sampling in France	B 8	31/12/2021	02/2022
Start training for the MSFD/OSPAR operators (SP/PT)	B 8	31/01/2022	05/2022
First DCSMMS/OSPAR survey (SP/PT)	B 8	30/04/2022	05/2022
Collect feedback (before second MSFD/OSPAR survey)	B 8	30/06/2022	06/2022
Associated beneficiaries meeting to prepare the adapted MSFD/OSPAR protocol	B 8	31/07/2022	07/2022
Start the adapted-to-local-context OSPAR protocol	B 8	30/09/2022	09/2022
Meeting between operators in order to present the new protocol (sheet and photoguide)	B 8	30/11/2022	03/2023
Meso and micro plastic analyses started	B 8	01/01/2023	01/2023
2 first workshops done	B 9	30/09/2022	03/2024
2 second workshops done	B 9	28/02/2023	07/2024
Tidal bins meetings done	B 9	30/04/2023	08/2022
First technical guide version	B 9	31/05/2023	08/2024
Last workshop	B 9	30/06/2023	04/07/2024
Care centres sharing data validate	C 1	28/02/2022	04/2022
First communication from care centres	C 1	28/02/2022	02/2022
Plovers protocol agreement	C 1	28/02/2022	05/2022
First plovers surveys started	C 1	31/05/2022	04/2022
Final report done	C 1	31/08/2024	12/2024
Filling Key project indicators	C 2	31/03/2024	03/2024
Internships January	C 3	30/06/2024	Cancelled
Coordination workshops	C 3	30/09/2024	Cancelled
1 communication plan	D 1	15/11/2021	05/2022
Layman's report	D 1	31/07/2024	07/2024
Final seminar	D 2	30/09/2024	11/2024

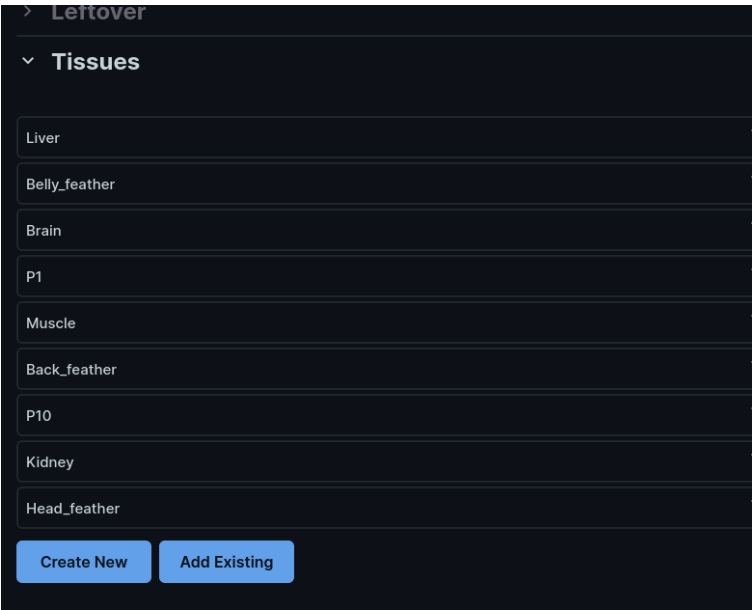
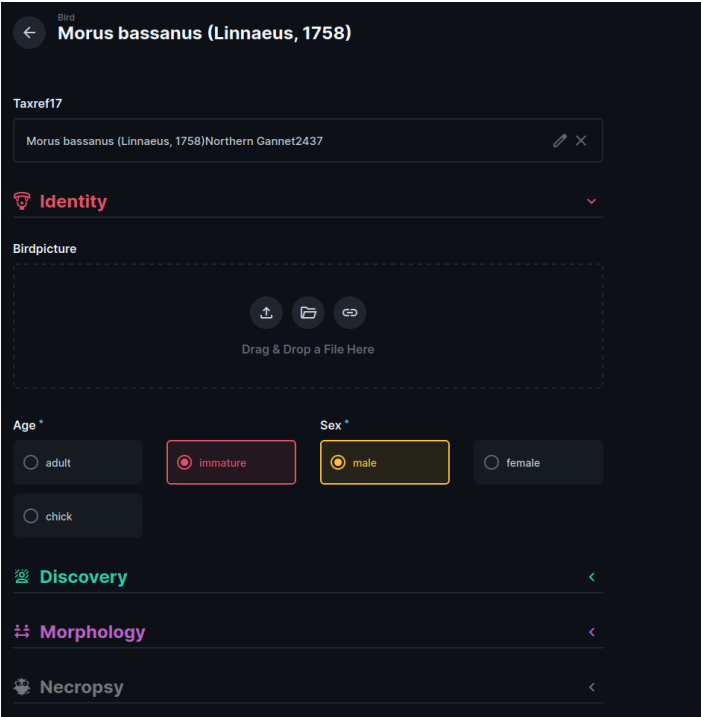
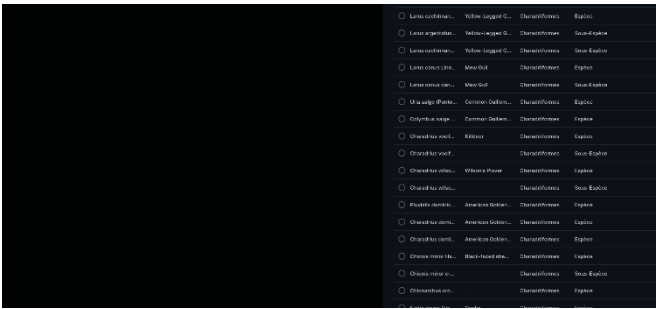
Opening committee	E 1	31/10/2021	10/2021
First consultative meeting	E 1	31/10/2022	01/2022
Closing committee	E 1	30/09/2024	09/2024

## 11. Appendixes

appendix 1: example of panels installed on the beach



appendix 2:screan captures of the tissue bank online interface





## Ligue pour la Protection des Oiseaux

- Étude menée dans le cadre du Life Seabil -

### ANALYSES DE MICROPLASTIQUES ET MÉSOPLASTIQUES ÉCHOUÉS SUR LE LITTORAL

#### RAPPORT D'ANALYSES



L.23.38/5783

TLB/KT

Fevrier 2024

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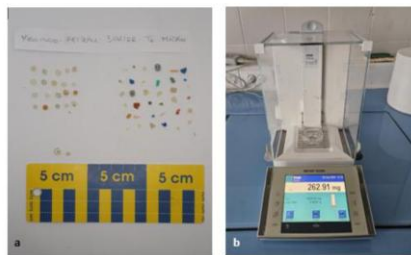


Figure 5 : (a) Catégorisation et comptage en laboratoire des grands microplastiques. (b) Pesées des différentes catégories de microplastiques à la balance de précision METTLER TOLEDO XP250 (source : Cedre).

#### 3.2.3. Analyse en IRTF

Afin de confirmer la nature chimique des particules et d'obtenir des données sur la composition chimique des particules, une analyse par spectrométrie infrarouge à transformée de Fourier est réalisée (IRTF, Figure 6). Elle permet de faire un contrôle sur la qualité des analyses et de confirmer que les particules analysées sont bien de nature plastique. Pour chaque échantillon (qui correspond au mélange des 5 sous-échantillons prélevés sur les 5 bandes de prélèvement), 10 microplastiques (hors GPI), 10 mésoplastiques et 10 GPI choisis au hasard, sont analysés en infrarouge. Si l'échantillon en contient moins de 10 dans une de ces catégories, la totalité des particules de la catégorie est alors analysée.

La détermination de la composition de chaque particule se fait à l'aide du logiciel de l'IRTF en comparant le spectre obtenu à des spectres de référence issues d'une base de spectres élaborée par le Cedre. La composition chimique de la particule est considérée comme confirmée lorsque le pourcentage de correspondance entre les deux spectres est supérieur à 60% (Galgani et al., 2013).

Pour l'analyse de la composition, les catégories de polymères considérées sont : Polyéthylène (PE) – Polypropylène (PP) – Polytéréphthalate d'éthylène (PET) – Polyamide (PA) – Polycarbonate (PC) – Polyméthacrylate de méthyle (PMMA) – Polystyrène (PS) – Polyuréthane (PUR) – Polychlorure de vinyle (PVC) – Autres polymères – Non déterminé (ou non plastique).

Analyses de microplastiques et mésoplastiques échoués sur le littoral  
Rapport d'analyse L.23.38/5783 TLB/KT Fevrier 2024

#### Table des matières

1. CONTEXTE ET OBJECTIFS.....	1
2. ÉCHANTILLONS.....	2
3. MATERIEL ET METHODES .....	2
3.1. Phase de terrain.....	3
3.2. Phase de laboratoire.....	5
3.2.1. Nettoyage de l'échantillon .....	5
3.2.2. Tri et analyse des échantillons .....	5
3.2.3. Analyse en IRTF.....	7
3.3. Phase de traitement des données.....	8
3.3.1. Centralisation des données .....	8
3.3.2. Traitement des données.....	8
4. RESULTATS ET DISCUSSION .....	9
4.1. Suivi de l'abondance et de la masse totales sur 100 m des déchets .....	9
4.1.1. Suivi des grands microplastiques .....	9
4.1.2. Suivi des mésoplastiques.....	12
4.2. Composition de la pollution .....	14
4.2.1. Composition des grands microplastiques .....	14
4.2.2. Composition des mésoplastiques.....	17
4.3. Analyse de la composition chimique.....	20
4.3.1. Composition chimique des grands microplastiques (hors GPI).....	20
4.3.2. Composition chimique des mésoplastiques.....	21
4.3.3. Composition chimique des GPI.....	22
CONCLUSION.....	23

#### 4.2. Composition de la pollution

Les figures ci-dessous représentent les proportions des différentes catégories de grands microplastiques (Figures 9, Figure 10 et Figure 11) et mésoplastiques (Figures 12, Figure 13 et Figure 14) observées dans les différents échantillons. Les données brutes sont présentées en (Annexe 1 et 2).

##### 4.2.1. Composition des grands microplastiques

Dans l'ensemble, pour le site du Gatteau, les grands microplastiques majoritaires sont les fragments, à hauteur de 58% des échantillons. Les GPI représentent aussi une large part des déchets avec 38%. Une petite partie des grands microplastiques sont des particules de polystyrène expansé (4%). D'autres particules de films plastiques et de filaments ont été identifiées en très faibles proportions. Aucune mousse, biobead et biomédias n'a été retrouvé.

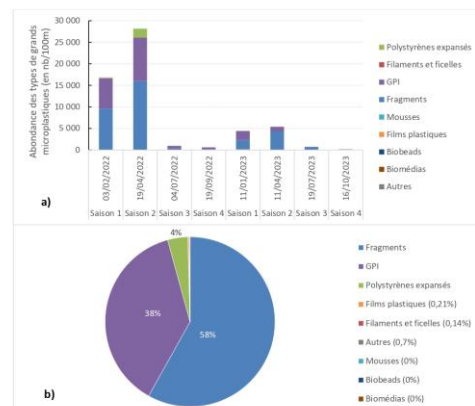


Figure 9 : a) Graphique des abondances des types de déchet en fonction des prélèvements. b) Graphique de la proportion des types de grands microplastiques (Gatteau, 2022-2023). Nombre de particules analysées : 1420 microplastiques.

Analyses de microplastiques et mésoplastiques échoués sur le littoral  
Rapport d'analyse L.23.38/5783 TLB/KT Fevrier 2024



## SEMINAIRE FINAL DU LIFE SEABIL

### Evaluer et réduire l'impact de la pollution plastique sur les oiseaux marins

**MERCREDI 27 NOVEMBRE 2024**

**ESPACE ENCAN DE LA ROCHELLE (17)**

9h00	Accueil Café / Coffee (ouverture portes 8h45)
9h30	Discours introductifs / Introductory speeches
10h10	<b>Vers un traité mondial pour mettre fin à la pollution plastique ? / Towards a global treaty to end plastic pollution ?</b> <ul style="list-style-type: none"> <li>Hugo Lequertier - Political advisor International governance of the environment and pollution</li> </ul>
10h30	<b>La pollution plastique des océans : une pression supplémentaire pour les oiseaux marins / Marine litter: An Additional Pressure on Seabirds</b> <ul style="list-style-type: none"> <li>Susan Waugh - Senior Programme Manager, Preventing Extinctions BirdLife International</li> </ul>
10h45	Pause-café / Coffee break
11h15	<b>Milieu marin : la LPO en actions / Marine Environment: LPO in action</b> <ul style="list-style-type: none"> <li>Alban Viaud - Responsable de service Réduction des Pressions sur la Biodiversité à la LPO</li> </ul>
11h35	<b>LIFE SeaBil : présentation du projet et des grands résultats / LIFE SeaBil: Project Overview and Key Results</b> <ul style="list-style-type: none"> <li>Guillaume Le Hétet - Coordinateur du projet LIFE SeaBil à la LPO</li> </ul>
11h55	<b>Suivi des oiseaux marins échoués : Méthodologie et résultats / Monitoring stranded Seabirds: Methodology and Results</b> <ul style="list-style-type: none"> <li>Paulo Lago Barreiro - Responsable de projet ICAO à la SEO</li> </ul>

Coordinateur projet



Bénéficiaires associés



Agir pour la biodiversité

12h15	Echanges avec le public / Discussions with public
12h30	Pause déjeuner / Lunch
14h00	<b>Le Fulmar Boreal comme espèce indicatrice en Manche Mer du Nord / The Northern Fulmar as an Indicator Species in the North Sea and Channel</b> <ul style="list-style-type: none"> <li>Fabrice Gallien - Coordinateur GOnM</li> </ul>
14h15	<b>Les oiseaux marins en tant qu'indicateurs du bon état écologique du littoral : analyses et résultats / Seabirds as Indicators of Good Ecological Status of the Coastline: Analysis and Results</b> <ul style="list-style-type: none"> <li>Jérôme Fort - Chercheur et coordinateur projet à l'Université de La Rochelle &amp; Marga L. Rivas - Chercheuse et coordinatrice projet à l'Université de Cadix</li> </ul>
14h30	<b>L'impact de la pollution plastique au sein des colonies des Berlengas / Impact of Plastic Pollution at the Berlengas Colonies</b> <ul style="list-style-type: none"> <li>Nuno Oliveira - Coordinateur projet à la SPEA</li> </ul>
14h50	<b>Les enjeux pollution plastique dans le LIFE Espèces Marines Mobiles / LIFE Mobile Marine Species: The Impact of Plastic Pollution</b> <ul style="list-style-type: none"> <li>Ségolène Fabre - Coordinatrice LIFE EMM à l'OFB</li> </ul>
15h10	Echanges avec le public / Discussions with public
15h30	Pause-café / Coffee break
16h00	<b>Pollution plastique des océans : 10 ans de données dans le Golfe de Gascogne / Marine litter: 10 Years of Data in the Bay of Biscay</b> <ul style="list-style-type: none"> <li>Clément Moreno - Chargé de mission sciences participatives à Surfrider Foundation Europe</li> </ul>
16h15	<b>Suivi et analyse de la pollution plastique au sein du Parc Naturel Marin de l'Estuaire de la Gironde et de la Mer des Pertuis / Monitoring and Analysis of Plastic Pollution in the Gironde Estuary and Pertuis Marine Nature Park</b> <ul style="list-style-type: none"> <li>Aurélien Lassus-Débat - Chargée de mission qualité de l'eau et lien terre-mer au PNMEGMP &amp; Camille Lacroix - Cheffe du service Surveillance et études des déchets aquatiques au CEDRE</li> </ul>
16h45	<b>L'identification et la réduction des sources de déchets au niveau local / Source identification and reduction at local level</b> <ul style="list-style-type: none"> <li>Edith Pavan - chargée de l'aménagement du littoral Communauté de communes Oléron</li> </ul>
17h00	Echanges avec le public / Discussions with public
17h30	<b>Conclusion</b> <ul style="list-style-type: none"> <li>Anne-Gaëlle Verdier - Directrice adjointe PPN LPO</li> </ul>
17h45	Pot Espace Encan / Drink at Espace Encan

Appendix 5 : Final table of key performance indicators

FIRST LEVEL DESCRIPTOR	CONTEXT	START VALUE	END VALUE	BEYOND END VALUE	UNIT	COMMENTS
1.5. Project area/length						
Partial reduction of specific pressures/threats affecting the spatial extent of the project in comparison to the present level	Marine Atlantic France	0	300	500	Km2	The number of coastline kilometres covered during the deployment of the network for protocol-based monitoring in France and beyond 3 years. 300 km of coastline are currently being monitored, and there are already plans to extend the territory covered in French Brittany (the coastline is difficult to access, so only 100 km are planned) and in the Mediterranean (also 100 km within three years, as mobilization on this issue may be more complex).
1.6. Humans (to be) influenced by the project						
Persons who may have been influenced via dissemination or awareness raising project-actions (reaching)	France, Portugal, Spain	0	34696	38165	Number of other persons influenced /impacted independently of the project area	Number of people reached through social media (Intagram, Facebook, twitter, TikTok, LinkedIn) : 15 008 /Number of readers of publication by beneficiaries : 2 200 for Oiseau Mag junior and 15 000 for Quercus / Project web site visitors : 2 488 people / $15008+2200+15000+2488 = 34696$ Beyond three years, with the actions continuing after the project, we estimate that at least an additional 10% will be reached by communications around the actions : $10\% \text{ of } 34\,696 = 3469.6$ $34696+3469.6 = 38\,165.6$
Persons with improved capacity or knowledge due to project actions	France, Portugal, Spain	0	1403	6363	Number of residents within or near the project area	Number of stakeholders trained about how to conduct beach clean-up without impact for birds ( 140 : 45 in France, 40 in Portugal and 54 in Spain) and number of volunteers involved in the beach-clean up activities proposed during B3 action (1 263) - See action B3 Viewing the online training sessions should, at a minimum, improve the knowledge of 200 people per country within three years. Indeed current view in Youtube are : 193 views for french session, 39 for spanish and 15 in portuguese (247 views). So we could expect a total of 200 per countries. $140 + (200*3) = 740$  We also hoped that, at least 50% of volunteers (631.5), will reached 3 other people each about low footprint beach clean-up. So with the minimum of 1 beach clean-up per years with may have around 5 623 persons improving their knowledge about low footprint beach clean-up beayond 3 years ( $631.5\text{vounteers}*3 \text{ persons}*3 \text{ years}$ ).  $740+5623 = 6\,363$



3.2. Marine litter						
Plastic (including polystyrene)	France, Portugal, Spain	5816	5815	5815	km2 intertidal shoreline	<p>Seven beaches, each 100 meters long, were monitored under the MSFD/OSPAR protocol during the project, at four sites. See B8 report. The project sites represent approximately 1,454 kilometers of coastline (Pertuis 1,300 kilometers / Cabo de Gata 63 kilometers / Delta de l'Ebre 51 kilometers / Santona 40 kilometers).</p> <p>So we estimated the number of kilometers cleaned compared to the total: each beach cleaned represents approximately 400 m<sup>2</sup> (100 m of shoreline x 4 m wide around the high tide line), or 0.0004 km<sup>2</sup>. For seven beaches, 0.0028 km<sup>2</sup> of coastline was therefore monitored. Using the same methodology, the coastline of the project sites represents 1,454 x 0.004 = 5,816 km<sup>2</sup>.</p> <p>5816-0.0028 = 5815 km2 of intertidal shoreline monitored</p> <p>MSFD monitoring resulted in the removal of 12 088 items from the 0.0028 km<sup>2</sup> surveyed.</p> <p>The method used to measure marine litter was the number of items. We found no indicators using this number as a value.</p>
7.5.2. Other threats						
wild species	Marine litter OSPAR_MSFD monitoring	291	291	291	Breeding pairs	<p>Thanks to MSFD/OSPAR marine litter monitoring, the project has enabled the temporary cleaning of 2,800 m<sup>2</sup> of coastline (see indicator 3.2). These cleaned beaches are also home to Kentish plovers (<i>Charadrius alexandrinus</i>), which, like most birds, is impacted by plastic. This is a species that we also monitored as part of the project (see report C1): 209 breeding pairs at the French pilot site; 32 in the Ebro Delta, around 40 at Cabo de Gata and around 10 on the beaches of Peniche: 291 breeding pairs.</p>
10.2. Involvement of non-governmental organisations (NGOs) and other stakeholders in project activities						
Volunteers	France, Portugal, Spain	0	1619	2000	number of individuals	<p>It's the number of people who downloaded ICAO (stranded seabird monitoring app) and provide information in France, Spain and Portugal about stranded seabirds. (see B1 and B4 actions). Without them, the stranded seabird network doesn't exist.</p>
Other	France, Portugal, Spain	2	47	53	number of stakeholders involved due to the project	<p>Stranded seabirds network works partly thanks to the implication of care centers (27) and scientifics (20) (see B4 action). Care centers receive, store and monitor stranded seabirds. Each center are more involved in the national network than EU level, even the data are also used/shared at the international.</p>

						Only La Rochelle University and Cadiz University were involved at the beginning of the project. Scientifics help to organised analyzed and adapte stranded seabirdsmonitoring. Each scientifics are more involded in the national network than european level, even the data are also used/shared at others levels.
Public body/bodies	France, Portugal, Spain	0	14	17	number of stakeholders involved due to the project	Stranded seabirds network works partly thanks to the implication of public bodies (municipality, Natural parc, etc.) (see B4 action). They help to organised the monitoring of stranded seabirds in their territory. Each public bodies are more involded in the local network than national level, even the data are also used/shared at others levels
11.1. Website (mandatory)						
No. of unique visits	France, Portugal, Spain	0	12500	30000	Number of unique website visits	number of unique visitors from statistic data (Google analytic)
11.2. Other tools for reaching/raising awareness of the general public						
Number of events/exhibitions organised	France, Portugal, Spain	0	113	113	Number of outcomes (e.g. nr of reports, events, etc)	Stands on the beach, exhibitions and actions whith schools (57), beach clean-ups ( 56) are all actions to raise awareness on marine litter and its impacts on seabirds - EU scale, see action B3 and B10
Number of different displayed information created (posters, information boards)	France, Portugal, Spain	0	25	25	Number of outcomes (e.g. nr of reports, events, etc)	Scientific publications (4) and field panels (21) installed at the beach intrance (see D1 and D2 actions)
12.1. Networking (mandatory)						
Professionals - experts in the field	France, Portugal, Spain	0	67	67	No. of individuals	With the structuration of the stranded seabirds network (61 professionals, see B4 action) and the networking with other programs by the partnership (6, see D2), it was at least 67 professionals who have been linked together by the project. We hopped that linkes remain through the years are be replaced by new one.
12.2. Professional training or education						
Members of interest groups / lobby organisations	France, Portugal, Spain	0	38	138	No. of individuals	Three online training sessions about low footprint cleaning guide and birds-risks maps for organizers and beaches managers (available online, see B3 report). 38 beach clean-up organizers (mostly NGO) participated. We hopped to reach more of them beyond three years, around the samed amount in three time longer (40), reusing SeaBiL tools in other actions : 40 at EU level in 3 years. 40+38=78

Other	France, Portugal, Spain	0	29	59	No. of individuals	Three online training sessions about low footprint cleaning guide and birds-risks maps for organizers and beaches managers (available online, see B3 report). 29 N2000 managers participated. We hoped to reach more of them beyond three years, around the same amount in three times longer (30), reusing SeaBiL tools in other action : 30 at EU level in 3 years. 30+29=59
Professionals - experts in the field	France, Portugal, Spain	0	109	109	No. of individuals	Workshops to share experiences between stakeholders of the stranded seabirds network were organized during the B7 action. 109 people, expert in their field participated to the three workshops, mainly scientifics, NGO, authorities, care centers involved in the project or invited by the partnership to share experiences : 48 in Spain, 35 in Portugal and 26 in France). Each workshop was the subject of a short report.
13. Jobs						
Jobs	France, Portugal, Spain	0	0,92	0,5	No. of FTE	The coordinator of the project was hired three months after the beginning of the project, for a 100% FTE, he was present during 36 months of the project. The project was extended by 3 months (30/09/2024 to 31/12/2024); making the project a 39 month project. So the project create a 0.92 FTE (36/39)  Due to the fact that the network implemented by the project is to expand after the project, the french network need a coordinator and LPO FRANCE already found financial support to hire a full time person during 18 months. Beyond three years (36 months), it is a 0.5 FTE who will therefore be dedicated to continuing the coordination of the french stranded seabirds network and maintain the link with other network and partners.
14.1. Running cost/operating costs during the project and expected in case of continuation/replication/transfer after the project period						
Running cost/operating costs during the project and expected in case of continuation/replication/transfer after the project period	France, Portugal, Spain	0	1085871,22	2197435,22	€	Total project budget and cumulative budget beyond 3 years with the After-Life plan budget 1 085871.22+1 111564 =2197435.22 €
14.3. Future funding						

Angel investor	Governance and networking actions in France	NA	NA	150000	€	To continue the stranded seabird's network's coordination in France and actions of sensibilization about marine litter and stranded seabirds
Grants, subsidies	Governance and networking actions in France	NA	NA	205244	€	To continue the stranded seabird's network's coordination in France, analyzes of stranded seabirds and actions of sensibilization about marine litter and stranded seabirds
14.4.1. Entry into new entities/projects						
Replication	France, Portugal, Spain	NA	NA	NA	NA	The partnership structured a project to continue and replicate actions in France, Spain, Portugal, Ireland, Greece and Malta. A first version was proposed under Interreg fund
Continuation	France, Portugal, Spain	NA	NA	NA	NA	Stranded seabirds network will be continued in the three countries with the help of ICAO app and using database in LR Univ. At least 0.5 FTE will be dedicated to that network during the three next years. Partners already organized the next winter of monitoring (2024-2025) MSFD/OSPAR marine litter monitoring of french beaches will also continue as the Kentish plovers surveys in France and Spain (every 3 years for Spain; every years in France).
14.4.3. Entry into new geographic areas						
FRANCE\\MÉDITERRANÉE	Governance and networking actions in France					The stranded seabird network should be replicate in the french mediterranean cast by LPO FRANCE and south of France stakeholders. It will be one of the objective for the french stranded seabirds coordinator
FRANCE\\OUEST	Governance and networking actions in France					The stranded seabird network should be replicate in the french brittany coast by LPO FRANCE. During the project the network was well deployed in the pilot site and the Bay of Biscay but in french brittany, the coastline could be more difficult to access so it's less easy to involved volunteers . It will be one of the objective for the french stranded seabirds coordinator

