LIFE Integrated Projects 2016

Stage 2 – Full proposal

TECHNICAL APPLICATION FORMS

Part C – detailed technical description of the proposed actions

General note regarding cost calculations

AFB:

Personnel costs are calculated on the basis of the costs of the former AAMP which leads to an average daily cost of €250 over the duration of the project. The total number of person-days per year is 204.

Travel costs: €600 flat rate for any trip of 1 to 4 days, of more than 300km in France. This flat rate includes transport costs, meals and accommodation, and is calculated on the basis of former AAMP projects in 2016. 50 to 300 km trips are estimated 200€.

CNRS:

External assistance: Some of the personnel involved in the project are part of AgroParisTech and the social science institution EHESS, bodies that are connected to the CNRS via a mixed research unit (UMR). Their work time is accounted for under “external assistance”.

TDV:

The *Pôle-relais lagunes méditerranéennes* (Mediterranean Lagoon Centre) is a consortium coordinated by the Tour du Valat foundation (TDV) in partnership with the *Conservatoire d’espaces naturels du Languedoc-Rousillon* (CEN L-R, Languedoc-Rousillon Conservatory for Natural Spaces) and the *Office de l’Environnement* (Environment Agency) of Corsica (OEC).

External assistance: Some of the personnel involved in the project are part of the OEC or CEN L-R. Their work time is accounted for under “external assistance” and their travel under “other costs”.

Translation costs throughout the project have been estimated based on the current framework contract that bind the AFB with a translation company. For French to English translations (or vice-versa), which will be the most frequent ones, the cost per word is €0.11.

Table of content

A. Preparatory actions

ACTION A.1: Characterize and assess current governance in Natura 2000 marine areas

2. Beneficiary responsible for implementation:
1- AFB
9-PNRA
11- PNRGM

3. Description (what, how, where, when and why):

This action seeks to characterise current local marine Nature 2000 governance systems and to analyse their main strengths and weaknesses in terms of how effective the system is for habitat conservation, with a view to then proposing changes. All or some of these proposed improvements will be offered to volunteer sites for implementation (Action C1) and assessment (Action D3) in order to select the most relevant solutions for more effective governance.

The core issue of this action is: how can governance be improved so that the best decisions are made in order to improve the conservation status of marine habitats?

Links between Action A1 and other IP actions

Action A1 must feed into:

- Action A3: in particular, the study of perceptions of some users and the study of image of the network at a national level.
- Action C9: some of its methods and results will be necessary for implementation of Action C9 (assessment of Natura 2000 transaction costs and identification of the various stakeholders).
- Action D2**:** in accordance with A3, this action must provide food for thought concerning the development of a system for assessing the effects of measures on activities and the way in which they can be integrated into the Natura 2000 tool.

Tasks 1 and 2 will be performed by the the human science manager of the coordinating beneficiary (*Agence Française pour la Biodiversité*). Task 3 will be performed by the two associate beneficiaries: the *PNR du Golfe du Morbihan* (PNRGM - Gulf of Morbihan Regional Nature Park) and the *PNR d'Armorique* (PNRA – Armorique Regional Nature Park).

Task 1: Prepare the call for tenders

It includes:
- Preparing the call for tenders
- Selecting the best candidates
- Contracting with a consortium of scientists. These scientists will take part in the action A1 as external assistance. The call for tender will be prepared by permanent staff at AFB and will be launched early 2018.

Task 2: Carry out the study

This task will be implemented by the selected consortium of scientists, the PNRGM and the PNRA, under the supervision of AFB. This task is organised in 5 steps.

1. Draw up a sample of representative sites (2 months)

The study will be based on analysis of a sample of 15 - 20 sites spread across the three French coasts, selected for optimal diversity of locations and taking into account the level of motivation on each site. Classification is expected to be made on the basis of the following factors:

- Time: consider sites created at different time periods;
- Type of site manager: AFB, local authority, park, fisheries committee, port, etc.;
- Is the site including in another management tool? If yes, what type of management tool (national park, marine nature park, regional nature park)?
- Organisational structure: is there a dedicated steering committee? For example, in marine nature parks, there is a management board for coordinating activities;
- Creation dynamics: for example, are there significant differences between the sites created by extending a land area into the sea and the sites created directly with marine objectives ;
- Isolated site or existence of cross-site dynamics;

European comparisons could be considered even if they remain small.

2. Build an analysis grid (2/3 months). Several levels of governance will be to be studied:

- The steering committee;
- Peripheral forums involving various civil society or private sector stakeholders;
- Coordination between formal bodies and local, more informal, consultation forums: local influences, conflicts, etc.
- Citizens who could be called upon to take part, whether or not they are familiar with Natura 2000 on the site, who have particular perceptions of it, etc.

A number of themes should be included in this analysis, such as:

- Management of interfaces: interfaces between management tools (parks, reserves, etc.), between Natura 2000 sites, between land-based and marine sites, between public policies;
- Integration of Natura 2000 into public policies: definition of structures responsible for coordinating and exchanging information between these policies; identification of actions;
- Participation of civil society and the private sector, perceptions, extent of ownership of the approach;
- Adaptation of a general system to local specifics: e.g. local influences, managers' room for manoeuvre, knowledge, technical and social skills required;
- Adaptation of a “standard model” to each situations;
- Handling conflict in governance;
- Potential developments for the governance of marine Natura 2000 sites;
- Assessment and coordination (link with Action D3).

3. Collect data through interviews, surveys of site managers and analysis of documentation resources (7/8 months)

4. Analyse data and make initial recommendations, in collaboration with managers (4 months)

5. Finalise and present study results (4 months)

Task 3: Coordinate network of coastal Regional Nature Parks

This task will be implemented by the PNRGM. It consists of performing an assessment of marine Natura 2000 governance approaches within French coastal Regional Nature Parks.

Task 4: Coordinate the integration of Natura 2000 in local governance for the PNRA

This task will be implemented by the PNRA. It consists of characterizing Natura 2000 integration in local governance for the PNRA case.

Dissemination
The recommendations from action A1 will be disseminated through the various channels of the IP: the toolkit, communication, conferences, networking actions including internationally. Translation for international circulation will depend on the level of priority for this topic (given that other countries do not have the same frameworks for the governance of Natura 2000 at sea). Regarding international dissemination, translated factsheets will be made available on the international webpage and presentations on governance work will be suggested within international conferences as part of C.11 and E.4 actions. The MTES will also disseminate the results internationally and to its deconcentrated services and the prefects concerned at national level.

Reasons why this action is necessary:

The European Commission's recent report on the implementation of nature directives (SWD(2016)473 final) states that the French contractual model has enabled a "remarkable improvement" in the acceptance of Natura 2000 in France. Acceptance has progressed, but does that mean improved effectiveness?
Moreover, when a contractual model predominates, the mandatory assessment of the impacts of activities on Natura 2000 site habitats may lead to management measures in the form of administrative authorisations and regulation of uses.
Finally, against the backdrop of budget restrictions, how can we target smooth, effective and legitimate implementation of public policy?

It is therefore necessary to review governance, focusing on its effectiveness in terms of the objective of habitat conservation, in the light of current institutional changes, particularly in territorial restructuring, transferred responsibilities and the creation of the AFB.

4. Constraints and assumptions

The first risk in theory is to fail to find a service provider that has all the required competencies during the call for tenders, given the complex nature of the subject and the absence of clearly defined references in terms of marine protected area governance. Action A1 has been developed with human and social science researchers gathered by the French Scientific Interest Group "HomMer" who have worked on the subject for several years (governance of protected areas, integrated coastal zone management, conflicts in coastal areas, etc.), so this risk should easily be overcome.

Another limiting factor will be the extent to which the relevant authorities and site managers recognise the usefulness of this action. In some cases, the results of this preparatory action may raise questions about the relevance of current local, or even broader, governance systems. Change in governance requires acceptance of the conclusions by the relevant stakeholders, and changing current models can take time and require regulatory modifications.

The objective of this action is therefore to put forward recommendations for discussion with the various stakeholders in order to suggest implementation of some of them under Action C1, as a voluntary initiative.
This action is concerned by interactions between land and sea waters through the governance and will be linked with WFD.

5. Expected results :

- Marine Natura 2000's governance system will have been characterised based on the implementation of a common analysis grid on 15 to 20 sites across the 2 France's marine biogeographical regions;
- At least 10 recommendations will have been shared by the consulted stakeholders (especially the State and the Natura 2000 site managers);
- At least 5 types of concrete actions to be implemented under Action C1.

As part of the action, as well as for the whole project, factsheets will be produced to provide feedback on the experience gained in the action implementation (in this case governance). The *bateau bleu* project illustrates this type of factsheet.
http://www.aires-marines.fr/Media/Agence/Fichiers/Documents-techniques/Mise-en-aeuvre-de-l-operation-Bateau-bleu-pour-la-reconnaissance-de-professionnels-engages-dans-le-parc-national-de-Port-Cros
This two-page format has proven very efficient in terms of dissemination towards managers and stakeholders and will be used as an inspiration for the project. Without getting rid of reports, in general, the project will favour the development of light deliverables as much as possible to facilitate dissemination.

6. Cost estimation:

AFB:
Coordination of the action: preparation and management of call for tenders
- Human science manager, over 2 years, 125 days €31,250
- 5 trips: €3,000

External assistance:
- A multi-disciplinary team over 2 years (estimate based on consultation with human science experts): €200,000

total AFB: **€234,250**

PNRGM:
- Personnel costs — total PNRGM: **€5,860**

PNRA :
- Personnel costs €10,421
- Travel (train and hotel) €331
- Catering costs for 1 forum and 2 workshops with stakeholders (30 attendees-local governance support) €1,200

total PNRA: €10,421

Total under Action A1: €250,530

Phase 1 costs:
AFB: €250,647.5
PNRA: €11,150
PNRGM: €6,270

7. Deliverable products:

31/12/2018: Methodological report: sample proposal, analysis grid, working methods/analysis tools, data reporting format;
31/12/ 2019: PNRGM's report on coastal Regional Nature Park governance;
31/12/ 2019: PNRA's report on the roadstead of Brest Natura 200 site;
31/12/ 2019: A final analysis report with recommendations for Action C1.

8. Milestones:

31/03/2018: launch of the scientist assistance external consultation
31/03/2018: recruitment of the AFB human science manager
31/12/2018: organisation of the 1st PNRA workshop
31/12/2019: organisation of the scientists' workshop

ACTION A2 : Develop strategy and methodologies for assessing habitat conservation status

SUBACTION A.2.1 – Develop an assessment strategy for marine habitats

2. Beneficiary responsible for implementation:
1-The AFB is responsible for this sub-action. Within AFB, it will involve the "Natural Heritage" mixed service unit.

3. Description (what, how, where, when and why):
This sub-action aims to develop an assessment strategy for marine habitats, and therefore plays a coordination role for sub-actions under Action A2 in preparation for Action D1. It will also focus on updating the marine habitats manual, the first version of which dates back to 2004 and was created by the former natural heritage department of the MNHN. This habitats manual is an interpretation guide for the marine habitats listed in Annex 1 of the Habitats Directive. For the habitats targeted by the project, it contains 45 versions ("elementary" habitats) of the directive's habitats ("generic" habitats).

The habitats concerned are habitats 1110 to 1170 and habitat 8330 for two marine biogeographical regions: the Atlantic and Mediterranean marine regions.

For ecological relevance and monitoring and management consistency purposes, these habitats are broken down and divided into the following groups in order to define the strategy:

- Zostera seagrass beds (part of 1110)
- Maerl beds (part of 1110 and 1160)
- Other subtidal sedimentary habitats (part 1110 and 1160)
- Intertidal sedimentary habitats (part of 1130 and 1140)
- Posidonia beds (1120)
- Coastal lagoons (1150)
- Honeycomb worm reefs (part of 1170)
- Other intertidal reefs (part of 1170)
- Coralligenous reefs (part of 1170)
- Other subtidal reefs (part of 1170)
- Deep-water coral (part of 1170)
- Submerged or partially submerged caves (8330)

These groups were also created to generate better synergy with the monitoring programme and are covered in the project's various actions (A2, A4, D1).

This sub-action will be organised around two pillars:

- The capitalisation exercise – the update of the habitats manual. This update relies on bibliographic research and consultation with experts.
- The habitat conservation status assessment process, which will be carried out in 2018 as part of the reporting under Article 17 of the Directive (reporting before the end of the first half of 2019). This process will rely on consultations with experts and will be strengthened to develop a strategy for the next assessment cycle (2024).

To develop the assessment strategy, four workshops will be organised (one workshop per biogeographical region during the last quarter of 2018, then in the first semester), with the experts concerned (including beneficiaries) and Natura 2000 site managers. By taking on their results, they will facilitate the integration of the work of the beneficiaries involved in Action A2 into the long-term strategy for assessing the Directive's marine habitats (indicators to be used, related protocols, monitoring network identifying priority sites, monitoring costs, etc.), which will include an action plan for the 5 following years.

Prior to these workshops, the updated habitats manual will provide an inventory of existing assessment and data consolidation tools. This work will contribute to the organisation of habitat data (linked to Actions and F3)

The work will be supported by permanent AFB staff ("Natural Heritage" mixed service unit marine Habitats Directive manager and manager in charge of the benthic habitats portion of the monitoring programme) to facilitate the involvement of experts from the scientific community working on marine habitat conservation status assessments under the Habitats Directive, the WFD and the MSFD.

This sub-action concerns the project's entire geographical scope of action.

This sub-action will take place over the first three years of the project, in Phase 1 and 2, and will end in late 2020.

Reasons why this action is necessary:
Conservation status assessment is the cornerstone of the directive as it relates to its ultimate purpose. In addition, the system for managing French protected areas places assessment at the heart of management. It is the key management tool used for decision-making and will be the subject of D1. The sub-action is therefore necessary for preparing all the project's assessment work and in particular for coordinating the project's preparatory actions.

This sub-action is also essential for promoting synergies with the monitoring and assessment strategies of the other relevant European directives (MSFD and WFD). The sub-action assumes that synergies will grow, especially following the European Union decision (2017) which revised the definition of good environmental status.

As for the habitats manual, it is a key tool for understanding the Directive that benefits managers and all stakeholders. It needs to be updated to incorporate new knowledge and specific aspects of the network, such as offshore habitats, and to facilitate consistency with the 2016 updates to European marine habitat types (EUNIS).

4. Constraints and assumptions
No major obstacles are expected for this sub-action. It will partially depend on the progress made by all the beneficiaries concerning habitat assessment. The sub-action is based on the idea of using the best available knowledge and does not presume to resolve all scientific issues related to habitat assessment. The premise is to move forward from the current situation, where habitat assessment mainly relies on the opinions of experts.

This action is concerned by interactions between land and sea waters through the assessment of habitats and will be linked with WFD.

When possible videoconferencing will be set up.

5. Expected results :
1. Organisation of two workshops per biogeographical region on the assessment of habitats of Community interest with scientists and managers.
2. Update of the marine habitats manual, available in an interactive version.
3. An assessment strategy for marine habitats in Metropolitan France by habitat or group of habitats:
    - The network of priority sites
    - Reference indicators and protocols common to the MSFD and recommendations for their implementation
    - Complementarity with the MSFD monitoring programme

6. Cost estimation: €172,100

Personnel costs: €151,500, working hours (3 years) for the scientific manager.
Working hours for permanent staff (cost not accounted for under the project): 90 days for the “Natural Heritage” mixed service unit marine Habitats Directive manager and 60 days for the manager in charge of the benthic habitats portion of the MSFD monitoring programme.

Travel: €5,400, 8 trips for workshops and meetings with scientific experts.

Consumables: €8,000, organisation of four workshops for 40 people (room, equipment rental, meal expenses).

Other costs: €7,200 covering travel costs for three experts per workshop.

Phase 1 costs:
AFB: € 119,519

7. Deliverable products
31/12/2020: report on the update of the habitats manual and on the development of the assessment strategy.

8. Milestones:
31/01/2018: recruitment of the AFB “Natural Heritage” mixed service unit scientific manager.
31/12/2020: publication of the assessment strategy and habitats manual.

SUBACTION A.2.2: Developing methodologies for the assessment of Atlantic habitats conservation status

2. Beneficiaries responsible for implementation:

1-AFB will follow-up indicators developments to carry out monitoring within sites, validate and disseminate the methodologies (department for Marine Nature Parks, National Parks and Territories and the mixed service unit Patrinat).
6-IFREMER, will develop methodologies for seagrass beds, intertidal reefs, subtidal reefs and deep-sea reefs.
7-IMA, will work on the adaptation of methodologies for the southern variations of subtidal reefs and underwater caves.
9-PNRA will develop methodology for maerl beds.
11-PNRGM will develop methodology for gorgogian subtidal reefs.
12-RNF will coordinate the involvement of sites managers for the assessment of seagrass beds and sediment intertidal habitats, prior to the integration within the Natural Heritage Observatory.

3. Description (what, how, where, when and why):
What

The subaction will prepare, for the of Atlantic habitats, the monitoring action (D.1) to improve the evaluation of the conservation status of habitats for the bioregion.

Nota bene: one pilot site of IFREMER regarding seagrass beds is located in the Mediterranean, but it has been included in this subaction as it is part of a set of pilot sites located in the Atlantic.

How and where

1-AFB scientific officer, with the support of permanent staff from UMS Patrinat and as part of the Natura 2000 scientific coordination, will ensure close collaboration with beneficiaries for the validation and dissemination of methodologies through the reference portal (resource is allocated to A.2.1 subaction).

The Channel and North Sea officer will be respectively in charge of supporting the collaboration with sites managers and the dissemination of results. The PNM officers (bassin d'Arcachon, estuaire de la Gironde et mer des pertuis, Iroise and estuaries picards et mer d'Opale) will ensure uptake of the methodologies to implement follow-up monitoring actions within its sites. They will be in charge in priority of one habitat for which they have a high responsibility (respectively seagrass beds, intertidal reefs, subtidal reefs and sandbanks).

6-IFREMER will develop extensive methodology for the assessment of seagrass bed (1110-10, addressing the two species: *Zostera nolteii* and *Zostera marina*). It will be deployed over a network of representative sites in the Atlantic (four) and one in the Mediterranean. Depending on data and means available two optional sites could be added (see figure 1). It will combine various approaches to be able to characterise the conservation status of the habitat at the biogeographic level: ground observation, aerial surveys with hyperspectral camera, historical data and habitat modelling. This will address all parameters of the conservation status: surface, distribution area, structure and functions. In each monitoring site, it will involve local staff of IFREMER and the work will contribute to implement consistent monitoring in the different sites. The sites have been selected due to their responsibility for the habitat and to represent the range of variations over the distribution area. The same approach will support work of the C.4 actions for the analysis of pressures on this habitat and the D.1 action for monitoring.

Regarding intertidal reefs, IFREMER will be involved in two aspects:

- Implementing a methodology for the assessment the surfaces of intertidal reefs with macro-algae cover (1170 – 1, 2 and 3) using remote sensing imagery at low tide (new Pléiades imagery). The approach intends to develop an easily replicable analysis, in order to follow the surface evolution of this habitat. Imagery will be complemented by ground data collected by sites managers. Two pilot sites in the Atlantic are targeted.
- Studying the variations of the intertidal reefs habitat in the Southern part of the biogeographic region. It will target intertidal boulder reefs and platforms reefs and will provide adapted indicators and protocols for the habitats. The action will be performed by the Anglet branch of IFREMER (Basque Country). The Basque Country is influenced by the Mediterranean climate and therefore the habitats can present different facies and associated species.

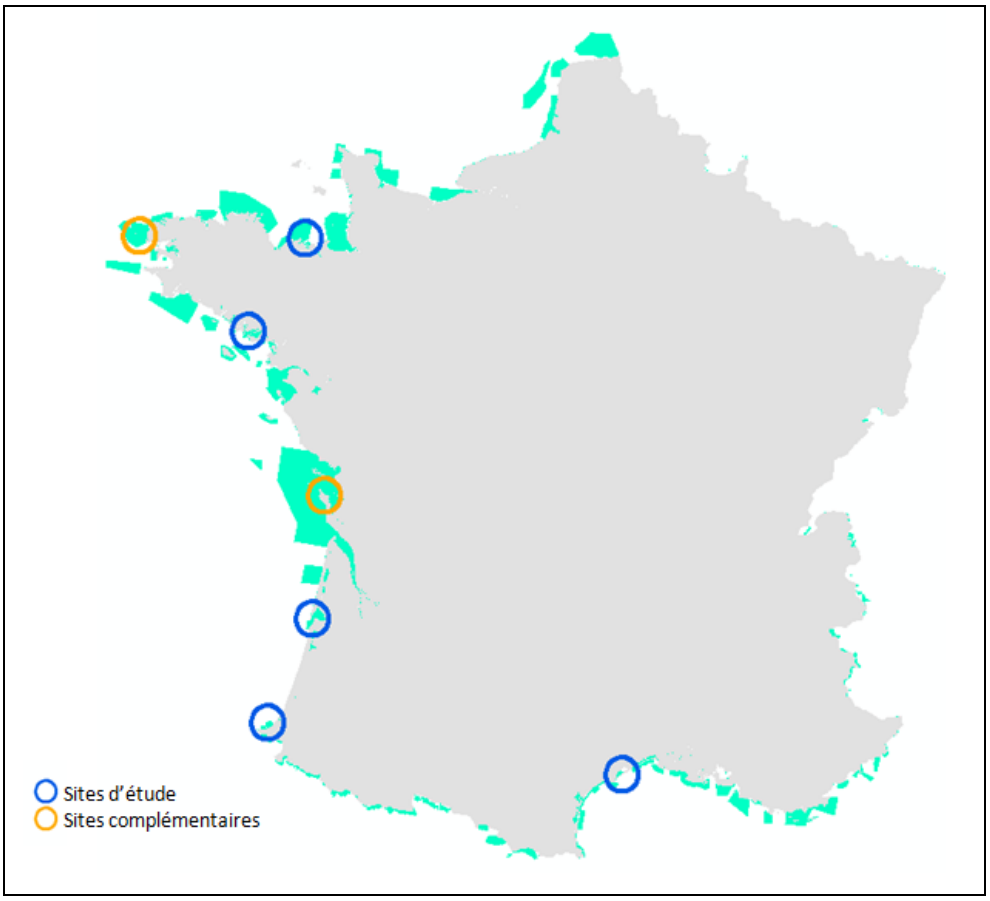


Figure1: monitoring sites (in blue) used by IFREMER to develop the seagrass methodology (the two sites in yellow are optional)..

IFREMER will develop a modelling approach to assess the spatial distribution of subtidal reefs with laminarian kelps. It will concern sites located in Brittany sites, which host the most important area for this habitat in Europe. The approach is particularly helpful to address the surface evolution of the habitat but also its structure and functions.

Last, IFREMER and its deep-sea laboratory will develop a monitoring strategy and a methodology for the assessment of deep-sea reefs conservation status. Complementary to functional indicators, the approach will seek providing surface information which is generally not available with traditional techniques providing station information. To this end, new data will be collected and to prevent this sensitive habitat (hosting coral reefs) from damages, non destructive techniques will be used: acoustic and optical imagery of the seabed in combination with discrete samples collected with a light submarine device. The relevance of the hyperspectral data in the deep-sea environment will be tested.

Data acquisition will be done during a series of offshore oceanographic campaigns. A dedicated campaign will target an offshore Natura 2000 site (probably located within sector A or B, see map of section B2b; the campaign will be funded by IFREMER as a complementary action) and an opportunistic approach will be favoured to regularly collect data during the future offshore campaign, using light techniques such as Remotely Operated Vehicle (ROV) and Autonomous Underwater Vehicle (AUV).

The combination of historical data, discrete samples and surface data will enable to implement statistic habitat modelling and to provide predictive habitats maps at the Bay of Biscay scale. In addition, photos and videos will be used to produce 2D and 3D habitats mosaic.

As part of this subaction, a deep-sea observatory will be prepared for future development in the D.1 action. At the end, it will consist in a permanent deep-sea reefs monitoring device installed at a depth around 1,000 metres. Prior to the development in D.1, the different component of the observatory will be assembled and the submersion will be tested in lower depths to guarantee maximum reliability.

7-IMA will develop adaptation of methodologies for the southern variations of two habitats: subtidal reefs and underwater caves. Within SACs of the Basque Country, the work will require fields studies, nautical means with divers and a ROV, sample of vegetation cover will be extracted and analysed with external assistance.

9- and 11- PNRA and PNRGM will be involved in the development of the Natural Heritage Observatory within their sites.

The PNRA will also develop methodology for the assessment of maerl beds (1110-4) as a reference site for this habitat. It will require external assistance to involve scientists experts for this habitat.

PNRGM will also develop a methodology for the assessment of conservation status of the reefs habitats and its rare gorgonian facies.

12-RNF will involve natural reserves and other sites managers in charge of Natura 2000 habitat management in the development of two components of the Natural Heritage Observatory for the two following habitats: seagrass beds and sediment intertidal habitats. The Observatory is a network evaluation tool based on local monitoring by site managers.

RNF will organise collaborative work to provide means to sites managers to assess the conservation status of those habitats (10 sites will be targeted for each habitat). External assistance will be used for scientific support to develop adapted protocols for each habitat and to work on data analysis (biostatistics). IFREMER will also provide support to feed this work with the methodology developed on seagrass beds. An annual workshop for each habitat will be organised to share experience between managers and scientists and an annual seminar for the integration of both components into the Observatory.

A full time additional officer will be recruited by RNF for its actions also supported by a permanent project manager.

When

For AFB, IMA, PNRA, PNRGM and RNF, the subaction will be carried out in phase 1 (methodologies for the main habitats).

IFREMER work will be developed over phases 1 and 2.

Reasons why the subaction is necessary

This subaction as well as the whole A.2 action is necessary for the development that will be carried out in action D.1.

Standard methodologies for the assessment of conservation status of habitats are lacking and several parameters defining the conservation status such as habitats functions and structure are require further investigation. Adapted protocols are need for habitats that can be monitored by sites managers. The work proposed in the subaction is based on the analysis of the existing protocols, indicators and methodologies that have been identified in the monitoring programme of the MSFD.

Seagrass beds will benefit from important means within this action and the project. This follows a strong demand from sites managers due to the sensitivity of this habitat and the high level of interaction with users and activities.

4. Constraints and assumptions

The subaction assumes that adaptation might be necessary and will be possible to ensure full complementarity with the MSFD. Scientists involved in the subaction, AFB and the MTES are also deeply involved in MSFD work and will ensure results transfer and coordination. Research work is part of the subaction and might lead to uncertainties in the result. Similarly to the whole project, the subaction does not target a holistic approach, but aims at progressing with the best knowledge available and gained.

Regarding RNF, one assumption is that natural reserves within Natura 2000 sites represent interesting cases studies due to a higher level of protection. The Observatory also relies on a resource effectiveness assumption as a monitoring networks. RNF work entails several meetings, and when possible videoconferencing will be set.

Deep-sea oceanographic campaigns depends on the selection mechanism of the French Oceanographic Fleet for offshore campaigns, which relies on call for projects and assessment by the national offshore fleet commission; of which IFREMER takes part.

This action is concerned by interactions between land and sea waters through the assessment of habitats and will be linked with WFD.

5. Expected results:

At the end of phase 1, the following habitat will benefit from a validated methodology to assess their conservation status:

- Southern area variations of subtidal reefs and underwater caves.
- Maerl beds by PNRA.
- Subtidal gorgonian reefs by PNRGM.
- Seagrass beds and intertidal sediment, adapted for managers implementation by RNF.

At the end of phase 2, the following habitat will benefit from a validated methodology to assess their conservation status or some parameters (IFREMER):

- Seagrass beds for an overall assessment over the distribution area.
- Surface of intertidal reefs with macroalgae cover.
- Subtidal reefs with laminarian kelps.
- Southern area variations of intertidal reefs.
- Deep-sea reefs.

The modelling approaches will result in habitats evolution maps for seagrass beds and subtidal reefs with laminarian kelps. And for deep-sea habitats, a predictive map of the

deep-sea reef habitat will be produced for the whole Atlantic region (the habitat is located in the Bay of Biscay area).

In terms of networking and dissemination, the following meetings will be convened:

- 4 annual workshops managers/scientists for seagrass bed and intertidal sediment habitats by RNF (15 persons each).
- 2 annual seminars for the integration of work in the Natural Heritage Observatory by RNF (30 persons each).

6. Cost estimation: €1,867,213

1-AFB: €83,200

Personnel costs: €80,000
Working time of Channel and North Sea and PNM officers (BA, EGMP, I and EPMO), for the uptake of monitoring protocols and indicators and dissemination to sites managers. Working time of the scientific manager is accounted in subaction A.2.1.
Travel and subsistence: €3,200€, local travels for the PNM officers and marine subregion travels for the Channel and North Sea officer.

6-Ifremer: €1,427,961
The subaction includes important cost for IFREMER. This is partly due to important investments in terms of equipment necessary for the whole project.

Personnel costs: €610,137
Permanent personnel, except where specified.
For coastal habitats:
- 54 days per phase for the coastal habitats officer (€332 per day).
- 64 days in phase 1 of benthic ecology researcher (€376 per day).
- 45 days in phase 2 of coastal ecology researcher (€376 per day).
- 18 days in phase 2 of subtidal reefs researcher (€376 per day).
- 94 in the two phases of benthic ecology engineer (€340 per day).
- 45 days in phase 2 of coastal ecology engineer (€340 per day).
- 210 days in phase 2 of coastal habitats engineer (€289 per day, additional).
- 26 days in phase 2 of subtidal reefs engineer (€340 per day).
- 151 days in phase 2 of post-doctoral fellow for seagrass spatial ecology (€304 per day, additional).
- 151 days in phase 2 of post-doctoral fellow for seagrass spatial modelling (€304 per day, additional).
- 151 days in phase 2 of post-doctoral fellow for subtidal reefs (€304 per day, additional).
- 50 days per phase for biology technician (€269 per day).
- 151 jours en phase 3 de technicien pour le tri des espèces (€209 per day, personnel additionnel).

For deep-sea habitats:
- 110 days per phase for the deep-sea habitats officer (€332 per day).
- 36 days per phase of deep-sea habitats researcher (€376 per day).
- 66 days per phase of deep-sea habitats engineer (€340 per day).
- 101 days in phase 2 of deep-sea habitats engineer (€289 per day, additional).
- 68 days per phase of deep-sea habitats technician (€269 per day).
- 151 days in phase 2 of biology technician (€209 per day).
- 10 days per phase of project assistant (€289 per day) for the deep-sea environment.

Travel and subsistence: €34,000 (travel for field work including oceanographic campaigns, €17,500 and €10,000 for phases 1 and 2).

External assistance: €310,024

- €125,000 for aerial surveys in pilot sites for seagrass habitat mapping using the hyperspectral camera acquired for the project.
- €118,804 for acquisition and processing of remote-sensing imagery. IFREMER benefits from preferential rates for imagery purchase within its framework agreement with the National Centre for Space Studies (*Centre national d'études spatiales* -CNES).
- €66,220 for biological analyses of benthic samples in phase 2. The project will collect extensive sample from the various habitats and IFREMER use to outsource such volumes of analysis.

Equipment: €447,000

- €307,000 for the purchase and assembling of the various part of the deep-sea observatory. The equipment is of high technicality considered that it will be permanently submerged and at a depth around 1,000 metres. The assemblage of the various components is also very complex to guarantee maximum reliability. The cost estimation is based on a quotation and is consistent with previous experience of IFREMER regarding the submersion of such devices in the mid-Atlantic ridge.
- €140,000 for the purchase of the hyperspectral camera. The cost estimation is based on a quotation and is consistent with the market rates. The camera will be used both for seagrass habitats and for subtidal reefs. It will also be used in A.2.4 subaction and in D.1 action.

Consumables: €26,800 (hardware and lab material).

7-IMA: €155,589

Personnel costs: €35,315

- 32 days of professional divers (387€ per day)
- 60.5 days of engineers for habitat monitoring and project management (€334 per day).
- 6.5 days of the director for expertise and coordination (€419 per day).

Travel and subsistence: €3,140

For diving and ROV boardings, local travel and national meetings.

External assistance: €106,104

- Divers certification: €2,200 (prorated calculation of diving days for the project: one third).
- Training to maintain divers qualification: €5,504 (prorated calculation of diving days for the project: one third). At the depths that will be explored here, professional divers must be up to date with their Class IIB certification, and training for maintaining the qualifications are going to be compulsory in France for this class.
- Chartering costs for professional diving vessel for subtidal reefs and underwater caves: €36,400 (€29,900 for the reefs, €6,500 for the caves).
- Use of a ROV for subtidal reefs and underwater caves: €44,000 (€33,000 for the reefs, €11,000 for the caves).
- Sample analysis: 18,000€.

Equipment: €9,100

- Bibliography for sample identification: €250.
- Renewal of mapping software license: €2,700.
- Field equipment (camera, lights, filters, sub boxes): €4,100.
- Diving equipment (pressure regulator, dive computer, stab jacket): €1,650.
- Pad: €400.

Consumables: €730

- Bottling material: €390.
- Protection equipment (for mobile, pad…): €100.
- Diving material revision: €240.

Other costs: €1,200 (project results valuing in various meetings).

9-PNRA: €15,141

Personnel costs: €4,150

- 22 days of the additional project manager (205€ per day).

Travel and subsistence: €631€ (2 travels in France for workshops).
External assistance: 10 000€ (implementation of the maerl protocol).

11-PNRGM: €17,310
Personnel costs: €16,010
- 47 days of the additional task officer (205€ per day).
- 25 days of the additional project manager (255€ per day)

Consumables: €300 (fuel for boat)
Other costs: €1,000 (organisation of meetings with scientists).

12-RNF: €168,012
Personnel costs: €117,308
- 388 days of the additional project officer (234€ per day).
- 104 days of the permanent project manager (296€ per day).

Travel and subsistence: €17,900
- 22 travels at 350€:10 for pilot monitoring sites and 6 for workshop attendance (2 persons).
- 6 five days travels (1 700€ each).

External assistance: €18,000 (scientific support for seagrass bed, sediment habitats and biostatistics €6,000 each).
Equipment: €6,000
- Hardware and softwares: €5,500.
- Field equipment (camera and GPS): 500€.

Consumables: €6,404
- Field and office material: 800€
- Catering: €5,604, 4 workshops (15 persons) and 2 seminars (30 persons and 2 days).

Other costs: €2,400 for accommodation during seminars (30 persons).

Phase 1 costs:
AFB: €89,024
Ifremer: €963,116
IMA: €166,480
PNRA: €16,200
PNRGM: €18,522
RNF: € 179,773

7. Deliverable products:

31/12/2019: first trench of methodologies for the assessment of Atlantic habitats conservation status.
31/12/2021: second trench of methodologies for the assessment of Atlantic habitats conservation status.
31/12/2021: seagrass conservation status map.

8. Milestones:
31/12/2021: validation of the deep-sea observatory material.

Dependence on complementary funds: the activities of Ifremer on deep-sea habitats within this action are dependent on the offshore campaign that will be realised under the complementary fund provided by the UMS French oceanographic fleet. Ifremer has applied in September 2017 to carry out the offshore oceanographic campaign in 2019.

The subaction will be supported by the habitats assessment activities funded by the Water Agencies, however the subaction is not dependent on the fund

SUBACTION A.2.3: Developing methodologies for the assessment of Mediterranean habitats conservation status

2. Beneficiaries responsible for implementation:

1-AFB will follow-up indicators developments to carry out monitoring within sites, validate and disseminate the methodologies (department for Marine Nature Parks, National Parks and Territories and the mixed service unit Patrinat).
3- Commune d'Agde will test corraligenous reefs indicators.
4- Tour du Valat (TDV) foundation will update the methodology for the assessment of Mediterranean lagoons (1150-2)
5-GIS Podisonies will develop methodologies for assessing the conservation status of Meditteranean habitats.

3. Description (what, how, where, when and why):

What
The subaction will prepare, for the of Meditteranean habitats, the monitoring action (D.1) to improve the evaluation of the conservation status of habitats for the bioregion.

How and where

1-AFB scientific officer, with the support of permanent staff from UMS Patrinat and as part of the Natura 2000 scientific coordination, will ensure close collaboration with beneficiaries for the validation and dissemination of methodologies through the reference portal (resource is allocated to A.2.1 subaction).
The Meditteranean officer will be respectively in charge of supporting the collaboration with sites managers and the dissemination of results. The PNM Cap Corse officer will ensure uptake of the methodologies to implement follow-up monitoring actions within its sites.

3- Agde will carry out monitoring of the coralligenous reef area targeted by the strong proction area planned in C.6 action. Monitoring will be implemented according to the methodology developed by GIS-P and will provide a baseline situations for this habitat prior to the protection. Agde will provide regular feedback to GIS-P regarding the operational feasibility of the protocols. The monitoring will require nautical means (existing one) and diving.

4- TDV will support sites managers for the implementation of the national methodology for the assessment of coastal lagoons (1150-2). This methodology has been elaborated by the former natural heritage service of the MNHN (now UMS Patrinat), but needs to be groundtruthed by managers. The field work will lead to an update of the methodology in collaboration with the UMS Patrinat by the inclusion of feedback factsheets.
Following the field work, a workshop will be organised to prepare the updates in collaboration with sites managers and other stakeholders.

5-GIS-P will develop an ecosystemic approach to perform the assessment of the various parameters defining the conservation status of habitats. It will target four habitats in priority: Posidonia oceanica seagrass beds (1120); infralittoral rock with photophilious algae (1170-13); coralligenous formations (1170-14) and submerged caves (8330). This is based on existing methodologies that have been tested in Marine Protected Areas but it requires further developments and adaptations. For those habitats, standard indicators and protocols will be produced, as well as adapted version for the implementation by sites managers. It will include field work (diving) in Natura 2000 sites and lab work.
Knowledge synthesis will be carried out for the particular facies of Posidonia barrier reefs. It will use existing data (LIDAR - light detection and ranging, and high resolution data from

aerial surveys) and it will address two major functions of this habitat: nurseries for fish species and erosion prevention.
Two workshops addressing those habitats will be convened to involve scientists in the development and disseminate results.
Starting on phase 2, GIS-P will prepare methodologies for habitats that are less considered in monitoring programmes to increase the capacity to assess their conservation status. Those habitats are the followings: 1110 (1110-5, 6, 7, 8 et 9), 1140 (7, 8, 9 et 10), 1160 (1160-3) and 1170 (offshore reefs).
GIS P will also prepare methodology with the assessment of sandbanks carried out in collaboration with PNRC in phase 1.
For all of this work, GIS Posidonie will involve scientists of its network through external assistance. GIS P will be highly involved in trainings (C.2) to build on those results and transfer to the sites managers and other scientists.

When
The subaction will be carried out mainly in phase 1 (methodologies for the main habitats). AFB and Agde will be involved only in phase 1. GIS-P will continue on adapted methodologies for other habitats and for the preparation of the Posidonia barrier reefs summary book as well as a workshop on this topic.
Although, TDV have allocated few resources in phase 3 and 4 for updating of the methodology, the subaction is considered to be finished at the end of phase 2.

Reasons why the subaction is necessary
This subaction as well as the whole A.2 action is necessary for the development that will be carried out in action D.1.
Standard methodologies for the assessment of conservation status of habitats are lacking and several parameters defining the conservation status such as habitats functions and structure are require further investigation. Adapted protocols are need for habitats that can be monitored by sites managers. The work proposed in the subaction is based on the analysis of the existing protocols, indicators and methodologies that have been identified in the monitoring programme of the MSFD.

4. Constraints and assumptions
The subaction assumes that adaptation might be necessary and will be possible to ensure full complementarity with the MSFD. Scientists involved in the subaction, AFB and the MTES are also deeply involved in MSFD work and will ensure results transfer and coordination. Research work is part of the subaction and might lead to uncertainties in the result. Similarly to the whole project, the subaction does not target a holistic approach, but aims at progressing with the best knowledge available and gained.
Work of TDV depends on involvement of sites managers and stakeholders. It has been included with the assumption that there is a strong demand for this priority habitat undergoing high level of interaction with human activities.
This action is concerned by interactions between land and sea waters through the assessment of habitats and will be linked with WFD.

5. Expected results :

At the end of phase 1, the following habitat will benefit from a validated methodology to assess their conservation status:

- Posidonia oceanica seagrass beds (1120); infralittoral rock with photophilious algae (1170-13); coralligenous formations (1170-14) and submerged caves (8330), by GIS-P.
- Mediterranean lagoons (1150), by TDV.

One report will be produced by each beneficiary and the AFB UMS Patrinat will produce factsheet for the validated methodologies. The GIS-P will include the monitoring network strategy for those habitats.
Three workshops will be organised:

- One ecosystemic management workshop for the conservation status assessments of Mediterranean habitats (2 days), by GIS-P.
- A workshop for stakeholders involved in the assessment of Mediterranean lagoons, by TDV.
- Workshop dedicated to Posidonia barrier reefs summary book, to disseminate the results to stakeholders (sites managers, scientists, marine users and decision-makers), in phase 2.

GIS-P will also produce:
- Methodology for the assessment of sandbank habitat in PNRC sites (for D.1 action in phase 1).
- Baseline information for future assessments of other Mediterranean habitats: 1110 (1110-5, 6, 7, 8 et 9), 1140 (7, 8, 9 et 10), 1160 (1160-3) and 1170 (deep-sea reefs), in phase 2.
- a Posidonia barrier reefs summary book (phase 2).

For relevant habitats, all methodologies will be the standard one for both HD and MSFD.

Agde will produce a factsheet including feedback on the implementation of the protocol for coralligenous reefs and results of the baseline situation in terms of conservation status of this habitat in Posidonies du cap d'Agde site prior to the creation of a strong protection area.

6. Cost estimation: €418,668

1-AFB: €24,200
Personnel costs: €22,500
Working time of Meditteranean and PNM Cap Corse officers for the uptake of monitoring protocols and indicators and dissemination to sites managers. Working time of the scientific manager is accounted in subaction A.2.1.
Travel and subsistence: €1,700€, local travels for the PNMCC officer and marine subregion travels for the Meditteranean officer.
s
3-Commune d'Agde : €16,480
Personnel costs: €16,480
For diving, based on a divers daily-rate of €515 (32 days), which includes two divers (senior manager and technical staff with the respective daily rates 315€ and 200€).

4-Fondation Tour du Valat: €21,607
Personnel costs: €15,169
Working time of the project manager (10 days at €310 on average) and PACA officer (52 days at €233 on average).

External assistance: €2,438 (for the working time of the Occitanie and Corse officers).

Consumables : €1,600
1 workshop for 50 attendees (room rental, catering, travel).

Equipment : €2,400 (hardware)

5-GIS Posidonie : €325,400
Personal costs: €209,600
- Working time of research engineer (€250 per day, permanent): €206,000.
- 1 internship : €3,600.

Travel and subsistence: €27,400€
- €4,000 for meetings.

- €23,400 for field work.

External assistance: €47,100 for the involvement of scientists of the GIS network.

Equipment : €13,000 (hardware, and field equipment : camera, GPS and for diving).

Consumables: €19,300
€5,000:organisation of two workshops.
€14,300: small field material, lab stuff, diving material and petrol for the car and the boat.

Other costs: €9,000 (reports publishing).

Phase 1 costs:
AFB: €25,896
Agde: €17,634
GIS-P: €295,320
TDV: €16,123

7. Deliverable products:
31/06/2021: synthesis of methodologies for the assessment of Mediterranean habitats conservation status.
31/12/2021: Posidonia barrier reefs summary book

8. Milestones:
31/12/2019: first tranche of methodology for the assessment of Mediterranean habitats.
31/12/2021: second tranche of methodology for the assessment of other Mediterranean habitats.

Dependence on complementary funds: this subaction will be supported by the habitats assessment activities funded by the Water Agencies, however the subaction is not dependent on the fund.

1. SUBACTION A.2.4 – technological developments for habitat monitoring

2. Beneficiary responsible for implementation:
1-AFB, marine environment department of the public policy support department

3. Description (what, how, where, when and why):
What?
This sub-action will test four innovative habitat mapping technologies that have recently been developed:

- hyperspectral remote sensing
- automated classification of sea bed types using sonar
- geolocation and underwater mapping for divers
- use of underwater drones for greater depths

The action aims to test them together, assess them on a Natura 2000 site and incorporate them into the methodological discussions under Action A2.

These innovative technologies have been developed to meet the needs of replicability, automation and performance required for deploying harmonised area mapping methods on a national level. Moreover, these technologies complement each other and will make help advance towards a comprehensive range of monitoring resources in MPAs: airborne remote sensing for supralittoral and mediolittoral zones and sonar remote sensing for infralittoral and circalittoral zones and diving equipment for field verification. This sub-action also plans to check the feasibility of integrating these sensors onto a single underwater drone type vehicle to improve the depth of surveys.
These tools have now moved on from the proof of concept phase and have already been implemented separately in R&D projects and public-private partnerships. The experiments envisaged under this sub-action therefore aim to test the maturity of these technologies, to assess their reliability and cost, and define the conditions their use in operations.
An objective of the subaction is to involve the private sector through R&D activities. Financial contribution with private companies will be sought for the development of some tasks of the subaction (see below).

Task 1: Test airborne hyperspectral imaging for mapping foreshore habitats and shallow areas (up to 20m depth).

This technology involves processing hyperspectral aerial images. At these depths, it can identify water, the sea bed and the type of sea bed (sand, rocks, plants, algae, coral). It will be based on recent experiments performed on reef foreshores in Normandy and on the entirety of French reef areas in the Indian Ocean since 2010 (as part of R&D work coordinated by the AAMP with private companies and IFREMER). This task aims to adapt the processing system already used for Indian Ocean habitats to the habitats targeted by the project.

Task 2: Automated classification of sea beds using sonar data.

A new automated method for detecting sea bed types has been developed. It uses data from a sonar sensor attached to the bottom of a ship and automatically analyses the acoustic response from the sea bed in order to characterise each type. The system automatically detects the characteristics of the signal and classifies the sea bed, distinguishing between rock, sand, mud and vegetation.

Task 3: Optimise diving equipment to include positioning and facilitate the spatialisation of data on habitats collected by divers.

The aim of this task is to develop and test a precise system for individual geolocation, navigation and mapping for a scientific diver. The goal is for these functions to be performed automatically by the equipment carried by the diver, and the user will be able to configure the interface so that he or she can adapt data entry forms to the relevant habitats and protocol. The navigation system will use AUV (Autonomous Underwater Vehicle) sensors and will be fully integrated into an underwater console carried by the diver.

Task 4: Integrate sensors onto an underwater drone

In order to extend the capacity for inspection of sea beds to 100m without onerous budget requirements, this task will test integration of the sonar sensor and hyperspectral camera onto a lightweight underwater drone that can be deployed from a jetty or small vessel. This underwater drone technology is used for offshore exploration and can carry a range of payloads. Usage procedures developed should comply with the nautical, human and logistics capacities available in MPAs.

Task 5: Merge data

This task aims to optimise coordination between the four mapping technologies mentioned above to provide MPA managers with a complete mapping solution for the benthic zone from 0 to 100m in depth.

How?
The four technologies will be tested on the same Natura 2000 site for the purposes of comparison and merging of the data from the various technologies. The site should present environments that are sufficiently diverse, and include seagrass, maerl, sand, mud and rock habitats.

There are companies that specialise in these 4 technologies that could perform the tasks described via R&D partnerships (assuming co-funding of at least 20% from the other party). This is the case for tasks 1 and 5, for which companies have already applied. The other tasks will be performed through calls to tender.
The sub-action will be coordinated by the AFB marine technologies manager and temporary 6-month assistance will be planned at both the beginning and end of the action for defining specifications and providing support for processing and presenting data. In 2019, a course will be run to support service providers studying data merging. Moreover, the companies selected will be assisted by benthological experts and the relevant Natura 2000 area managers in completing specification phases and developing plans for site sampling, comparing data and validating results.
Tasks 1 and 4 will use the hyperspectral camera acquired by IFREMER for the project (see A.2.2 costs).
Pre-existing data and maps will be used to validate and qualify results.

Task 1:
This task will be organised around the following components:

- Field verification to feed into the spectral library on benthic populations.
- Integration of the hyperspectral camera and acquisition of hyperspectral images by light aircraft over 500km² of shallow areas (0 to 20 metres).
- Configuration of classification algorithms to take into account new types of habitat, calculation of indices to characterise the state of health of habitats and testing of results visualisation tools adapted to large-scale data

Task 2:

This task will focus on acquiring a second set of data by boat over an area of around 10km² (depths of 10 to 50 metres) using a sonar sensor and automated data analysis.

Task 3

At the start of the project, a working group including industry players, divers and managers will define the functional specifications of the system. A prototype will then be developed and tested with the PNM Iroise divers and IFREMER scientific divers for qualification of an operational environment (cost not accounted for under the project). The system will then be implemented on the selected site via external assistance. This task will provide field verification for data acquired under task 4.

Task 4

Testing here will include the following components:

- Definition of standard mission scenarios (drone routes)
- Integration and synchronisation of sensors (hyperspectral imaging and sonar) onto the underwater drone. Integrating sensors is a complex technical process.
- Acquisition of marine data in areas at depths of between 30 and 100 metres.
- Processing, data merging and mapping.

Task 5

This task focuses on methodological support for the whole of the sub-action: definition of technical developments, analysis of various sets of data collected for developing an operating procedure and of a common process for processing data and producing two technical guides for reproducibility.

Where?
The sub-action will target a site offering contrasting characteristics and habitats and presenting fairly recent field verification data. The Natura 2000 Glénans site is a potential candidate for these tests.

When?
2018-2020

Reasons why this sub-action is necessary:

Marine mapping methods in subtidal areas generally rely on sonar, sampling and divers. The limitation of these approaches is how difficult they are to implement, the lack of automation, biased interpretation and poor coverage. These obstacles prevent standardisation of monitoring and large-scale harmonised deployment. Technological improvements therefore need to be made to extend data collection and create disruptive innovation in habitat monitoring strategies. The sub-action does not cover mapping techniques in dewatered coastal areas which are already subject to similar work.

This sub-action is also necessary for optimising technologies used under the habitats monitoring action (D1) which will use the results of these developments.

Reducing the cost of habitat monitoring is also one of the objectives of this action. Area monitoring is not implemented much due to the staff, equipment, logistics and processing costs involved. In order to reduce these costs, the action plans to automate, standardise and simplify monitoring. Integrating multiple sensors onto underwater drones is also part of this approach, because it is less expensive than airborne technologies.

Task 1: hyperspectral remote sensing

This method can be used to mitigate against several of the obstacles encountered with traditional techniques, including mapping of shallow areas, geographical range and resolution, and automation. It also allows progressive capitalisation of results to feed into international spectral databases, and generates high resolution bathymetric data as a by-product.

Task 2: automated classification of sea bed types

Sonar methods currently use supervised classification, which requires significant field verification work.

Task 3: navigation console for divers

The quality of diver observations is determined by their ability to locate themselves under water, select predefined observation points in the sampling plan and georeference and record their observations. GPS positioning is not possible under water, so divers position themselves in relation to one or more reference stations and then in absolute terms via a connection to a surface GPS system. These systems are not very satisfactory in that they require significant logistics and slow divers down. This task will test systems that have been trialled for the military.

Task 4: Integration of sensors onto underwater drones

Sonar can provide automated classification of the major types of substrate (rock, sand, etc.), but cannot precisely identify the type of benthic coverage, especially with vegetation and coralligenous formations. Hyperspectral imaging sensor technology has recently been adapted to the underwater environment to overcome these limitations.

Task 5: data merging

These technologies complement each other and must be implemented together.

4. Constraints and assumptions

Using these technologies in the marine environment depends on the weather. Unfavourable weather conditions can delay experiments. Equipment and team mobilisation periods and logistics will therefore be designed to take into account this variable. Moreover, tests will be scheduled outside the winter season. Finally, “backup” sites will be identified in case changes have to be made.

A risk has been identified for the technological component. It relates to the feasibility of integrating sensors onto the underwater drone, which has not been studied to date. An initial theoretical assessment suggests that this task is feasible, with a good level of confidence. However, in order to prepare for any difficulties, a feasibility study on integrating sensors will be launched once the action begins.

5. Expected results :

In general, it is expected that:

- The four technologies tested under tasks 1 to 4 will be validated.
- Continuous mapping of depths of 0 to 100 metres over a 600km² surface area will be validated.
- One of the optimised data processing systems will be validated for providing developed and standardised results (mapping of habitats and their status) which can be used directly by Natura 2000 site managers. Habitat conservation status will also be assessed.

More specifically, the sub-action should produce and provide the following results:

- Validated interpretable data: all data collected will be validated and published in a standardised format that can be used by a GIS: raw data and other data collected for use of data series (consolidation under Action F3).
- Mapping results: the data produced and graphical representations thereof (time series, maps, indices).
- Technical reports:
    - Report on needs analysis and implementation of tests describing the four tests under the sub-action and main objectives (functional specification, field testing acquisition strategy, use of data, design of methodologies)
    - Campaign report, precisely describing the resources implemented, the operations performed, the actual sampling plan, the data collected and the performance achieved. It will account for any malfunctions, damage and difficulties encountered.
    - Sub-action summary report including results and recommendations (in the form of practical datasheets for each technology). This will include discussion of difficulties encountered in achieving the objective and the limitations of the technologies used.
    - Two methodological guides will be written: a guide on the appropriate field protocol describing the coordination between various technologies and their implementation and a data analysis guide.
- Involvement of the private sector through R&D activities.

6. Cost estimation:

Costs are estimatedbased on the surface areas to be covered (aeroplane, boat) and a daily rate for divers and, the underwater drone.

Total cost of the subaction: €425,000

Personnel costs: €55,200

- 1st phase (2018): temporary 6-month support for defining specifications for the call for expression of interest and calls to tender.
- 1st phase (2019): course on merging technologies for summary mapping.
- 2nd phase (2020): temporary 6-month support for publications and results capitalisation and dissemination.

Travel costs: €2000 (travel for field tests).

External assistance: €270,000

Costs are estimated based on surface areas to be covered (aeroplane, boat) and a daily rate for divers and the underwater drone. They have all been estimated by specialised companies.

External assistance will be used for all four tests and the overall methodology:

- Airborne hyperspectral technology: €80,000, 80% coverage of the total cost of €100,000 for the R&D partnership (assuming 20% contribution from the other party), which breaks down as follows: field verification trips (€6000), sensor integration and surveys (€54,000), results processing and validation (€40,000).
- Data acquisition via sonar: €45,000; including boat chartering, integration of sensors and surveys (€38,000) and validation of results (€7000).
- Fitting the underwater drone with sensors (hyperspectral and sonar):
    - €100,000 for data acquisition by underwater drones: sensor integration and surveys (€75,000), results processing and validation (€25,000).
- Positioning for divers: €5000 per dive.
- General methodological study: €40,000 (80% coverage of a total cost of €50,000 as part of an R&D partnership) including: methodological research, adaptation of processing software, merging of data from various tests and production of deliverables.

Equipment cost: €95,000

- Purchase of a sonar sensor (€25,000). This cost corresponds to the market price for this type of equipment. The equipment will be used again for implementation of Action D1.
- Purchase of diver equipment (€70,000). This cost corresponds to the purchase of a geolocation console for divers and has been estimated on the basis of a quote from a specialised company. This equipment is little used in civil applications, and has a number of high-technology features associated with waterproofing and the positioning technology which uses inertial navigation system. The equipment will be used again for implementation of Action D1.

Other costs: €2800 (rental of an underwater drone). This cost is estimated on the basis of a quote from a specialised company.

Phase 1 costs:

AFB: €427,465

7. Deliverable products :
30/09/2020: report on technological developments for habitat monitoring.

8. Milestones:
30/09/2018: validation of the needs analysis and definition of technical specifications.
30/09/2019: end of data acquisition campaigns.

30/09/2020: end of processing, validation of technologies for the rest of the project.

ACTION A3: Enhance knowledge of existing activities and users to support management, assessment and communication

2. Beneficiary responsible for implementation:

1-AFB: coordination of the action's overall implementation

Beneficiaries jointly responsible for the Action

11-PNRGM
6-IFREMER and only AMURE, the maritime economy unit, for this Action A3
2-CNRS
9-PNRA
3-Municipality of Agde
10-PNRC

3. Description:

Action A3 focuses on acquiring knowledge on activities and users (it mirrors Action A2, but focuses on society) via two tasks and throughout the Integrated Project (IP)'s first 3 phases.

Task 1. Enhance knowledge of existing activities and users so as to better prepare management: analyse and improve DOCOB socio-economic diagnostics
DOCOB socio-economic diagnostics often contain limited information about activities ie. the minimum in order to characterise the impacts that the activities may have on habitats and species, in line with the goal of the Natura 2000 directive. Representations, perceptions, conflicts on marine environment uses, historical and cultural aspects are often overlooked, while they are integral part of the day-to-day management and issues. So as to better prepare management (ex: identifying main stakes, elaborating measures, assessing effects of measures on habitats, activities and users, etc.), this task will :

A. Analyse existing DOCOB socio-economic diagnostics and produce a critical assessment (January 2018 -> December 2018)

The goal of this first step is to get a technical assessment of current socio-economic diagnostics, based on literature review and experience feedback: what works, what does not work, what the necessary means are etc. Questions to tackle might be the following: are other information and indicators necessary to build socio-economic diagnostics, and which ones are essential? To what extent can we quantify and qualify people in Natura 2000 sites: who are they, when do they come, why? Are we able to understand users and uses in their historical, social and cultural context? What are the strategies to collect data? Shall we adapt methodologies depending on activities?

=> Literature survey including methodological aspects + analysis of previous diagnostics (e.g. PNM and other types of Marine Protected Area (MPA) and land-based areas that have developed usage and user analyses). *Implementation: external assistance scientists*
=> Experience feedback: experience feedback workshops held over 2 days and discussions with N2000 site managers and stakeholders with whom they work. *Implementation: AFB + external assistance scientists*

B. Propose methodological revisions and additions in line with this technical assessment and the human resources available on each Natura 2000 site (January 2019 -> March 2019)

The aim of this sub-task is to translate the first step into concrete recommendations, by suggesting new or different ways to carry out socio-economic diagnostics (ex: include

representations studies), while taking into account the human and financial means of the sites.

Implementation: AFB + external assistance scientists

C. Perform missing DOCOB diagnostics or required diagnostics (reference state) for Action D2 by applying revision proposals (March 2019 -> March 2023)
Implementation: Natura 2000 site managers + external assistance scientists + AFB + PNRGM (nautical activity diagnostic + reference state under D2) + *Agde municipality* (reference state under D2).

D. Revise the technical guide for producing DOCOB socio-economic diagnostics, according to feedback on the application of the methodological revisions proposed and implemented. (January 2020 -> March 2023)
Implementation: AFB + external assistance scientists

WHERE
The entire marine SAC network is concerned.
Extra sites will be added for comparative analysis and experience feedback.
The AFB will also support the implementation of 3 diagnostics in Phase 1, 2 diagnostics in Phase 2, 1 diagnostic in Phase 3, selected from the needs of the following sites:

- Atlantic coast:
    - Houat-Hoëdic site: DOCOB diagnostic
    - Baie de Vilaine site: DOCOB diagnostic
    - potentially, offshore sites: DOCOB diagnostic
    - PNM EGMP: focus on industrial and leisure activities
    - PNM BA: focus on the activities on the Natura 2000 sites it covers

- Channel-North Sea coast:
    - Littoral Ouest Cotentin site: recreational fishing activity diagnostic (reference state to assess the effects of the fallow area under D2)

Links between Task 1 and other IP actions:
Task 1 provides the reference states needed for Action D2 “Assess the impact of project actions on activities and users”. It also provides data for drafting DOCOBs under Action A4.

Task 2. Enhance knowledge of activities and users for improved site management: meeting needs outside DOCOB socio-economic diagnostics.

Socio-economic diagnostics on Natura 2000 sites are not the only step in the management process that needs information on activities and users. This second task seeks to meet four other needs, as a preparatory phase for specific actions.

A. Study perceptions of some users to better understand their relationship to nature and its protection, in order to build relevant actions of sensitization (connected to Action C8)

- Identify sites with this need. *Implementation = AFB (supported by PNRA, PNRGM, PNRC, PNPC and Agde municipality);*
- Develop a methodology (qualitative if possible). *Implementation = external assistance scientists + PNRGM;*
- Implement the methodology, collect data on perceptions. *Implementation = external assistance scientists + PNRGM ;*
- Summarise and disseminate results. *Implementation = external assistance scientists;*
- Make recommendations for messages or action of sensitization. *Implementation = external assistance scientists.*

WHERE
-PNRGM *for recreational seafood hand harvesting, pleasure boaters, water-sports club supervisors.*
-Implementation of 3 studies in Phase 1, and 2 studies in Phase 2 on sites selected by the AFB (call for expression of interest).

B. Characterise ecosystem services provided by marine habitats of Community interest

- Identify 4 pilot sites: two sites to be assessed by IFREMER and CNRS and two to be supported by the AFB. The 4 sites should represent a diversity of issues and contexts (ex: habitats, state of conservation, stage of DOCOB implementation, etc.). *Implementation = IFREMER + CNRS + AFB;*
- Review the current marine ecosystem service assessments, in terms of the methods used in relation to the context and objective of the assessment. *Implementation = CNRS;*
- Train selected site managers to carry out strategic ecosystem service assessments by appropriating the TRIAGE* decision-making process and concepts developed under the INTERRG IVA Valmer project. *Implementation = IFREMER + CNRS;*
- Deploy the TRIAGE* approach on pilot sites to prioritise assessment objectives and select the assessment method most adapted to issues targeted.
- Implement ecosystem service assessment, adapted to the issues defined in the previous step. *Implementation = CNRS + IFREMER*
- Develop multi-agent modelling for at least one site in support of the TRIAGE* approach, so as to carry out a dynamic assessment of the socio-ecosystem and perform some measure assessments scheduled under D2. *Implementation = CNRS;*

** The TRIAGE approach (Pendleton et al., 2015) is a methodology to select the relevant ecosystems services that need to be assessed in marine planning. The methodology targets decision-making processes and works with a step wise approach :*
1. Considering the general scope and need for ecosystems services assessment
2. A refinement of the scope of the assessment.
3. A selection of methods, tools and means for quantifying marine ecosystems services.
This approach has been developed during the INTERRG IVA Valmer project, based on the findings that such methodology was lacking in the marine environment generating a lack of uptake and usefulness of ecosystems services assessments in marine planning.

WHERE: 4 sites including:
-External Loire Estuary
-PNRGM

C. Study perceptions in support of the territorial consultation and coordination process

This study will be carried out in the same way as Task 2.B and aims to gather recommendations for the territorial coordination process. *Implementation by external assistance scientists + PNRGM.*

WHERE:
-PNRGM
-Implementation of 3 studies in Phase 1, and 2 studies in Phase 2 on the same sites as study 1 on perceptions:
  - Channel - North Sea sites managed by the AFB;
  - PNM GdL for the management of canyons, reef habitats and Posidonia beds, study of perceptions of divers;
  - PNM EGMP and its 13 SACs.

D. Monitor activities for daily management needs

This subtask will address the monitoring of various marine activities that can impact marine habitats (leisure activities: boating, scuba diving... as well as professional activities such as fishing). Such monitoring is frequently implemented by sites managers but a common methodology is lacking. The subtask will first collect information on existing methodologies to monitor activities and then provide support to site managers to implement activities monitoring according to a set of common protocols. More precisely, the subtask will consecutively:

- Identify sites with this need and for which activities. *Implementation = AFB;*
- Assess existing protocols. *Implementation = external assistance + partner managers;*
- Develop or select a protocol adapted to those activities. *Implementation = AFB + external assistance scientists;*
- Carry out the monitoring process. *Implementation = AFB + external assistance scientists + Natura 2000 site managers.*

  WHERE:
  - PNM GdL: monitor the visitation of rocky habitats and Posidonia beds by divers, in relation with task 2.3;
  - 3 other Mediterranean sites, identified via a call for expression of interest to monitor the extent of diving, pleasure boating and fishing activities, by offering an easily transferable protocol with a view to homogenously monitoring the marine sub-region;
  - PNRA: survey of pleasure boats in preparation for Action C7.1 (implementing anchorages).

Implementation procedure for A3.2: external assistance requests will be performed via a call for expression of interest. The AFB will seek to form partnerships through consortiums of researchers and Natura 2000 site managers. Each partner is to provide a technical and financial contribution of at least 20% to the action's budget. The different tasks will be carried out so as to boost managers' skills and will therefore involve them throughout the action's implementation.

Link between Task 2 and other IP actions:
Task 2 includes preparatory elements for Action C8 (Change behaviours to limit the impact of activities on sensitive habitats) and Action D2 (Assess the impact of project actions on activities and users).

Action A3 is also linked to actions relating to governance: A1, C1, and D3. Methodological elements and experience feedback from this action will be capitalised on and published via the toolkit (C3). Finally, there are also links with Action A2, on “habitat ecology” and Action D2, for an integrated and systemic approach. This action lays the groundwork for drafting the DOCOBs, for the participation process and for some awareness-raising and communication actions (A4, C6, C8, E).

The AFB's human science manager will be responsible for coordinating and implementing Action A3.

Reasons why this action is necessary:

Action A3 generally aims to improve understanding of activities and users on Natura 2000 sites and their interactions with marine habitats so as to prepare for specific management actions. It enables the organised and formal gathering of data on human activities and users throughout the project.
This action is concerned by interactions between land and sea waters through terrestrial users or activities that can impact the marine habitats, and will be linked with WFD.

4. Constraints and assumptions

Action A3 contains many tasks of various kinds; there is a risk of losing sight of the core objective which will be limited by the human science manager's coordination work.

So as to avoid dissipation and loss of efficiency, the time required for assessments and capitalisation before developing new studies will be taken into account.

Given the wide range of situations (sites, stakeholders, timing) there is a risk of studies not being representative - and therefore being impossible to replicate on other very different sites. However, the LIFE + *pêche à pied de loisir* project showed that the issue of context and its effect did not really affect perceptions, so diversity of situations is not necessarily an obstacle to replicability (in any case, it does not seem to present obstacles to the methods).

5. Expected results:

-Elaboration of measure 2 of the PAF.
-Enhanced knowledge and understanding of activities and users on Natura 2000 sites (especially their relation/interaction with the habitats) particularly via:

- 8 DOCOB socio-economic diagnostics (through Task 1);
- at least 3 reference states for D2 (through Task 1);
- 4 ecosystem service assessments (through Task 2.2);
- at least 3 activity level monitoring reports (through Task 2.4);
- at least 5 perception studies (through Task 2.1 and 2.3).

6. Cost estimation:

AFB:
-Personnel costs: €127,250
Human science manager (269 days): €67,250
PNM GDL officer (80 days in phase 1): €20,000
PNM EGMP officer (100 days): €25,000
PNM BA officer (60 days): €15,000
-Travel costs: €6,600
-External assistance: €355,000
External assistance costs were estimated with the help of scientists with skills required to implement Action A3.
Task 1 A & B: €20,000, Phase1
Task 1 C & D: €75,000 - Phase1; €75,000 - Phase2; €25,000 – Phase3
Task 2A: €80,000 – Phase1; €50,000 – Phase2
Task 2D: €30,000 – Phase2
-Other costs: €5,000

Total AFB costs: €493,850

CNRS:
-Personnel costs: €33,410
-Travels: €4,500
-External assistance: €15,400

Total CNRS costs: €53,310

Agde municipality: personnel costs: **€7,980**

IFREMER:
-Personnel costs: €87,535
-Travel: €13,000
-Computer (phase1): €2,000

-Consumable costs for catering for workshop: €3,000

Total IFREMER costs: €105,535

PNR GM:
-Personnel costs: €118,825
-Consumables for catering and renting room: €16,000
-Equipment: Drone for data collecting: €7,000

Total PNRGM costs: €141,825

PNRA: personnel costs: **€1,025**

PNRC: personnel costs: **€43,890**

Total Action A3: €847,415

Phase 1 costs:
AFB: €279,752
Agde: €8,539
CNRS: €57,042
Ifremer: €94,879
PNRA: €1,097
PNRC: €6,709
PNRGM: €66,645

7. Deliverable products:

31/12/2018: report on socio-economic diagnostics from existing DOCOBs (Task 1 A)
31/03/2023: Internet links to the new French DOCOBs and their socio-economic diagnostics (Task 1.3)
31/12/2019: Report on ecosystem services provided by Natura 2000 marine habitats (Task 2.2)
31/12/2021: Recommendations for action C8 and consultation and coordination process (Task 2.1 and 2.3)
31/03/2023: Guide for elaboration of socio-economic diagnostics (Task 1.4)

8. Milestones:

01/2018: The AFB recruits a coordinator (1/4 FTE for Phases 1 and 2) for this action
07/2018: IFREMER recruits an 18-month post-doc (connected to Actions C9 and D2)
01/2019: CIRED recruits a 22-month post-doc (connected to Actions C9 and D2)

ACTION A.4: Develop site management plans and strategic documents for the biogeographic regions

2. Beneficiary responsible for implementation
AFB, for coordination and implementation of the action.
PNRA, as reference point for production of the strategic document for the maerl habitat.

3. Description (what, how, where, when and why):
What:
a. The purpose of the strategic management documents is to provide a clear and shared vision, per biogeographic region (Atlantic and Mediterranean) and per habitat, of the objectives in terms of state of habitats, pressures on these habitats, and priority measures to be implemented to meet these objectives.
They will contribute to specifying the location of some actions planned under the project (such as monitoring under Action D1) and propose supplements to LIFE project actions to be implemented via other funding. They will also ensure consistency with the environmental objectives of the Marine Strategy Framework Directive (MSFD).

b. Site management plans (Documents of objectives – DOCOBs) are the cornerstone of Natura 2000 implementation within sites. Here, this involves finalising production of the habitats section of the DOCOBs for all marine Special Areas of Conservation (SACs) by testing adaptation to Natura 2000 of the new French methodology for producing management plans, common to all protected areas.

How:
a. Produce strategic management documents for each biogeographic region

For the two biogeographic regions (Atlantic and Mediterranean), each habitat or group of habitats (identified under Action A.2.1) will be the subject of a strategic document. These documents will be produced collaboratively by AFB project team staff (project officers for the Atlantic, Channel, Mediterranean and the other parks and areas), by the PNRA (for maerl), and with the support of other associated beneficiaries (Agde Municipality, Tour du Valat foundation, GIS-Posidonie, IFREMER, IMA, PNPC, PNRC, PNRGM and RNF). The protection of biodiversity project officer (permanent staff) will provide support for implementation of this action as a whole (cost not accounted for under the project).
For each biogeographic region, 4 workshops will be organised bringing together science experts to draw up these strategic documents.

These documents will be produced at the level of biogeographic regions, based on summaries of existing knowledge and supplemented under Actions A.2 and A.3, with the following sections:
- **Issues** relating to habitats, in order of priority at various levels (biogeographic, and marine sub-region where relevant).
- **Long-term conservation objectives**, specified by biogeographic region for each habitat. They correspond to the target state for management.
- **Operational objectives**, mainly covering reduction of pressures, specified for the duration of the LIFE project in line with the environmental objectives of the MSFD. The main Natura 2000 sites that these operational objectives apply to will be identified.
- **A programme of measures**, on the basis of existing measures, with proposals for new measures if necessary, in line with the MSFD measures programme. Sites on which these measures would be most relevant will be identified, based on the priorities at various levels.
- **Prioritised list of DOCOBs to be revised** and a working schedule.

This first part of the action shall take place during the first phase (first two years) of the project; monitoring and updating are planned throughout the project. The document will be

made available in the toolkit (C.3). In Phases 2 and 3, Action A4 will be implemented by the AFB team staff mentioned above, then by AFB permanent staff.

b. Planning for site management
The purpose of this Action is to draw up the habitats section of the DOCOBs for SACs and for future offshore sites (2020-2022), using a common, new methodology. The new methodology promotes the use of clear terminology for the mandatory pillars of DOCOBs: issues, long-term objectives and operational objectives. Furthermore, it puts assessment of the results of actions, such as the state of conservation of habitats, at the heart of site management coordination. These parts of the DOCOBs must therefore be consistent with the equivalent sections of the strategic documents at the biogeographic level. In some cases, these documents could be common to several sites.
They will be drawn up by the project officers for the Atlantic (the coastal sites listed below and offshore sites), Mediterranean (offshore sites), and other parks and areas: GNB, PNM Cap Corse (coastal sites and offshore site) and PNM GdL (offshore sites).

Where:

a. Atlantic and Channel-North Sea biogeographic regions

b. Natura 2000 sites or groups of sites targeted (all SACs):
GNB:

- FR2500079, FR2500084, FR2502018 and FR2502019: Chausey, La Hague reefs and moorlands, Surtainville banks and reefs, and Vauville bay.
- FR5300011, FR5300012 and FR5300066: Cape of Erquy - Cape Fréhel, Lancieux bay - Arguenon bay - Saint-Malo and Dinard archipelago, and Eastern Saint-Brieuc bay.

Atlantic zone:

- FR5202011 and FR5202012: Northern Loire estuary, and Southern Loire estuary - Bay of Bourgneuf.
- FR5300020: Cape Sizun.
- FR5300033: The Houat and Hoëdic islands.
- FR5300034: Vilaine estuary.
- **FR7200812:** Sandy part of the Aquitaine coast.

PNM Cap Corse:

- FR9400570 and FR9402013: Agriates, and Cap Corse plateau.

Offshore sites (in the process of being defined): 5 sites in the Atlantic, 5 sites in the Mediterranean.

When:
Strategic documents will be produced in Phase 1, and updated as needed.
DOCOBs for the Atlantic zone and GNB will be produced in Phases 1 and 2.
DOCOBs for PNM Cap Corse will be produced in Phase 1.
DOCOBs for offshore sites will be produced in Phases 2 and 3.

Reasons why this action is necessary:
Currently, management planning is performed independently at site level. While taking the local level into account is essential and will be pursued under this action, it is important to supplement this opportunistic approach with a strategic vision at the biogeographic region level, specifying priorities for the issues, objectives and actions to be implemented. In other words, answering the question: “where and how do we need to act to make the most effective progress towards a good conservation status?” The aim of this Action is therefore to increase objectivity in selection of the sites on which management measures will be proposed for a given habitat, via identification of long-term objectives at the biogeographic

level and prioritisation of issues at various levels. This means that management can be phased and prioritised at the Natura 2000 network level. Production of strategic documents therefore ensures a uniform approach for local acceptance of the measures and for any potential local or regional funding. It is therefore essential for prioritisation of actions throughout the project.
Producing site DOCOBs at the same time means that coordination of these two approaches can be tested using shared methodologies.

4. Constraints and assumptions
This national level approach must lead to optimised management within sites and therefore requires close collaboration with managers and steering committees at the local level. There is a risk that this will not happen, and there is therefore a plan in place to update these strategies to take into account the results of other LIFE project actions (identification of indicators, acquisition of knowledge, experience feedback on management measures, etc.).
In fact, there will be a schedule overlap between finalisation of the strategy (2018-2019) and production of some DOCOBs. The operators and steering committees of these sites will be involved in this work to ensure their engagement with the approach.
This action is concerned by interactions between land and sea waters through the integration of terrestrial activities in the DOCOBs and the strategic documents, and will be linked with WFD.

When possible, videoconference will be set up.

5. Expected results :

a. Management planning by biogeographic coast
A document providing strategic vision and prioritisation of conservation issues at the biogeographic level for each of the 18 habitats or groups of habitats (as defined under Action A.2.1).

b. Planning for site management
Production of the habitat sections of 8 DOCOBs covering 15 coastal sites and 4 DOCOBs covering 10 offshore sites, using a common methodology and pooling across groups of sites.

6. Cost estimation: €635,151

a. Management planning by biogeographic coast: €159,301
AFB Personnel costs: €125,000
- 40 days for the project officers for the Atlantic, Channel, Mediterranean and parks and other areas in Phase 1, then 5 days per phase in Phases 2 and 3.

N.B.: Cost not accounted for under the project: 40 days for permanent staff (project officer for protection of biodiversity) in Phase 1, then 10 days per phase.
PNRA personnel costs : €1,640

Travel: €12,000 (AFB)
- Participation in workshops: 2 workshops per project officer: 2*€600
- PNRA : workhops attendance : 661

Consumables: €8,000
- 4 workshops per biogeographic coast, bringing together science experts (30 people): €1,000 for logistics (room hire, catering).

Other costs: €12,000
- Covering travel costs of experts (5*€300 per workshop).

b. Planning for site management €475,850

Personnel costs: €467,750

(based on an average of 150 days per DOCOB).

- Production of DOCOBs for the coastal sites:
  - 368 days in Phase 1, then 199 days in Phase 2 for the Atlantic and GNB project officers.
  - 286 days in Phase 1 for the PNM Cap Corse officer.
- Production of DOCOBs for the offshore sites:
  - 100 days in Phase 2, then 50 days in Phase 3 for the Atlantic, Mediterranean and PNM GdL project officers
- Cost not accounted for under this action: 20 days for permanent staff (project officer for protection of biodiversity) in Phases 1, 2 and 3.

Travel costs: €8,100 (participation in local or marine sub-regional meetings for site management).

Phase 1 costs:
AFB: €416,551
PNRA: €2,462

7. Deliverable products:

a. Management planning by biogeographic region

31/12/2019 : List of strategic documents for management at the biogeographic level for each of the 18 habitats or groups of habitats.

The documents will be made available in the toolkit (Action C3) and will each include:

- the conservation objective targeted for management
- the most representative sites for this habitat
- the associated state and tracking indicators, including detailed protocols (or the work planned for specifying them)
- the operational objectives specified for the duration of the LIFE project to achieve the target state
- the list of proposed measures for this habitat and, as far as possible, identification of the sites on which these measures will be most relevant.

b. Planning for site management

List of DOCOBs produced (DOCOBs will be available on the project website):

- **31 December 2021**, for the 15 coastal sites.
- **31 December 2022**, for the 10 offshore sites.

Experience feedback on implementation of a uniform method for drawing up management plans (will be translated under Action C11).

8. Milestones:

31/01/ 2018: recruitment of project officers for Channel, Atlantic, Mediterranean, GNB, and PNM Cap Corse, and of additional PNRA personnel.
1st half of 2018: recruitment of project officers for the other marine nature parks.
31/12/ 2019: validation of the 18 strategic management documents.
31/12/ 2021: validation of the 8 DOCOBs for the 15 coastal sites.
31 /12/2022: validation of the 4 DOCOBs for the 10 offshore sites.

Dependence on complementary funds: although the action is not dependent on a complementary fund, synergies will be sought between this action (the development of DOCOBs) and the implementation of risk analysis of fishing activities funded by EMFF.

ACTION A.5: Assess data requirements and links to existing information systems

2. Beneficiary responsible for implementation:
1-AFB

3. Description (what, how, where, when and why):
What
This action aims to prepare for data management during the project. This includes analysis of the needs of the various data producers, identification of existing information systems in order to provide project beneficiaries with recommendations for facilitating data integration, use and accessibility. All data produced by the project must be freely accessible.
The project will produce several types of data:
- Georeferenced data (points or vectors) on habitats including beneficiary data (Actions A2, C4, D1, E3).
- Data on maritime uses which may contain spatial data on activities (visitor numbers) and data from economic and social analyses (Actions A3, C1, C4, D2).
- Data from impact assessments and monitoring performed by project leaders which could affect habitats located within Natura 2000 sites (Actions C4 and C5).
- Document data associated with impact assessments (Action C5).
- Data on Natura 2000 sites, including regulatory zoning (Action C6).
- Document data generated under all project actions (deliverables: technical reports, awareness-raising materials, communication documents, data from the website, administrative reports, etc.) some of which will be included in the toolkit (action C3).

How
This action will be implemented by the project coordination team data manager. It will make an inventory of the types and volumes of data expected from the beneficiaries and other project stakeholders and identify existing Information systems. The action will produce a data management strategy for the project which will be used to set out recommendations for beneficiaries for consolidating data (including data entry and use) and will identify any developments required. These developments will include the data manager's participation in defining technical specifications for the toolkit (planned under Action C3).
The objective of the action is to avoid the creation of new databases and facilitate the consolidation and dissemination of project data via existing databases and reference portals, and interoperability with current or future Information systems, including at a European level.
The databases and information systems which may be useful for this project include:
- The Quadrige information system, which includes data from IFREMER monitoring networks.
- The marine and coastal geographic data infrastructure (Sextant) operated by IFREMER.
- The Natura 2000 Information system operated by the French Ministry for Ecological and Inclusive Transition (MTES).
- The National Inventory of Natural Heritage (INPN) operated by the French Natural History Museum (MNHN).
- The Marine Protected Areas (MPA) database, the database on foreshore habitats (ESTAMP) and the mapping portal for marine data (Cartomer), operated by the AFB.
- The future marine environment information system run by the MTES and AFB
- The future information system for integrating data from prior assessment or impact monitoring studies.
- The European Marine Observation and Data Network, EMODnet, data portal on benthic habitats. IFREMER is a network partner and is part of the "benthic habitats" consortium.
- The European Biodiversity data centre operated by the European Environment Agency, under the Biodiversity Information System for Europe (BISE), particularly with regard to the Natura 2000 database and the results of assessments of the state of conservation of habitats disseminated via the EIONET database.

When

2018

Where
Across the project's geographical scope of action.

Reasons why this action is necessary:
This action will prepare for the project's data management action (Action F3). By defining common specifications for the format of data, it will contribute in particular to data longevity and results acquired under Actions A2, A3, C1, C3, C4, C5, C6, D1, D2 and E3.

4. Constraints and assumptions
The scope of some databases or information systems fall outside the framework of Natura 2000, let alone the scope of this project (e.g. the information system on the marine environment developed under the Marine Strategy Framework Directive (MSFD) or the legal obligation under the Restoration of Biodiversity, Nature and Landscape Act regarding storing data from prior assessment or impact monitoring studies).
The primary objective of this preparatory action and resulting Action F3 is the management of the data from the IP. It will also serve to define the scope for Action F3 so as not to mobilise project resources beyond the areas targeted by the project.
This action is concerned by interactions between land and sea waters through the link between freshwater and marine information systems and will be linked with WFD.When possible, videoconference will be set up.

5. Expected results (quantitative information when possible):
For the six categories of data mentioned above, instructions for the IP beneficiaries and project stakeholders regarding data submission (format - metadata - standards), a target Information system, processing procedures for publication and free access to data and interoperability with European reference systems.
Performance indicator: number of data categories for which instructions have been specified.

6. Cost estimation: €57,600
Personnel costs: 1 data manager within the IP Coordination Team, 1 year: €51,000
Travel (6 trips within France and 1 to Brussels or Copenhagen): €4,600.
Other costs: €2,000 (organisation of a meeting with data producers).

Phase 1 costs:
AFB: €61,632

7. Deliverable products :
A general data management strategy for the IP including allocation of the budget for Action F3 by area in which data is produced.
A Data Management Plan for each area in which data is produced (of which there are six) to document how data will be produced or collected, in order to define how it will be described, shared, protected and stored. Sections will cover:
- Stakeholder responsibility for data,
- The resources required for implementing this approach,
- For each data set:
    - description: documents and metadata,
    - storage, access and security,
    - dissemination: free and facilitated distribution and accessibility.

8. Milestones:
01/01/2018. Recruitment of data manager within the Project Coordination Team.
15/12/2018: publication of the general strategy and data management plans.

C. Concrete actions

ACTION C.1.: Enhance the governance of Natura 2000 marine areas

2. Beneficiaries responsible for implementation

1-AFB will coordinate action C1.

Beneficiaries jointly responsible for implementation

11-PNRGM will implement innovative governance actions and disseminate practices via the network of coastal regional nature parks in France.

9-PNRA will test new governance methods and more informal bodies such as workshops or forums.

3. Description (what, how, where, when and why):

WHAT:

This action aims to help the managers of Natura 2000 sites implement initiatives to improve the effectiveness of their site governance. These sites will be selected via a call for expression of interest.

The specific content of Action C1 will be specified through recommendations from Action A1. However, the themes around which the calls for expression of interest will be built can be identified.

a. Implementation of consistent management between Natura 2000 sites that share the same ecological issues

This theme will focus on sharing environmental, social and economic issues between several neighbouring sites at relevant functional scales to improve management. It will also seek to coordinate situations where spaces have overlapping protection statuses.

Examples of potential measures:
- collective awareness-raising between sites about shared issues;
- experience sharing between the stakeholders, particularly between steering committees;
- joint coordination for developing management plans: drafting / revision of DOCOBs, ensuring the consistency of action plans (in relation with Action A4);
- implementation of measures that are common to several DOCOBs at an inter-site scale.

b. Integration of Natura 2000 policy into other local public policies.

This theme will aim to improve the incorporation of Natura 2000 issues into local policies.

Examples of potential measures:
- facilitate the incorporation of the key measures of approved DOCOBs into action plans implemented under major public policies (WFD, MSFD);
- integrate Natura 2000 issues and even the measures of approved DOCOBs into management strategies for the maritime public domain;

- build the capacities of local stakeholders concerning Natura 2000 issues and the need for consistency between public policies (Action C2).

c. Development of local participation

This theme will aim to involve a wider public by increasing involvement and collective contributions to better site management.

Examples of potential measures:
- development of innovative tools that encourage participation in debates on measures to be taken, concrete involvement in actions;
- organisation of hackathons[1];
- implementation of open meetings and debates at various locations to increase citizen involvement;
- enhance ownership of environmental issues through innovative approaches (foresight, ecosystem services, etc.).

d. Integration of *in itinere* assessment into governance bodies in order to improve management coordination

This theme will aim to use a dashboard-type monitoring and evaluation tool to continuously assess the achievement of objectives for the purposes of decision-making (Actions D1 and D4).

Examples of potential measures:
- raise the awareness of local people involved in site governance about assessing the achievement of objectives and interpreting the results observed in order to programme the measures to be adopted;
- perform shared inter-site analysis of the assessment results in order to facilitate consistent decision-making.

Figure 1: Workshop for the LIFE + on recreational seafood hand harvesting project, (credits: *M.Morineaux /Aamp/LIFE+ Pêche à pied de loisir)*

WHEN:

[1] "Hackathon" is a portmanteau merging hacker and marathon. The aim is to test an idea and design an app prototype in a few hours (principle of rapid prototyping). It is organised as a competition for programmers, typically working in teams under a time limit. A panel of judges usually chooses the winning team when the time limit is up.

The action C1 will begin in the first quarter of 2020 and end in the first half of 2025 at the latest.

WHERE:

Action C1 will take place on the following 16 pilot sites located across France's two biogeographical regions:

- 6 sites managed by the beneficiaries of the IP, who will continue the initiatives launched under the VALMER and the LIFE+ recreational seafood hand harvesting projects:
  - 1 SAC within the PNRGM;
  - 1 SAC within the PNRA;
  - 4 SACs in 4 Marine Nature Parks: 1 SAC within PNM EPMO, 1 within PNM EGMP, 1 within PNM BA and 1 within PNM GDL;
- 10 Natura 2000 sites that are not managed by the beneficiaries of the IP, selected *via* a call for expression of interest.

HOW:

The managers of the 16 Natura 2000 sites will be assisted in implementing governance measures via:

- Funding for the 10 sites to be selected;
- Methodological support from external assistance scientists in order to ensure that the recommendations elaborated in action A1 are implemented.

Task 1: coordination of Action C1 outside the call for expression of interest
(5 years and 6 months - 1St quarter 2020 to June 2025)
The AFB human science manager will be responsible for this task

An interim report will be produced in 2022, and a final report in 2025.

Task 2: coordination of the call for expression of interest
(5 years - 1st quarter 2020 to 1st quarter 2025)
The AFB human science manager will be responsible for this task, which will include:

- preparing and implementing the call for expression of interest;
- overseeing the implementation of governance measures on the 10 sites selected.

An interim report will be produced in 2022, and a final report in 2025.

Task 3: methodological assistance for the 10 sites selected
Assistance external scientists will be responsible for this task, which includes:

- assisting in the selection of sites during call for expression of interest;
- providing methodological support to the sites;
- participating in steering committee or other governance meetings.

An intermediate report will be produced in the 3rd quarter of 2020, along with a final report in the 3rd quarter of 2021.

Reasons why this action is necessary:

This action is necessary because the quality of governance is an important lever for improving the quality of management (connected to Action D4).

This action will facilitate consistent decision-making between the sites or, within the same site, between different local policies.

This action will facilitate decision-making concerning the measures to be implemented based on the results of the assessment of habitat conservation status.
This action will improve experience sharing in terms of governance.
This action will be based on recommendations from Action A1 to offset the lack of effective governance on the sites.

4. Constraints and assumptions

Some of the measures will be implemented without significant change to current forms of governance and will mainly involve specific coordination while drawing on existing frameworks.
Other measures will require significant changes or even a complete overhaul of these frameworks, which means acceptance from all participants in the relevant bodies. To mitigate against the risk of these stakeholders not being engaged, specific efforts will be made to raise awareness about governance issues to improve management quality and the assistance provided to managers.
This action is concerned by interactions between land and sea waters through the governance and will be linked with WFD.

5. Expected results:

- 4 approaches aiming at improving governance effectiveness, tested and validated on the pilot sites (at least 1 approach per theme identified)
- An increase in the number of stakeholders / better networked stakeholders
- 10 feedback reports from managers on governance to be included in the toolkit
- Integration of at least 5 approved Natura 2000 measures into other local policies
- Development of an *in itinere* assessment tool to be used for decision-making

6. Cost estimation:

AFB

Personnel costs: €165,750

	Costs (€)	Number of days
Human science manager	75,750	303
PNM EPMO officer	22,500	90
PNM EGMP officer	25,000	100
PNM BA officer	25,000	100
PNM GDL officer	17,500	70

Travel: €18,000
including travel within the 10 sites: 3 x 10 x €600= €18,000

External assistance: €175,000
including expert for methodological assistance: €75,000
including grants to 10 sites (€5,000 x 10 sites (phase1); €2,500 x 10 sites x 2 phases (phase 2 & phase 4)) : €100,000
The external assistance cost have been estimated by scientists involved in governance research projects

Total AFB **€358,750**

PNRA

Personnel costs: €26,465
Phase 1: €9,710, phase 2: €8,480, phase 4: €8,275

Travel: €2,976
3 travels during the 3 last phases: €992 x 3

Consumables: €3,600
3 workshops x 3 phases: 3 x 3 x €400

Total PNRA: **€33,041**

PNRGM

Personnel costs: €16,200

Total PNRGM (Phase 3 only): **€16,200**

Total cost of Action C1: €407,991

Phase 1 costs: €0

7. Deliverable products:

31/12/2023: PNRGM final report on governance changes in coastal regional nature parks in France
31/12/2024: PNRA final report on governance in the roadstead of Brest
31/03/2025: final report on the coordination of the action with the network of Natura 2000 site managers in 2025.
31/03/2025: final report on Action C1

8. Milestones:

31/03/2020: Launch of the scientist assistance external consultation, organised by AFB
30/04/2020: Launch of the call for expression of interest, organised by AFB
31/03/2025: Publication of the final report on Action C1 (tasks 1 and 2)

1. ACTION C.2 Implement the capacity building plan

2. Beneficiaries responsible for implementation

1- AFB

Beneficiaries jointly responsible for implementation

4-TDV will extend training from the Life+ LAG'Nature project.

5-GIS *Posidonie* will organise training on Mediterranean habitats.

7- IMA will organise training for the Sentinel network.

8- PNPC will take part in training provided by GIS *Posidonie*.

11- PNRGM will be responsible for training on activity management.

12- RNF will organise training on habitats for the *Observatoire du Patrimoine Naturel Littoral*.

3. Description (what, how, where, when and why):

This is a cross-cutting action that covers all capacity building needs for the IP, particularly training needs. It is linked to Action C3 (toolkit) and Action D5 for the assessment component.

The AFB outreach manager will coordinate this action and run some training courses. He or she will communicate with permanent staff members to ensure coordination with the AFB resource centre and the AFB Natura 2000 training programme.
The 5 PNM officers and the GNB (Normandy-Brittany Gulf) officer will organise some courses in their area.

The courses provided under the LIFE project are organised by the needs identified in the following tables.

3.1-Taking ownership of issues associated with Natura 2000 marine habitats.

WHAT	HOW	WHERE	WHEN
Training to interpret the new habitat manual for managers, consultants and nature protection NGOs. Target: 150 people trained.	12 training days organised by the AFB scientific manager	Every marine sub-region	5 courses during Phase 2; 1 course during Phase 3

3.2-Taking ownership of the process for assessing the conservation status of marine natural habitats (linked to Actions A2, D1 and D2).

WHAT	HOW	WHERE	WHEN
Training/support for managers for standardised annual data collection campaigns relating to intertidal sediment habitats (1130 & 1140) and zostera seagrass beds (1110-1). Target: 75 people trained	3 three-day courses for 1110-1; 2 three-day courses for 1130 & 1140. The RNF will be responsible for this training programme	Every marine sub-region, around ten sites per habitat.	Phase 1: 1st course on zostera beds Phases 2 - 4: courses on zostera beds and sediment habitats.
Training to assess the conservation status of four Mediterranean habitats[1] with implementation of the	10 courses. 1 assessment.	Mediterranean marine sub-region	Phases 1 and 2: 8 courses. Phases 3 and

"Ecosystem-based quality index". Assessment of these courses. Target: 50 people trained	GIS *Posidonie* will be responsible for this training programme. The PNPC will take be responsible for Phase 1 of these courses.		4: assessment followed by 2 adjusted courses
Training on Mediterranean lagoons (1150) for all stakeholders. Target: 300 people trained	24 courses. *Tour du Valat* will be responsible for these programmes	Mediterranean marine sub-region	Phases 1 - 4.
Training to use study indicators for "honeycomb worm", "boulder field" and posidonia seagrass habitats (linked to Actions A.2.2 and D.1) for site managers. Target: 200 people trained	22 days of technical discussion, organised by the 5 AFB PNM officers and the AFB GNB officer.	PNM and GNB sites	Phases 2 - 4

[1] *Posidonia oceanica* seagrass beds; infralittoral rock with photophilious algae; coralligenous formations and submerged caves

3.3. Development and sharing of planning and management tools for Natura 2000 sites (linked to Actions A4 and D4).

WHAT	HOW	WHERE	WHEN
Methods for drawing up Natura 2000 documents of objectives (DOCOBs) in response to Action A4. Target: 100 people trained	6 courses organised by permanent AFB staff[1]	Every marine sub-region	Phase 2: 2020
"Green List" training for managers and government services, linked to Action D.4. Target: 70 people trained	9 courses organised by permanent AFB staff[1]	Every marine sub-region	Phases 2 - 4.

[1] During the annual meetings of managers (and government services)

3.4. Taking ownership of the impacts of activities on habitats (linked to Actions C6, C8 and C7)

WHAT	HOW	WHERE	WHEN
Training for staff responsible for port and boating management of PNRGM. Target: 40 people trained	4 courses, including field trips, organised by PNRGM	On Natura 2000 sites covered by PNRGM	Phases 1 - 3
Training and development of technical documents on yacht anchoring and low-impact signage (linked to Action C.7.1 and 2) for local authorities, management consultants, etc. Target: 150 people trained	14 days of technical discussion, organised by the 5 AFB PNM officers and the AFB GNB officer.	On the 5 PNM sites and the GNB site	Phases 2 - 4
Training on the impacts of coastal development on marine habitats (anchorage zones, sand extraction, submerged dykes, etc.) for local authorities, management consultants, etc. Target: 120 people trained	19 days of technical discussion, organised by the 5 AFB PNM officers and the AFB GNB officers.	On the 5 PNM sites and the GNB site	Phases 1 - 4
Training for organisations in contact with the general public (tourism office) to raise awareness of seafood hand harvesting and outdoor sports on Natura 2000 sites (linked to	22 days of technical discussion, organised by the 5 PNM officers, the GNB officer and the outreach manager.	On the 5 PNM sites and the GNB site + 4 sites to be defined.	Phases 1 - 4

Action C.8.). Target: 300 people trained			
Training on regulations for police officers / managers: understanding issues of monitoring, clarification of investigation processes, etc. (linked to Action C6). Target: 30 people trained	2 courses organised by the outreach manager.	Two “pilot” sites.	Phase 2
Training for specialist maritime schools Target: 90 people trained	3 courses organised by the PNM EGMP (*Estuaire de la Gironde et de la Mer des Pertuis*).	PNM EGMP site.	Phase 1

3.4. Taking ownership of Natura 2000 governance methods and stakeholder mapping (linked to Actions A1 and C1)

WHAT	HOW	WHERE	WHEN
Training for local stakeholders and managers in supporting consultation processes: issues associated with consistency between public policies, participatory leadership of meetings, open-source participatory digital tools, etc. (depending on the results of Actions A1 and C1). Target: 80 people trained	6 courses organised by an external service managed by the AFB human science manager.	In every marine sub-region	Phases 2 - 4

3.5. Taking ownership of funding mechanisms (linked to Action C9)

WHAT	HOW	WHERE	WHEN
Training of Natura 2000 managers to use Natura 2000 funding. Target: 90 people trained	6 courses organised by the Natura 2000 financing manager	In every marine sub-region	Phases 2 - 4

3.6. Taking ownership of the issues associated with the LIFE Integrated Project for all trainers and beneficiaries (linked to Action F1)

WHAT	HOW	WHERE	WHEN
Training for trainers: explanation of common training approaches, communication messages, links between actions, for beneficiaries and their teams (e.g. PNM). Target: 15 people trained	8 half-day courses organised by the outreach manager	During board meetings of the LIFE Integrated Project	Phases 1 - 4

Action D5 will help adjust this plan throughout the project, depending on the effectiveness of training and changes to requirements.

The following objectives apply to all training programmes:

- Promote the use of paperless training documents (datasheets, webinars, guides) that are distributed using the toolkit (Action C3)
- Limit training costs for participants in order to ensure the expected participation rate (e.g. create programmes that are eligible for the use of employee personal training credits)
- Target different training levels from initiation to expert courses
- Train all individuals involved in teaching these programmes to ensure the consistency of Action C2.

Reasons why this action is necessary:

- The French context for implementing the Natura 2000 initiative (1 site = 1 steering committee and 1 manager) requires a methodological framework to ensure

consistent management of the network. Capacity building is required to ensure consistency.
- Capacity building in this context is also key to ensuring long-term capacity.
- This action ensures that all stakeholders, both locally and at national level, have a good understanding of the issues surrounding marine habitats.
- This action makes management more efficient and improves conservation status, and ensures that it is maintained in the long term.

4. Constraints and assumptions

The large number of beneficiaries involved in this action must not prevent national management and training consistency at local level. Training for trainers and the participation of the AFB will ensure that training programmes are consistent between beneficiaries.

The training topics were set according to the priority needs identified by the beneficiaries in order to improve the conservation status of habitats on their site. The training topics will be adjusted in Phases 2, 3 and 4 depending on the results of the actions of the IP and changes to priorities.

A need assessment has been done annually by the French Agency for Marine Protected Areas regarding training for the management of marine protected areas. This is based on a sites managers survey. This activity continues with the AFB and integrates the resource center for the marine environment. This compendium of training not only concerns marine natural habitats of Community interest, but they are part of it. The choice of the training courses proposed in the IP has also been based on this information and considering the feasibility, in particular with regard to the beneficiaries ability beneficiaries to provide such training. The training provided for in the IP will integrate the AFB's marine environment training catalog and future developments can be considered in the light of future needs assessments.

5. Expected results:

- Elaboration of measure 21 of the PAF
- Ownership of Natura 2000 issues by stakeholders
- Ownership of the method for developing the DOCOBs and ensuring their consistency
- Ownership of the “Green List” approach and implementation by 20 managers.
- Training programmes carried out:
  - 5 RNF courses: 75 Natura 2000 site managers trained
  - 10 GIS *Posidonie* courses: 50 managers trained
  - 24 “lagoon” habitat meetings: an average of 50 people per meeting. A total of 1,000 individual participants (stakeholders only counted once when they attend more than once)
  - 4 PNRGM courses: 40 people trained
  - A total of 121 training days organised by the AFB and its PNMs, with 2,300 people trained
  - 1 training programme for trainers

6. Cost estimation:

AFB

-Personnel costs: €201,250

	Number of days	HR cost (€)

Outreach manager	172	43,000
Scientific manager	60	15,000
Human science manager	36	9,000
PNM EGMP officer	250	62,500
GNB officer	62	15,500
PNM EPMO officer	90	22,500
PNM BA officer	50	12,500
PNM GDL officer	40	10,000
PNM Cap Corse officer	45	11,250

The Natura 2000 financing manager's time is accounted for under Action C9. Permanent AFB staff involved in training for Actions A4 and D4 are not accounted for here.

-Travel: €22,400

-(Other costs) Room hire: €13,000
Approximately two thirds of training courses will not require travel as the PNM officers will carry out training in their own premises and some courses will be linked to trips which have already been budgeted for (IP project management meetings such as board meetings, local technical committee meetings, etc.).

-Technical assistance: €24,000
Including mobilisation of experts: €18,000 for training on governance and €6,000 for actions on regulations

Consumables:
-Cost of participant meals (€25 per meal): €63,425
-Publishing of teaching materials: €13,000

Total AFB : €337,075

Tour du Valat:
-Personnel costs : €59,973
-External assistance : €68,625
-Consumables : €38,400

Total TDV : €166,998

GIS Posidonie:
-Personnel costs : €13,000
-Travels: €6,300
-External assistance: €16,400
-Consumables: €2,500

Total GIS Posidonie: €38,200

IMA:
-Personnel costs: €2,825 **Total IMA: €2,825**

PNPC:
-Personnel costs: €1,500
-Travels: 600€ **Total PNPC: €2,100**

PNRGM:
-Personnel costs: €9,810 **Total PNRGM: €9,810**

RNF:
-Personnel costs: 37,980€

-Travels:3,500€
-External assistance (mobilisation of experts): €15,000
-Consumables: €3,375
-Other costs: €3,000

Total RNF: €62,855

Total cost of Action C2: €619,863

Phase 1 costs:
AFB: €57,298
GIS-P: €14,873
IMA: €1,653
PNPC: €2,247
PNRGM: €3,499
RNF: €13,262
TDV: €26,371

7. Deliverable products:

31/12/ 2019: List of IP Natura 2000 training programmes for Phase 2
31/12/ 2021: List of IP Natura 2000 training programmes for Phase 3
31/12/ 2023: List of IP Natura 2000 training programmes for Phase 4
31/03/ 2025: Internet link to the toolkit (connected to Action C3) with at least 80 new teaching materials

8. Milestones:

20/12/2019: organisation of at least 25 courses
20/12/2021: organisation of at least 65 courses
20/12/2023: organisation of at least 105 courses
20/12/2025: organisation of at least 125 courses

ACTION C.3: Develop and implement online dynamic "toolkit"

2. Beneficiary responsible for implementation:

1- AFB, *via* its departments "Resource Centres", "Marine Environments" and "Marine Nature Parks, National Parks and Territories" : *PNM GDL* (Gulf of Lion Marine Nature Park), *PNMI* (Iroise Marine Nature Park), *PNM EPMO* (Picard estuaries and the Opal sea Marine Nature Park) and *PNM BA* (Arcachon Basin Marine Nature Park).

3. Description (what, how, where, when and why):

What:

This action aims to develop and maintain a toolkit for capitalising on and sharing experience feedback, for which the main objective is to support the work of managers by providing them with operational, up-to-date and common resources. The secondary objective is to make all these operational elements available to other Natura 2000 stakeholders.

This toolkit consists of an online platform which will be developed in line with Action F3 (consolidation of data from the LIFE Integrated Project into a database).

This will be part of AFB's online Natura 2000 Resource Centre, as shown in the diagram in Figure 1. Permanent AFB staff (research, expertise and skills development management) will be involved in development of this tool, in particular to ensure interoperability with the Natura 2000 Resource Centre.

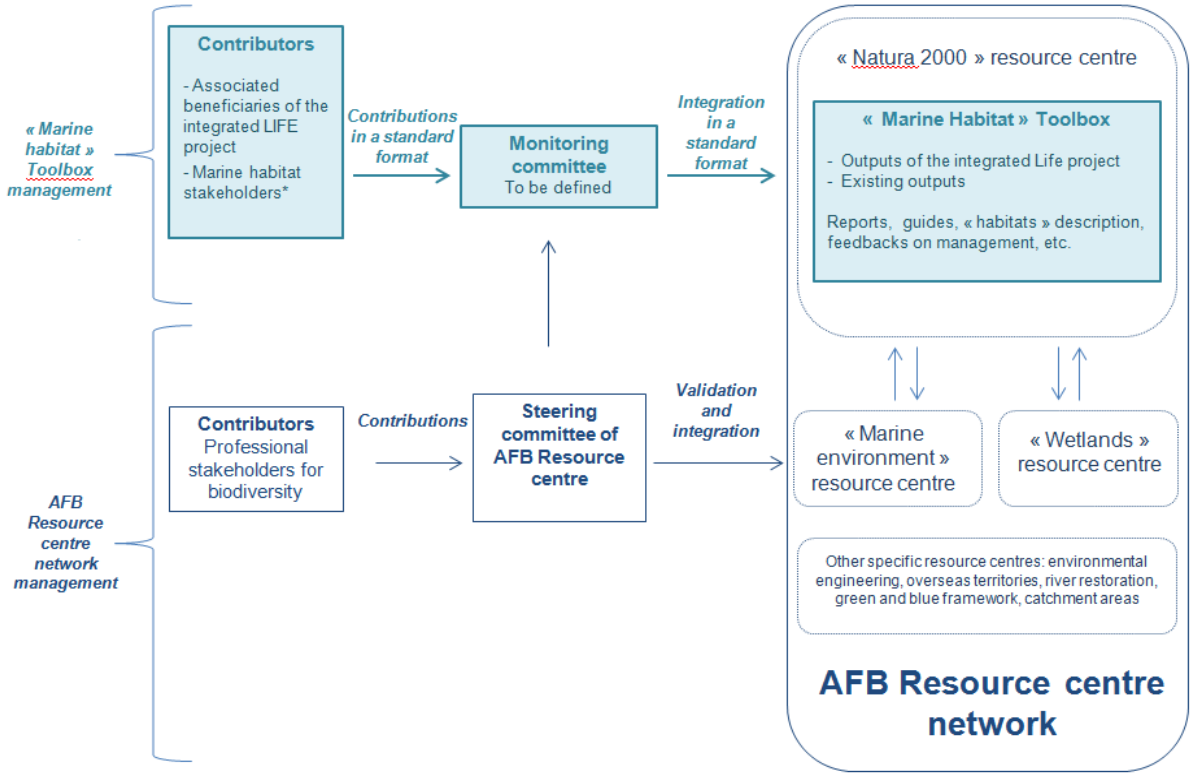


Figure 2. Planned co-ordination between the toolkit and AFB's Natura 2000 Resource Centre

Contributors to this toolkit will be stakeholders involved in marine habitat management, in particular managers of Natura 2000 sites.

Assessment of this action is planned under Action D5.

Examples of resources planned for the toolkit:

- Reference information on habitats;
- Technical tools (guides, web resources, methodological framework, etc.);
- “Experience feedback” forms, on measures implemented for habitat protection within Natura 2000 sites;
- Catalogue of assessment indicators for the state of habitat conservation;
- Awareness-raising resources;
- Up-to-date information (newsletter, articles, workshop reports, etc.);
- Training catalogue;
- Web seminars, an online videoconference teaching tool (in particular on experience feedback from the implementation of Natura 2000 charters);
- Funding methods for Natura 2000 measures.

How:

The AFB’s data manager will be responsible for defining the specifications for the external assistance planned under this action, and its coordination with Action F3. Project officers for the Channel and North Sea, Atlantic Ocean, and Mediterranean Sea will have a marine subregion coordination role for this tool: presenting it to stakeholders, supporting beneficiaries in integrating their deliverables, supporting managers in formalising their experience feedback, updating, and performing validation with the AFB Resource Centre.
Marine Nature Parks with experience feedback under Natura 2000 will assist in specifying requirements for the toolkit and in supplying content for it.

The action will be performed according to the following schedule:
1/ Marine subregion inventory of Natura 2000 tools and of their content, and specification of requirements for the toolkit.

This will be performed by the Channel and North Sea, Atlantic Ocean and Mediterranean Sea Project Officers with the support of the Protection of Biodiversity Project Officer (permanent post, cost not accounted for in this action).

2/ Development of the toolkit.

a- Drawing up of specifications: production of the Specifications by assisting the project manager.
b- Development of the toolkit by external assistance.

3/ Drawing up of methods for maintaining the toolkit.

a- Specification of the make-up of the toolkit monitoring committee.
The monitoring committee will be made up, at minimum, of members of the Resource Centre, LIFE project co-beneficiaries, and stakeholders.
b- Specification of the procedure for validating content to be included.
The monitoring committee will validate toolkit content and ensure its correct operation. It will meet annually. The relationship with the Steering Committee of the Resource Centre will be defined.

4/ Supplying toolkit content

Supply of toolkit content will be ensured by annex Project Officers, by coast.

a- Specification of methods for collecting content, to facilitate inclusion of content from all stakeholders.

b- Integration of standardised deliverables from beneficiaries of the LIFE integrated project.
c- Organisation of specific workshops during existing meetings, grouping managers and other stakeholders (coast technical committees from the LIFE integrated project, roundtables, workshops by coast, technical discussion days, training, etc.).
d- Development of 10 web seminars by the Gulf of Lion Marine Nature Park: 4 per year over 2.5 years.
e- Integration of the Habitat Manual into the toolkit. Use of the Habitat Manual in the toolkit will be implemented by the scientific manager.
f- Production of experience feedback from the PNMI.

The PNMI will recruit a staff member on a 1-year contract to analyse experience feedback from 10 years of management of the Natura 2000 sites within Park boundaries, and to work on the methodology for integrating Natura 2000 into a management plan.

Reasons why this action is necessary

This action is indispensable for:
- implementing consistent and effective management of Natura 2000 sites across metropolitan France.
- implementing consistent assessment at the biogeographical level.
- capitalising on effective Natura 2000 measures implemented locally.

The role of the steering committee is essential. The experience on this aspect has shown that the quality of the materials is not enough to ensure an effective dissemination but that it should be the accepted by the stakeholders. Therefore, discussions are required before dissemination and that is why the toolkit monitoring committee will meet annually, to validate the elements that will integrate the toolkit. Nonetheless a light format will be sought as much as possible for those meetings (videoconference or back-to-back with other meetings).

4. Constraints and assumptions

Proper performance of this action is dependent on the various contributors sharing their data. The LIFE integrated project will ensure that:
- for contributions from the project, it is specified in advance that they are to be public and used in the “toolkit”,
- for external contributions, to frame them using agreements that set out copyrights, distribution rights and usage rights.

It is important that the toolkit is kept up-to-date in order to be operational and reliable. The roles of staff members responsible for this action and the toolkit monitoring committee are key to this mission succeeding.

5. Expected results:

- Elaboration of measure 21 of the PAF
- formation of a toolkit monitoring committee;
- the toolkit put online, consistent with the Resource Centre;
- 100 contributions included in the toolkit, covering 75% of Natura 2000 network marine sites;
- toolkit site visitor numbers constantly increasing over the project duration, reaching 5000 visits per year in the last phase, 2024-2025.
- 4 web seminars per year being put online over 2.5 years;
- Natura 2000 taken into account in the PNMI Management Plan;
- Habitat Manuals put online.

6. Cost estimation:

The AFB Data Manager is responsible for this action, with hours accounted for under Action F3. The data manager will be responsible for toolkit implementation, using 10% of work time during phase 1, then 5% FTE for coordination in the other phases.

AFB
-human resource: €269,000

	Number of days	HR cost (€)
Scientific manager	50	12,500
Project officer for the Mediterranean sea	190	47,500
Project officer for the Atlantic ocean	120	30,000
Project officer for the Channel and North sea	190	47,500
PNM EPMO officer	60	15,000
PNM GDL officer	152	38,000
PNM BA officer	60	15,000
PNMI officer	254	63,500

-Travel: €18,000

-External assistance: €38,000
Toolkit specifications definition and tests: €30,000
Development of 10 web seminars (€800 x 10): €8,000

-Equipment:
Database/interactive platform development: €50,000

Total C3: €375,000

Phase 1 costs:
AFB: €94,802

7. Deliverable products:

30/06/ 2018: A report on the inventory of Natura 2000 tools and their content;
31/12/2019: Minutes of the 2 monitoring committee meetings;
31/12/2020: A functional toolkit, interoperable with the Natura 2000 Resource Centre;
31/12/2022: Recommendations for integrating Natura 2000 into Marine Nature Park management plans, based on the experience of PNMI;
31/07/ 2023: links to the 10 web seminars online.

8. Milestones:

31/05/2018: creation of the toolkit monitoring committee
30/06/ 2018: report 1 “Inventory of Natura 2000 tools”
30/08/ 2018: production of specifications for development of the toolkit.
15/10/2018: 1st monitoring committee meeting
30/12/2018: specification of the procedure for validating toolkit content
15/10/2019: 2nd monitoring committee meeting
15/10/2020: 3rd monitoring committee meeting
31/12/2020: toolkit online
31/01/ 2020: 1st web seminar online (then one every 3 months)
15/10/2021: 4th monitoring committee meeting
31/12/2021: all existing content online and IP deliverables produced

15/10/2022: 5th monitoring committee meeting
31/07/ 2023: 10th web seminar online
15/10/2023: 6th monitoring committee meeting
15/10/2024: 7th monitoring committee meeting
15/10/2025: 8th monitoring committee meeting
30/12/2025: all LIFE integrated project deliverables online

ACTION C.4: Improve practices through analysis of pressures on habitats

2. Beneficiaries responsible for implementation:

1-AFB, coordination of the action, organisation of calls for expression of interest, and implementation on sites managed by the AFB, including Seine Bay, and PMN Cap Corse, PMN BA and PMN EPMO.
5-GIS *Posidonie*, for pressures on posidonia bed barrier reefs.
6-IFREMER for pressure on zostera seagrass.
7-IMA for pressure of foreshore visitor numbers on boulder fields (excluding pressure from recreational seafood hand harvesting).
8-PNPC, for implementation of an observatory for managing the impact of site inhabitants on habitats.
9-PNRA, for recreational seafood hand harvesting pressures on boulder fields and maerl, and anchorage pressures on maerl.
10-PNRC, for sand extraction pressures on sandbanks.
11-PNRGM, for recreational seafood hand harvesting pressures on seagrass and boulder fields, and anchorage pressures on seagrass.

3. Description (what, how, where, when and why):

What

1. The purpose of this action is to improve management of activities in Special Areas of Conservation (SAC), via implementation through partnerships of analyses of pressures on marine habitats. Within pilot SACs, this involves monitoring habitats at various points with various levels of pressure for the same activity (see Figure 1), or sometimes for several activities. This work will be implemented collectively, systematically involving the area manager, a representative of relevant users, and scientific support. Technical innovations could be tested and the results will consist of recommendations for practices in SACs for the relevant activities, including recommendations for appropriate assessments where necessary.

Maritime pressures directly or potentially affected by this action include: aggregate extraction, dredging, dumping dredged materials, beach nourishment, developments (embankments, ports, marine energies, etc.), cable laying, anchoring, recreational seafood hand harvesting, invasive species and litter. Other land-based pressures are involved: contamination of marine habitats by estuary influence on the coastline (eutrophication) or further offshore (accumulation of sediments), or by wastewater treatment plant effluents.

All habitats targeted by the project are directly or potentially affected. As sensitivity may vary for different components of the same habitat in the sense of Annex 1 of the Marine Strategy Framework Directive (MSFD), habitats are generally presented here at the level of elementary habitats according to the classification in the French marine habitats manual for habitats under the directive (e.g. 1170-14 for coralligenous reefs).

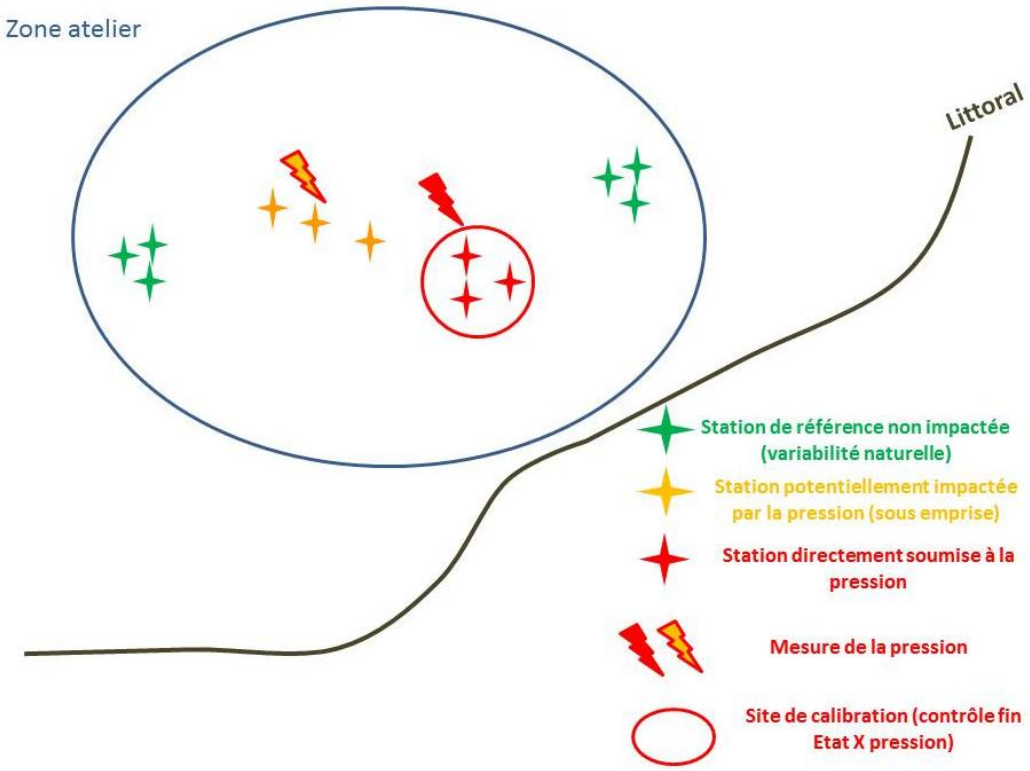


Figure 1: principle of monitoring in a pilot area: example for a habitat/pressure pair (monitoring performed on various stations with differing levels of impact on the habitat).

2. As a second step, and with a view to analysing the cumulative effects of various activities, the results of Part 1 will be reused for a mapping analysis of the risks of concurrent pressures on marine habitats and the drawing up of recommendations for managing these risks.

How
This action will be coordinated by the AFB and developed in close collaboration with associated beneficiaries, Natura 2000 site managers, users and scientists.

1. For this part, the AFB will coordinate the work of beneficiaries, implement pilot areas on 4 sites, and organise 2 calls for expression of interest for implementation of pilot areas on sites not managed by beneficiaries.

<u>List of pilot areas planned by beneficiaries:</u>

For the AFB:

- Distinction of pressures associated with various activities on sandbanks (1110, in particular ill-sorted sand – 1110-4). The work will be performed as a supplement to the analysis of risks associated with commercial fishing performed under complementary actions, due to the multiple pressures that exist on this site. Implementation of the action will be coordinated by the project officer for the Channel and North Sea and be the subject of external assistance for monitoring.
- The PNM BA officer will be the reference manager for IFREMER work on the area, in particular with regard to management of pressures associated with maritime work (including turbidity) on *Zostera noltii* and *Zostera marina* seagrass in PNM BA and more generally for combinations of pressures on these habitats.
- Management of pressures generated by leisure activities on habitats of sites managed by the marine nature park (in particular 1110 and 1130). Implementation of this action will be coordinated by the PNM EPMO officer and be the subject of external assistance for methodology and data collection.

- Management of pressures generated by leisure activities on reef habitants (1170, in particular 1170-10 and 1170-12). Implementation of this action will be coordinated by the PNM Cap Corse officer and be the subject of external assistance for methodology and data collection.

GIS-*Posidonie* will provide scientific support:

- To PNRC for analysis of pressures on sandbanks,
- To managers of sites that include the barrier reefs identified under Action A2, for analysis of pressures on these habitats.
- For the development of pressure indexes to understand the effect of pressure on the conservation status of habitats, via intervention in Actions A2 and D1 (1120 – Posidonia beds, 1170-13 – photophilous algae reefs, 1170-14 – coralligenous reefs, and 8330 – undersea caves).

IFREMER will provide scientific support to site managers affected by its involvement in zostera seagrass under actions A2 and D1 (Lancieux and Arguenon bays, Gulf of Morbihan, Arcachon, Bidassoa estuary, Thau lagoon) for analysis of pressures on these habitats. This analysis will be based on a local-scale mechanistic model (for each site). This approach is aimed at simulating the dynamics of seagrass beds and the influence of hydro-sedimentary flows (in particular associated with tides), anthropogenic pressures, and environmental changes specific to each region. Modelling will be based on field data collected during Actions A2 and D1 and the present action.

The IMA will perform an analysis of the effect of foreshore visitor numbers (excluding recreational seafood hand harvesting) on *Sabellaria alveolata* (honeycomb worm) reefs (1170-4) and boulder fields (1170-9). The LIFE+ *pêche à pied de loisirs* project has shown that the impact of recreational seafood hand harvesting in overturning boulders and trampling *Sabellaria alveolata* was less than that of the ordinary visiting of the foreshore by the general public. Assessment of visiting pressure and the habitat status will be performed by drone overflying combined with field monitoring using a protocol implemented in the Gulf of Morbihan.

Managers affected by the interventions of GIS-*Posidonie*, IFREMER and the IMA will be responsible for involving representatives of the activity sectors relevant to the studies.

PNPC will implement an observatory for managing the impact of site inhabitants. This observatory will focus on diving and yachting activities, and posidonia beds and coralligenous formations. In addition to data gathered by PNPC, external assistance will be mobilised to assess pressures and publish data online. PNPC will coordinate working groups in collaboration with scientific teams and representatives of local stakeholders.

PNRA will pursue impact assessment actions for recreational seafood hand harvesting on boulder fields for management of this activity. These assessments will include future developments of the protocol defined under the LIFE+ *pêche à pied de loisir* project and will be based on monitoring visitor numbers for the activity based on tested protocols. In addition, PNRA will participate, in partnership with scientists, in defining and implementing new protocols for the impact assessment for recreational seafood hand harvesting on maerl and in planning new management methods (awareness raising or regulations), as use of fishing gear can irreversibly damage the habitat. Finally, PNRA will implement impact assessment actions for anchorages on maerl, which will support implementation of new anchorages planned under Action C.7.1. This work will be based on diagnostics of activities which will be drawn up during Action A3.

PNRC involvement will cover assessment of the impact of sand extraction on sandbanks, for improved management of these activities. The Natura 2000 sites “Espiguette dunes” and “Camargue” include highly dynamic sandy spits which form micro-habitats within “sandbank” habitats, enabling the development of biotic communities of interest

(invertebrates, syngnathid populations). These sites are sought after for sand to nourish other eroded sandy beaches in the Mediterranean, and are subject to dredging. Two sand spurs (one developed, the other naturel and protected) will be compared using the same diving-based investigation methods, to assess the impact of activities on habitat functions. PNRC will associate contracting authorities and government services with this work, as they are responsible for ordering dredging actions.

PNRGM and PNRA have offered to pursue assessment of the impact of recreational seafood hand harvesting activities on boulder fields and *Zostera notlii* seagrass, in order to have long-term monitoring using refined protocols for managing this activity. Furthermore, PNRGM will assess the impact of anchor dropping on zostera seagrass, along with the beaching of small craft (dinghies) with a view to proposing regulation of these practices, similar to the zones implemented for anchoring (ZMEL). This work will be based on diagnostics of activities carried out under Action A3.

Each beneficiary will be responsible for providing experience feedback (as specified in Expected Results below) and will be supported by AFB staff for capitalising on and sharing results.

Calls for expression of interest for sites not managed by beneficiaries

Two calls for expression of interest will be coordinated by marine sub-region project officers (Mediterranean Sea and Channel and North Sea for both, and Atlantic for the second only) and the scientific manager. Coordination will involve drawing up the specifications, and selecting and monitoring the projects, including capitalising on and sharing results. Selection of proposals will involve relevant stakeholders (government services, user representatives, scientists, etc.), and be based on the following criteria:
- Substantiation of the issues on the habitats, interactions with the activity and the short-term improvement expected on the status of marine habitats.
- Partnership with the relevant activity sector(s).
- Scientific partnership.

As a priority, proposals will be focused on habitat-pressure pairs, representing major management issues. Around a hundred habitat-pressure pairs have been identified for management of the French SAC network.
Proposals could include testing new practices.

Projects will be selected as part of a partnership, involving joint funding by the other party of at least 20%. In particular, project involving contribution of the private sector would be favoured in the selection process.

As the type and cost of projects could vary significantly depending on the habitats and activities studied, it is difficult to predict the number of projects that will be selected. At minimum, it is expected that 3 projects will be implemented via calls for expression of interest.

2. This part will be performed by the AFB with support from beneficiaries for use of the results from the first part. It will involve temporary recruitment by the AFB of a GIS officer to produce the mapping of risks from concurrent pressures. The GIS officer will work under the manager for assessment of cumulative effects within the AFB (permanent staff), and will use the methodology and results produced by the AFB in work on cumulative effects to integrate the results of the first part of the action.

The analysis will be performed using a GIS, with a mesh of 1 minute of latitude by 1 minute of longitude. This resolution is a scale suitable for summarising local processes (SACs) with reasonable levels of data loss, and for breaking down biogeographic processes (SAC network) with perfectly adequate accuracy. The objective was to represent areas at risk

due to combinations of activities that could have an impact on a habitat, by overlaying layers of load associated with various sectors of activity and including the risk factor for habitats located within the mesh.

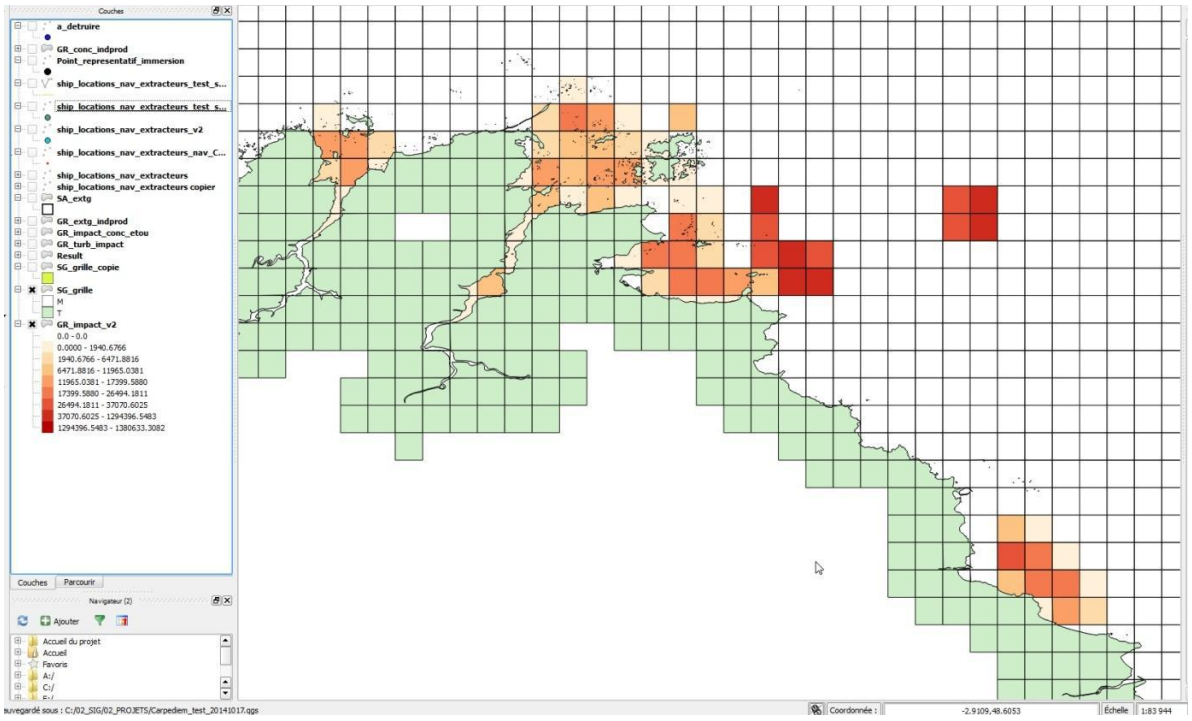


Figure 2: Illustration of a partial result on the mapping of two concurrent pressures (shellfish farming and marine aggregate extraction) on the Tregor Goëlo Natura 2000 site

Where
The action will take place partly within sites managed by beneficiaries: Natura 2000 sites in Seine bay, PNM Cap Corse, PNM BA and PNM EPMO for the AFB, PNPC, PNRA, PNRC and PNRGM.
The action will also take place in part to support managers of the following sites: Natura 2000 sites in the Basque region (via the IMA), IFREMER analysis sites for zostera seagrass (see Action A.2) and GIS-*Posidonie* sites for posidonia bed barrier reefs (the major sites will be selected on the basis of the inventory performed in A.2).
Finally, the action will partly take place on Natura 2000 sites selected following calls for expression of interest.

When
The AFB, PNRA and PNRGM will implement this action over the 4 phases for their respective work.

Phase 1 (2019): launch of the first call for expression of interest, whose implementation will overlap with the second phase (2 years per project).
IMA preliminary work for awareness-raising actions (C8).

Phase 2: initial work for recommending management of concurrent effects.
Start of joint work by GIS-*Posidonie* and PNRC.
Launch of implementation of the observatory by PNRC.

Phase 3 (2022): launch of the second call for expression of interest.
On the basis of the results of Action A2, initial IFREMER analysis work on pressures on zostera seagrass.
Pursuit and completion of the action for PNRC.

Phase 4: further work for recommendations on management of concurrent effects.

Reasons why this action is necessary:

This action is essential for suitable management of activities to achieve Favourable Conservation Status (FCS) for marine habitats. In the marine environment, knowledge of habitats is patchy, as is understanding of the impact of activities on habitats (at both French and European levels). However, these two aspects are fundamental for managing activities.
Work on the sensitivity of habitats to physical pressures was performed in 2015 and 2016 by the former natural heritage service of the French Natural History Museum (MNHM - now part of the AFB), on the basis of a literature survey. The results are presented as sensitivity matrices for pressures and habitats. These results are essential, but they sometimes need to be confirmed locally or taken further by field studies, and it is also important to jointly construct these diagnostics with the relevant users, both to ensure the accuracy of the results and to facilitate their acceptance.
With regard to concurrent pressures, this part of the analysis has not currently been adequately covered, in particular due to the fact that impact studies and appropriate assessments tend to focus attention on the impact of one activity. Furthermore, analysis of concurrent pressures is inherently more complex.
The habitats and work sites for this action have been selected on the basis of criteria for sensitivity to pressures and conservation issues (responsibility of sites in the achievement of favourable conservation status for the habitat). The work performed under the LIFE+ *Pêche à pied de loisir* project on assessment of the impact of recreational seafood hand harvesting on boulder fields needs further study, which will be performed under this action.

4. Constraints and assumptions
The difficulty with analysing pressure/habitat pairs concerns taking account of scales (station, project zoning, etc.) and the associated pressure levels, and identifying “lesser impact” reference stations. Furthermore, the impact of the same pressure could vary based on local environmental context, and require adaptation of the impact indicators. Finally, it is not always possible to distinguish the influence of external factors and to attribute variations in a habitat’s conservation status to variations of the same pressure.
Recommendations for management of concurrent pressures may be faced with lack of knowledge on synergistic or antagonistic effects.
To mitigate these difficulties, the action benefits from similar experiences of work on pilot sites and assumes collective progress in the context of partnerships with users, scientists and managers. This does not mean implementing a holistic approach, but rather giving preference to proposals for shared diagnostics (risk-based approach) on the basis of objective elements and the best knowledge available.
The plan for the action is also based on the assumption that work performed outside the Integrated Project is available regarding assessment of cumulative effects on marine habitats. This work has been performed under the Carpediem project coordinated by AFB with the support of the Ministry for Ecological and Inclusive Transition (MTES), whose results (aspects of methodologies and mappings for cumulative pressures on habitats at the level of French waters) should be delivered in 2018 for inclusion in the update of the initial MSFD assessment.
This action is concerned by interactions between land and sea waters through terrestrial activities that can impact the marine habitats, and will be linked with WFD.
When possible, videoconference will be set up.

5. Expected results:

The expected results include

- Improvement of practices via studying 15 habitat/pressure pilot areas and experience feedback (by the relevant beneficiaries and by those selected under the calls for expression of interest) for each area, including:

  - a joint technical assessment (by users, managers and scientists) on the work performed.
  - joint proposals for changes to the methods of practising these activities to reduce pressures on habitats.
  - recommendations for performing appropriate assessments on the practice of relevant activities on SACs.
  - publication of monitoring data.
  - an indicator to assess the relevant pressure on habitats.
  - a mapping of the risk areas identified for each analysis site, using a methodology that can be applied to other sites.
- Testing of technical innovations on at least 3 pilot areas.
- Recommendations for management of concurrent effects.
- Regular updating of matrices for the sensitivity of habitats to pressures (disseminated under Action C3).
- Involvement and contribution from the private sector.

6. Cost estimation: €1,114,667

AFB: €698,600

Personnel costs: €276,000

Coordination by the project officers for the Mediterranean, Atlantic (for Phases 3 and 4) and Channel and North Sea:
- preparation of calls for expression of interest and calls to tender, project selection and monitoring, coordination of beneficiaries, and capitalisation on results.
- support of the scientific managers (40 days per phase for Phases 2, 3 and 4).
- temporary assistance in GIS for producing mappings (100 days per phase, in Phases 2 and 4)

PNM Cap Corse, PNM BA and PNM EPMO officers for implementation of projects (330 days).

Travel costs: €17,600

Travel for marine sub-region project officers and the scientific manager to monitor actions on the selected sites and to participate in meetings with scientists and managers ; Local travel to meet with stakeholders for PNM officers.

External assistance: €400,000

2 calls for expression of interest (€160,000 each): payments distributed in Phases 1 and 2 for the first and payment in Phase 3 for the second.
2 calls to tender for actions on sites managed by the AFB (€20,000 in Phases 1 and 2). Multiple offers for actions on PNM Cap Corse and PNM EPMO (2 times €10,000 for each).

Other costs: €5,000 to publish the action report

5-GIS-*Posidonie*: €40,000

Personnel costs: €31,250

Working time of the research engineer (€250 per day) for:
- Support in performing the action in PNRC in Phase 1 (15 days)
- Analysis of pressures on barrier reefs (88 days)
- Development of pressure indicators in Mediterranean habitats (22 days).

External assistance: €8,750

Scientific consulting for:
- Support in performing the action in PNRC in Phase 1 (€1,050)
- Analysis of pressures on barrier reefs (€7,700)

6-IMA: €17,518 for analysis of pressures due to foreshore visitor numbers in Phase 1.

Personnel costs: €7,518

- Working time (20 days for an engineer at €334 and 2 days management consulting at €419).

External assistance: €7,000 (7 days hire of a drone for visitor number analysis).

Equipment: €3000 (IT and office equipment, used for all actions).

7-IFREMER: €101,896 for analysis of pressures on zostera seagrass.

Personnel costs: €68,896 (€34,448 per phase in Phases 3 and 4 (working time for permanent staff, per phase: 25 days at €332 for the coastal habitats project officer, 26 days at €376 for the coastal ecology researcher, 26 days at €340 for the coastal ecology engineer, 28 days at €269 for the biology technician).

External assistance: €33,000 for biological analysis of samples.

8-PNPC:€112,000 for implementation of an observatory for managing the impact on habitats.

Personnel costs: €10,200, working time for the additional junior officer for drawing up specifications for external assistance, then collecting data to feed into the observatory (10, 30 and 20 days at €170 in Phases 2, 3 and 4 respectively). Support by permanent staff (10 days per phase, cost not accounted for under the project):

Travel costs: €2,800 in Phases 2, 3 and 4. Meetings with stakeholders to define and manage the observatory.

External assistance: €19,000, €40,000, and €40,000 in Phases 2, 3 and 4 respectively, for design and management of the observatory and data consolidation.

9-PNRA: €25,963, to pursue improvement of recreational seafood hand harvesting practices, to protect boulder fields and maerl beds, and reduce the impact of anchorages on maerl beds.

Personnel costs: €25,232

- 108 days at €205 over the 4 phases for additional staff to monitor recreational seafood hand harvesters, modify protocols, analyse data, and provide experience feedback.
- 5 days per phase at €170, for permanent field staff for field monitoring.

Travel costs: €723 for local travel and travel to one feedback meeting in France.

10-PNRC: €76,050 to reduce the impact of extraction processes on sandbanks.

Personnel costs: €5,410, working time in Phases 2 and 3 (8, then 2 days at €190 for additional staff, a technician for field studies; and for permanent staff for project monitoring and analysis of the results: 3 then 9 days at €230 for the project officer, then 1 then 2 days at €250 for the project manager).

External assistance: €70,000

- In Phase 2, for performing dives and acquiring impact data on sandbanks (€30,000) and analysis of the samples taken (€20,000).
- In Phase 3 for data analysis, comparison between the two monitoring sites and production of the assessment (€20,000).

Consumables: €640 (vessel operating costs).

11-PNRGM: €42,640 for reducing the impact of anchorages on seagrass and continued improvement of recreational seafood hand harvesting practices.

Personnel costs: 52 days at €205 per phase for the additional project officer.

Summary of Action C4 costs by phase and beneficiary (without overheads):

	Phase 1	Phase 2	Phase 3	Phase 4
AFB	€127,400	€206,600	€268,500	€96,100

GIS -P	€4,800	€35,200	0	0
IMA	€17,518	0	0	0
IFREMER	0	0	€67,448	€34,448
PNPC	0	€21,700	€45,900	€44,400
PNRA	€5,900	€5,900	€6,297	€7,866
PNRC	0	€52,780	€23,270	0
PNRGM	€10,660	€10,660	€10,660	€10,660

Phase 1 costs:
AFB: €136,318
GIS-P: €5,136
IMA: €18,744
PNRA: €6,313
PNRGM: €11,406

7. Deliverable products:
30/06/2025: assessment of changes in practices via analysis of habitat/pressure pairs.
30/06/2025: final report on good practices to develop to reduce the effect of concurrent pressures on habitats.

8. Milestones:
30/06/2019: launch of the first call for expression of interest.
30/09/2020: first mapping analysis of concurrent effects.
30/06/2022: launch of the second call for expression of interest.
30/03/2024: second mapping analysis of concurrent effects.

Dependence on complementary funds: this subaction will be supported by the human activity impact studies on Mediterranean marine habitats funded by the Rhône Méditerranée Corse Water Agency. However the subaction is not dependent on the fund.

ACTION C.5: Increase the involvement of activity sectors

2. Beneficiary responsible for implementation:

1-AFB (department of marine environment, department of marine nature parks and national parks, mixed service unit Patrinat)

9-PNRA for the implementation of charter and recognition mechanisms.

3. Description (what, how, where, when and why):

What

This action seeks to enhance cooperation with activity sectors and authorities responsible for reviewing the appropriate assessments, by the production of tools and background documents, to allow a better management of pressures on natural habitats. These co-constructed tools and guidance should make it easier for activity sectors to understand and take into account the objectives of the directive.

Task 1: Update the Natura 2000 background or guidance documents on activities through updated factsheets in a numerical format

And task 2: Produce new Natura 2000 guidance documents complementary to the existing ones

The development of the Natura 2000 network was accompanied by the production of guidance documents for the management of activities. Since 2009, the following documents have been produced together with activity sectors:

- Guidance document on the Natura 2000 appropriate assessments for dredging (Study and obersvation group on dredging and the environement, *Groupe d'étude et d'observation sur le dragage et l'environnement* - Géode, 2008)

- Technical and economic guidance documents for recreational and sports activities (AAMP, 2009), profesionnal fisheries (AAMP 2009), marine aquaculture (AAMP, 2009) and national Defense (AAMP, 2014)

- Guidance document for the extraction of marine materials in Natura 2000 marine sites

- Guidance document on cargo ports and Natura 2000 (Studies and expertise centre for risks, the environment, mobility and planning, *Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement* – Cerema/ex-Cetmef, 2012).

These guidance documents are used by both the activity sectors and the Natura 2000 managers in order to seek a better compatibility between activities and conservation objectives. They make this easier by providing information about the objectives of the directive, the interactions between the ecological stakes and the pressures generated by activities (through matrixes) and information about social and economic aspects. Most of those materials have been elaborated prior to the implementation of the management in the Natura 2000 network and therefore they need updates as management progresses within sites.

Other guidance documents, although not targeting Natura 2000 only, do help the protection of Natura 2000 habitats: guidance on environmental monitoring of coastal and harbour infrastructures (Cerema, 2012), guidance on undersea cables' operations (Cerema, 2012), guidance on assessing the environmental impacts of offshore windfarms (MTES, 2017). Those guidance documents will therefore also be used, adapted and updated in the Natura 2000 context of habitats conservation.

Task 3: Build a database for Natura 2000 appropriate assessments

This task aims to share and build on existing Natura 2000 appropriate assessments carried out for the protection of habitats.

Task 4: Foster stakeholders' engagement about making activities compatible with a favourable conservation status of marine Natura 2000 habitats

This task seeks to favour voluntary commitments, such as charters, with activity sectors. It also aims at facilitating the use of those mechanisms for sites managers.

How

AFB staff will work in a collaborative way to carry out this action. The different tasks will be coordinated by the human and social sciences officer. The scientific officer will bring its expertise on interactions between pressures and natural habitats, while the project officers from submarine regions and territories will bring their feedback on their management experience and will liaise with the activity sectors and the responsible authorities for appropriate assessments at the local level.
PRNA will provide feedback on its experience regarding appropriate assessments for task 1 and will be involved in task 4.

Task 1: Update the Natura 2000 guidance documents

On the one hand, this task will focus on updating the existing guidance documents structured around the following parts:

A-context elements on the activity,
B-pressures induced on habitats by the sub-activities of the specified activity (interaction matrixes). It will use the work from the CARPEDIEM project (apart from the integrated project), regarding mapping of pressures on habitats, at the inter-sites, submarine region or biogeographic region scales.
C-description of habitats: mapping and sensitivity to different pressures. Action C.4 will help carrying out this part.
On the other hand, this task will focus on feedback and lessons learned from management:

D-standard measures to reduce the impacts, which may be implemented: lessons learned factsheets based on management measures already implemented across the network and processes to grant activity authorizations.
E-standard measures to monitor the marine Natura 2000 habitats, along the description of protocols and expected results: experience feedback will be based on the results of actions C.4 and D.1. This subtask will include recommendations to store data collected by private operators.

Task 1 will be implemented together with the users or representatives from the specific activity sectors, the decentralised administration services and the sites managers. External assistance for expertise will be used to simultaneously undertake this task and task 2. The dissemination of guidance documents and informative sheets will be done through the Natura 2000 resources center, through action C.3.

Task 2: Produce complementary N2000 guidance documents along the existing ones

Based on the existing guidance documents and experiences on appropriate assessments and management actions, new guidance documents on managing activities in the context of habitat conservation will be produced. The following activity sectors do not benefit from existing guidance:

-renewable marine energies,

-hydrocarbons extraction and transportation,
-mineral resources prospection,
-marina harbours and mooring areas (link with action C.7),
-beach nourishments,
-maritime transport.
The coordination team will ensure the dissemination of products from tasks 1 and 2, including at the community level, to contribute to the European Union guides on marine Natura 2000 using guidance documents from tasks 1 and 2.

Task 3: Build a database of Natura 2000 appropriate assessments
In the first instance, this task will build on the Natura 2000 information system managed by the MTES and appropriate assessments for which the AAMP/AFB has been consulted. It will consists in setting up a feedback grid type: activity X/habitat Y, recommendations, requirements endorsed by the competent authority, assessments criteria, measures for avoiding-reducing-offsetting impacts and their efficiency, protocols for monitoring the compliance with the recommendations or requirements and data provision mechanisms. Based on the AFB experience, the typology proposal will discussed with other sites managers, representatives from activy sectors and competent authorities, in order to develop the tool (through external assistance in F.3 action).

Task 4: Foster stakeholders' engagement about making activities compatible with the favourable conservation status of marine Natura 2000 habitats

Templates for charters will be produced, by types of activity, and in priority for sports and recreational activities, for which such mechanisms of voluntary commitments have proven their effectiveness, being legal Natura 2000 charters permitting appropriate assessments exemption or a non-binding commitment. Those templates will be adapted at various levels (marine subregion, biogeographic region) to take into account local characteristics.

Recognition mechanisms for habitats conservation good practices will be developed too (certification or label). External assistance will be used to support their implementation and use by activity sectors.

PNRA will work on the development for the marine habitats of the national brand "*valeur Parc*" (Park value) of the Nature Regional Parks. This brand has been initially created for terrestrial stakeholders. PNRA will also work on a "bay label" to acknowledge good practices of marine stakeholders.

This task will also be performed in a collaborative way with sites managers, relevant activity sectors and decentralised administration for the endorsement of binding charters.

Interaction with the private sector will consist mainly in cooperation for task 1, 2 and 3 to produce the guidance for the different activities including the tourism sector. Financial contribution from the private sector would be sought in task 4 to support the implementation of good practices and their recognition.

Where

This action will be carried out at the scale of the project.

When

This action will be carried out over the duration of the project.

Reasons why this action is necessary?
Implementing the Natura 2000 directive on the marine environment is quite recent. There is

thus a need for all stakeholders to have access to guidance elements. It is necessary for sites managers to allow an adequate management and increase the coherence at the network level. Activity sectors also ask for these guidance elements, in order to better understand the objectives of the directive, what these objectives mean in practice, and *in fine* to better take into account when doing the appropriate assessments and during the projects implementation. Finally, authorities responsible for appropriate assessments ask for better decision-making support tools. Furthermore, as marine Natura 2000 is quite recent, there is a need to share experiences and practices across the network, since all stakeholders involved at the local level face the same kind of issues. This action is also necessary to improve our knowledge about pressures, interactions with the marine environment and the efficiency of management measures. This need of harmonisation and sharing of experiences is particularly relevant regarding the appropriate assessments; as they are a key tool to achieve the directive's objectives. In addition to the guidances, fostering involvement can be very efficient, sometimes more than other measures. That is why it is necessary to provide means to activities, allowing a commitment on a voluntary basis.

Those needs are shared by the other Member states and the action will thus contribute to European initiatives on that topic.

4. Constraints and assumptions:

This action requires availability from stakeholders. The assumption is that this action benefits to all stakeholders, so they should be willing to get involved in the action, provided that AFB brings human and financial means to perform the necessary work.
This action is concerned by interactions between land and sea waters through terrestrial users or activities that can impact the marine habitats, and will be linked with WFD.When possible, videoconference will be set up.

5. Expected results:

This action aims to:

- Update 7 guidance documents and elaborate 4 new ones on the management of activities and their interactions with the Natura 2000 marine habitats;
- Produce 30 experience feedback' factsheets on management actions implemented to reduce the impacts of activities on habitats;
- Build a database on appropriate assessments;
- Elaborate 10 "best practices" charters;
- Create 5 systems, including the "bay label" in the PNRA, to recognise the environmental compatibility of some practices.
- An adaptation of the "valeur Park" brand for marine habitats in the PNRA.

All of these technical products will be elaborated and validated in cooperation with stakeholders, in particular the private sector, including financial contribution for the implementation of good practices. They will feed into the C3 "online dynamic toolkit" as well as the trainings implemented by action C2.

6. Cost estimation: €549,294

- **AFB : €517,950**

Direct personnel costs : €338,830

- Working time of the human sciences manager for coordination (130 days over all phases).
- Working time of the scientific manager (89 days during phases 2 to 4).
- Working time of the marine subregions officers (400 days over all phases).
- Working time of the territories officers (636 days over all phases).

Travel and subsistence : 16 864€ (meetings with stakeholders, local travels for territories officers and national travels for the others).

External assistance: 190 000€

- 20 000€ per phase for technical expertise supporting the production of guidance or background documents.
- 30 000€ during phases 1, 2 et 3 et 20 000€ during phase 4 to support commitment from stakeholders and good practices recognition mechanisms.

- **PNRA : €31,344**

Direct personnel costs : €25,080 (projects managers to participate in best practice guide with users)

Travel and subsistence : €2,664

Consummables : workshop organization (catering) €3,600

Phase 1 costs:

AFB: €123,157

PNRA: €7,614

7. Deliverable products:

30/06/2025: assessment of the activity sectors involvement actions for the conservation of habitats.

8. Milestones:

30/06/2025: dissemination of the products of action C.5 is finalised.

1. ACTION C.6:
Contribute to implementation of marine strategy measure M03 by developing strong protection for Natura 2000 site habitats

2. Beneficiary responsible for implementation:

1-AFB: coordination of the action at the national level and its implementation in two marine nature parks (marine environment department, and department for marine nature parks, national parks and territories)
3-Agde municipality
8-Port-Cros National Park (PNPC)
9-Armorica Regional Nature Park (PNRA)

3. Description (what, how, where, when and why):

What
This action is part of a national measure under the Marine Strategy Framework Directive (MSFD): “marine strategy measure M03: developing strong protection for Natura 2000 site habitats”. Depending on the issues identified, it involves implementing regulatory protection measures within certain Natura 2000 sites, to significantly reduce the main pressures to which the target habitat is sensitive. Various instruments may be used: biotope protection orders, nature reserve, or public maritime domain assigned to the *Conservatoire du littoral*. These protection measures must be validated by the site Steering Committee and ultimately ordered by the relevant authority. These measures must be accompanied by implementation of suitable habitat monitoring, along with monitoring of social and economic impact, and regulatory control.

This measure applies as a priority to habitats whose sensitivity has been assessed as high or very high. Until a national framework is in place (see below), this means the following habitats:
- Atlantic: 1110-1 (seagrass and maerl), 1130-1, 1140-3 (seagrass), 1160-1, 1160-2 (maerl), 1170-1,2,4,5,6,9 and 8330-1
- Mediterranean: 1110-7,8, 1120-1, 1130-2, 1140-7,8, 1170-10,11,12,13,14, 8330-2,3,4
N.B.: habitats are presented here at the level of elementary habitats according to the classification in the French marine habitats manual for defining habitats under the directive. This level of precision is necessary for this action, as sensitivity may vary for different components of the same habitat in the sense of Annex 1 of the directive.

How
Implementation of these measures will stem from implementation of the Documents of Objectives (DOCOBs) in which regulatory management measures have been included, based on the sensitivity of the issues on the site, in order to obtain favourable conservation status. The order of priority of management measures to be applied in the network will be established based on prioritisation of conservation issues at the marine sub-region level.
The action will be implemented in coordination with the various government services: at the central level, for good coordination with the framework to be implemented for Measure M03 of the MSFD programme of measures, and at the decentralised level, for consultation phases that should lead to proposed measures.
Natura 2000 site managers will provide the link with the Steering Committee in the phase for consultation and specification of management measures, and then ensure their implementation.
Activity sectors will be involved in defining the principles of action at the national level, then at the local level via consultation meetings in association with the Steering Committees.

For the purposes of integrated management of the various activities, this action will be coordinated with additional actions regarding analysis of risks associated with fishing activities for habitats of Community interest, and proposed measures that may result from these analyses.

Step 1: Ensure that issues regarding Natura 2000 habitats are properly integrated into MSFD Measure M003-Nat1b: “Enhance the network of marine protected areas by implementation of strong protection measures on sectors with remarkable marine biodiversity”. This phase will be performed by permanent AFB staff.
- List the Natura 2000 habitats subject to regulatory protection measures.
- Analyse the content of DOCOBs and identify any strong protection measures already proposed in DOCOBs and not implemented.
- Identify and analyse sticking points for actions included in DOCOBs and which have not been implemented, in association with Action A1.
- Identify habitats that could be subject to additional regulatory protection measures, on the basis of scientific (identification of functional zones, prioritisation of issues) and socio-economic (social acceptability) criteria.
- Draw up a list of pressures to be addressed for each habitat (in association with Action A4 and specification of long-term objectives per habitat, which includes the list of influencing factors, and with Action C4 on the assessment of pressures on habitats).
- Identify available regulatory instruments, relevant to the situations and legally suitable.

Step 2: Implement regulated zones
Task 1: Draw up proposed measures and consult within Steering Committees
This task involves defining protection issues: target habitats and their location, then drawing up proposed measures suitable for the issues with relevant stakeholders, followed by validation by the relevant Steering Committee.
At minimum, this action will be implemented within the 5 sites managed by beneficiaries:

1. Create a regulated area (fishery reserve) to protect coralligenous reefs (1170-14) on the Agde coast Natura 2000 site.
2. Create a regulated area (nature reserve) to protect subtidal reefs (1170-5, 6 and 7) on the Ouessant-Molène Natura 2000 site in the Iroise marine nature park (PNMI).
3. Create two regulated areas to protect maerl beds (1110-3) and boulder fields (1170-9) on the bay of Brest Natura 2000 site in the Armorica regional nature park. Part of these areas is located in the *de facto* highly protected area, due to its proximity to military bases.
4. Plan, at the scale of the Gulf of Lion marine nature park (PNM GdL), regulatory protection areas for the protection of sedimentary habitats (1110), Posidonia beds (1120), coralligenous reefs (1170-14) and deep reefs (1170).
5. Within the Port-Cros national park (PNPC), mark off an existing area (1.2 km^2 for the protection of Posidonia beds and coralligenous reefs on the Hyères bay) to test the relevance of this equipment for the effectiveness of the highly protected area, then create two regulated areas on the Hyères bay and Corniche Varoise sites for the protection of Natura 2000 habitats (Posidonia barrier reefs).

On the basis of experience on these sites, the AFB will support the implementation of strong protection on other sites, although it is not possible to definitively identify them at this stage (cf. 4. Constraints and assumptions). Marine subregions, PNM Cap Corse and GNB officers will be involved in these further developments.

Task 2: Examination by government services of the proposed measures adopted in the DOCOBs for effective implementation of the measures.

Depending on actual validation by government services on a timescale compatible with the project schedule and the available budget, the following tasks will also be performed on sites other than those mentioned above.

Task 3: Regulated areas implemented by Agde municipality (one area) and by PNPC (3 areas) will be marked out during the project.

In addition to physical marking of these sites, and in general, marking could be electronic and will be performed in collaboration with the Naval Hydrographic and Oceanographic Service (SHOM).
Permanent AFB staff (office for control and monitoring at sea) will provide the link with government services for taking regulated areas into account in the control plans of MPAs by marine sub-region.

Task 4: *(outside this action): Assessment of the effects of the measure under Actions D1 and D2 of the LIFE project.*

Where
At minimum, on the following sites: FR9101414 for Agde municipality, FR5300046 for PNRA, FR5300018 for PNMI, FR9101482, FR9101493, FR9102012 and two future offshore sites for PNM GdL and FR9301613 and FR9301624 for PNPC. The target habitats will be those considered as priority at the Natura 2000 site and marine sub-region levels (on the basis of preliminary work: Step 1) and on areas subject to validation by government bodies.

When
AFB: throughout the project for coordination and in Phases 1 and 2, and 2 and 3 respectively for PNM GdL and PNMI.
Agde municipality: throughout the project.
PNRA: throughout the project.
PNPC: in Phase 1 (marking out of existing area), then 3 and 4 (creation of two new areas and their marking out).

Links with other actions
Assessment of the effects of these regulated areas will be performed in Actions D1 and D2.
This action will be coordinated with Action A4 for management planning.
Consultation meetings rely on the governance actions implemented under Action C1.
Training actions (C2) for environment inspectors and prosecutors.
Awareness-raising (C9) or communication (E2) actions will support implementation of regulated areas.
Data on regulated areas will be consolidated into a database and made available under Action F3. This data will also be included in Action C3 (toolkit).

Reasons why this action is necessary:
This action is part of the long-term objective of maintaining or restoring the habitats for which a site has been designated in favourable conservation status via implementation of suitable protection measures. These measures could be regulatory if justified by the issues. Currently, regulated areas aimed at protecting habitats represent about 1% of the surface area of the network of habitat sites (i.e. less than 0.1% of the waters of metropolitan France). The French Natura 2000 model favours use of contractual measures where possible. However, in some cases, depending on the issues, regulatory protection measures could be more suitable for achieving the objectives of the directive. Regulatory measures are therefore part of the actions proposed by the DOCOBs, but for the moment their implementation is limited. This project action will ensure consistent and acceptable implementation of these regulatory measures, in particular by supporting implementation via preliminary work to provide a scientifically, economically and socially supported basis for work.

In addition to the fact that this action contributes to Good Environmental Status and implementation of the programme of measures under the MSFD, this action will contribute to implementation of the national strategy for marine protected areas.

Some sites will receive significant means for implementing this action, in particular for marking out regulated areas. The project and these pilot sites provide experience of

implementing the means required for maximum effectiveness of strong protection in marine Natura 2000 sites, to achieve the objectives in terms of habitat conservation status.

4. Constraints and assumptions
The main constraint for this measure is the social acceptability of regulations at sea. The timescale for adoption of measures is also difficult to predict. At this stage, 5 areas where these constraints are under control have been identified. Other sites could be affected by this action on the basis of experience from the pilot project on these 5 areas, and subject to the issues identified being compatible with the national framework and validation of the approach by the Steering Committee.

To mitigate this risk, recommendations from the national conference on MPAs, pertaining to implementation of strong protective measures, will be followed:
- With regard to governance: definition of national guidelines and local objectives shared with users, joint construction of projects at the local level and proposals produced and validated within Steering Committees, and involvement of assessment services as early as possible.
- On the technical side, to optimise the positive effects for the environment and users: implementation of impact monitoring on these areas, use of buffer zones, and taking the life cycle of species into account and their dependence on specific habitats.

The assumptions in terms of surface areas, mentioned in the section on expected results, is based on the protection issues identified and targeted in the DOCOBs for each site. However, the final results will depend on the options adopted during the consultation process. Another intention of the action is to test different approaches for implementation of these areas, such as the low-cost opportunistic approach (for example for PNRA), and an approach using significant means to aim for maximum optimisation of protection (as for Agde municipality and PNPC).

Finally, there is uncertainty associated with the effectiveness of this action, as changes in the conservation status of habitats could be slow and affected by other factors. While unable to mitigate this uncertainty, the project will seek to understand the impact of the action on the conservation status of habitats via assessment actions.

5. Expected results:
Creation of 6 highly protected areas (regulated areas) and achievement of favourable conservation status or improvement of the conservation status for habitats inside the following Natura 2000 sites:

- Agde coast (FR9101414) – coralligenous reefs (5 km²).
- Bay of Brest (2 areas, FR5300046) - maerl (2.5 km²), seagrass (0.2 km²), boulder fields (0.3 km²).
- Ouessant-Molène (FR5300018) – subtidal reefs (3 km²)
- Hyères bay (FR9301613) and Corniche Varoise (FR9301624) – Posidonia barrier reefs (linear structure: 1km).

Achievement of favourable conservation status or improvement of the conservation status of coralligenous reefs or Posidonia beds (1.2 km^2) on the Hyères roadstead site.

Marking installed for highly protected areas on the Agde coast site (1 area), and the Hyères bay (2 areas) and Corniche Varoise sites (1 area).

A highly protected areas plan for habitats of Community interest within PNM GdL, validated by the park's management board.

6. Cost estimation: €661,950
1-AFB €222,000

Personnel costs: €194,000
Parks and Golfe Normand breton officer (Cap Corse, Golfe du Lion) phases 3-4 : 203days
Iroise Marine nature park officer (all phases) : 234 days
- Mediterranean officer (60 days phase 2 & 3)
- Chanel and North sea officer (166 days, all phases)
- Atlantic officer (93 days, phases 3 and 4)

Travel costs: €3,000 (local travel for phase 2 and 3)
External assistance: €25,000
- €5,000 for PNM GdL in Phase 2 (technical support for defining the plan for highly protected areas).
- 2*€10,000 for PNMI in Phases 2 and 3 (scientific and technical support for implementation of the nature reserve).

3-Agde municipality: €295,880
Personnel costs: €53,280
- €50,400 (42 days at €300 per phase for the senior manager: consultation to define the area and relations with stakeholders throughout the project).
- €2,880 (4 days at €180 per phase for the technician: support in preparation for marking out, installing buoys and then their maintenance).

External assistance: €57,600 buoy maintenance (€19,200 per phase for Phases 2, 3 and 4, on the basis of a cost estimate regarding a flat-rate support fee for installation then maintenance of the buoys by the Lighthouses and Beacons Service, at an annual cost of €9,600). The Lighthouses and Beacons Service is the national reference operator for markings at sea.

Infrastructure: €104,000
€104,000 for purchase of 8 buoys in phase 1 (€13,000 per buoy, on the basis of a cost estimate from the Lighthouses and Beacons Service, the high cost of each buoy being mainly due to the depths involved). This cost has been assigned to the “infrastructure” category, as the equipment, although removable, is destined to remain attached to the seabed for 15 years, and this complies with Agde municipality accounting rules. Buoy installation will be performed in Phase 2, but the purchase cost has been assigned to Phase 1 to spread out expenses.

Equipment: €81,000
- €80,000 for the purchase of a vessel (cost estimated on the basis of a quote for an 8 metre vessel with a 200 hp engine, and fitted out for hosting professional divers). The vessel will be used for buoy installation, and for habitat monitoring actions (Action D1) and social and economic surveys (Action D2). The cost has been assigned to Action C6, which is at the centre of Agde municipality involvement in the project.
- €1,000 for purchase of a computer for all Agde municipality actions on the project.

8-Port-Cros National Park (PNPC): €139,150
Personnel costs: €16,150
- €16,150 (50 days at €170 in Phase 1, then 30 and 15 days in Phases 3 and 4 respectively, for additional junior staff for defining marking plans and buying equipment).
- Support of permanent staff (cost not accounted for under the project; 40 days in Phases 2, 3 and 4: consultation for definition of the two areas and relations with the stakeholders over these phases).

Travel costs: €2,000 for local travel for meetings with stakeholders (higher cost in Phases 3 and 4 as the target areas will be further away).

Infrastructure: €121,000

- €36,000 in Phase 1 for the marking of a 1.2 km^2 area on the basis of an estimate for installing 10 buoys
- €43,000 in Phase 1 for the marking of an area expected to be 1 km^2, made up of two sub-areas, requiring installation of 25 buoys (depths being less than for the first area).
- €42,000 in Phase 1 for the marking of an area expected to be 1 km^2, made up of two sub-areas, requiring installation of 24 buoys (depths being less than for the first area).
For the same reasons as for Agde municipality, these costs have been assigned to the "infrastructure" category.

8-Armorica Regional Nature Park (PNRA): €4,920
Personnel costs: €4,920 (24 days work time for additional staff distributed over the 4 phases: consultation to define the areas and relations with stakeholders throughout the project).

Phase 1 costs:
AFB: €22,738
Agde: €126,602
PNPC: €47,829
PNRA: €439

7. Deliverable products:
31/12/2024: report on the implementation of strong protection areas.

8. Milestones:
31/12/2018: national framework for installation of strong protection within Natura 2000 sites available.
31/12/2019: marking out of a highly protected area within the Hyères bay site.
31/12/2020: creation and marking out of a highly protected area within the Agde coast site.
31/12/2020: validation of the highly protected areas plan for habitats of Community interest within PNM GdL**.**
31/12/2021: creation of two highly protected areas within the bay of Brest site.
31/12/2022: creation of a highly protected area within the Ouessant-Molène site in the PNMI.
31/12/2023: creation and marking out of a highly protected area within the Hyères bay site.
31/06/2025: creation and marking out of a highly protected area within the Corniche Varoise site.

Dependence on complementary funds: although the action is not dependent on a complementary fund, synergies will be sought between this action (the implementation of highly protected areas) and the measures that can derive from risk analysis of fishing activities funded by EMFF.

ACTION C7 : Restore Habitats

SUBACTION C.7.1 – develop lower impact recreational anchorages and navigation marks

2. Beneficiary responsible for implementation:

1-AFB, for coordination and implementation of the action.
8-Port-Cros National Park (PNPC) for roll-out of anchorages across a pilot area.
9-Amorique Regional Nature Park (PNRA) for feedback on the methods tested and roll-out of anchorages and navigation marks.
11-Gulf of Morbihan Regional Nature Park (PNRGM) for feedback on the methods tested.

3. Description (what, how, where, when and why):
This action seeks to reduce the impact of fixed anchoring systems on marine habitats. It affects yacht anchorages and navigation marks. The action differentiates between “small yachts” (under 24 m) in Task 1 and “large yachts” in Task 2. Navigation marks are considered in Task 3.

Task 1: small yacht anchorages
What
This task involves developing the organisation of yacht anchorages (yachts under 24 m) by creating and managing anchorage zones, incorporating anchorage techniques with a lower impact on marine habitats. This task can also cover anchorage associated with diving.

Anchorages are generally organised by the implementation of small craft anchorage zones (ZMELs). This is a regulatory provision in France for the spatial distribution of anchorages, in part according to environmental criteria, which authorises user fees for the services provided (e.g. anchorages).

This task will initially consist of producing methodological information for future roll-out of lower impact anchorages.

This methodological work will be based on feedback from PNRA, PNRGM and PNMI (AFB) and will provide the following scoping information: technical information for anchorage sizing, methodology for zone organisation and analysis of the carryover effects, procedure for ZMEL creation including an impact study, monitoring actions to be implemented, funding mechanisms and legal aspects.

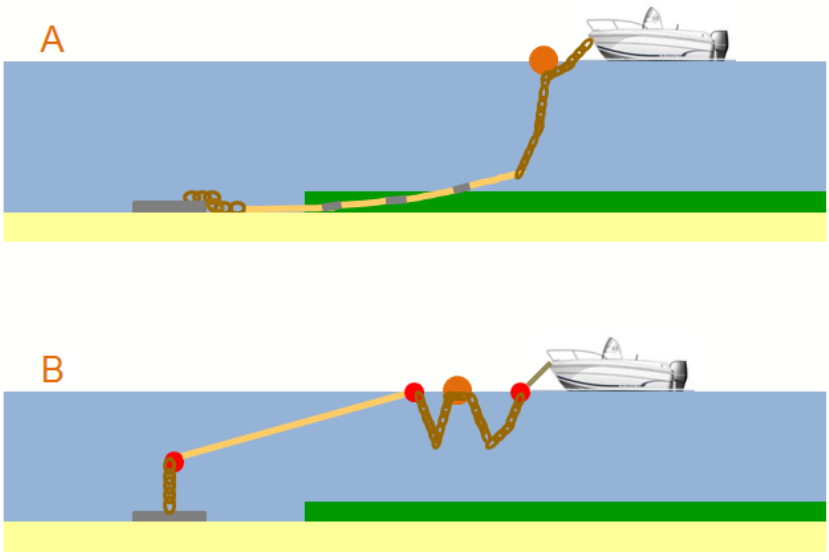


Figure 1: example of two systems tested in PNMI (System A patented by *Bretagne Plongée* and System B by *Imer*). These systems reduce interactions between the chain and habitat, compared to a traditional system.

How
Development of a methodological guide will be coordinated by the AFB project officers for the Mediterranean sea and for the Channel and North sea. It will be supported by PNRA, PNRGM and the AFB PNMI officer to take into account feedback from the trials conducted on their site. It will be carried out in partnership with all other relevant managers, yachting and diving clubs, local authorities and organisations responsible for yachting.

Three calls to tender will be issued one after the other for implementation of anchorages in the sites managed by the AFB and PNRA (2 experimental anchorages for maerl preservation) and three calls for expression of interest will be launched for implementing anchorages on sites not managed by the project beneficiaries. The specifications for calls to tender and calls for expression of interest will be defined by the AFB officers (of marine sub-regions and PNMs) and PNRA staff. Projects will be selected on the basis of the following criteria:
- Justification of the challenges facing habitats, interactions with the activity and the expected short-term improvement to the status of marine habitats.
- Local acceptance: inclusion of the action in the DOCOB, partnership with a yachting or diving club, existing or planned ZMEL.
- Consideration of the authorisations required.
- Long-term future of the project (requiring the commitment of the anchorage zone manager).
- Scientific monitoring carried out in order to assess the impact of the action.

Project selection will involve the relevant stakeholders (government services, user representatives, etc.).

Anchorages will be implemented on the sites selected via a partnership agreement with the anchorage zone managers, requiring joint funding of at least 50% by the other party and a commitment to long-term system maintenance and monitoring of the impact of anchorages (the results of monitoring will be reported under Action D1). The projects must include communication actions with users and incorporate feedback that can be passed onto other relevant managers and stakeholders.
Similarly, the implementation of these AFB anchorages will be subject to the commitment of the anchorage zone manager.

Projects that include definition of the ZMEL or prototype testing may be selected, providing that this is justified by specific conditions (e.g. type of sea bed).

Project monitoring and capitalisation will be performed by AFB staff.

Calls for expression of interest will be coordinated with Task 3 and will include navigation marks. They will be issued at the same time as the expression of interest under Action C.7.2.

As part of this action, the PNP-C will implement 60 lower impact anchorages across a pilot zone, with the aim of rolling out the technique in the long term right across Porquerolles island (500 anchorages), in the Hyères Bay Natura 2000 site and within the national park. This is the area in the Mediterranean where anchorage pressure is considered to be the greatest (2017 study).

This task will be carried out alongside Actions C3 (for publishing methodological information), C8 (for raising the awareness of the relevant authorities and users) and D1 (for monitoring the impact of these techniques).

Where
The methodological guide will apply to the entire project area.

For the beneficiaries, implementation of anchorages will affect the sites managed by PNP-C and PNRA, and for the AFB, at least the sites managed by PNM GDL, PNM BA and PNM EGMP.

The choice of other sites will depend on calls for expression of interest and around thirty sites may be affected (sites with relevant actions outlined in their DOCOB). The aim is to implement around a dozen projects across as many different sites as possible.

When
The methodological guide will be produced during Phase 1 of the project.

Calls for expression of interest and invitations to tender will be launched in a coordinated manner in 2019, 2021 and 2023.
The projects are expected to last for an average of two years, with one year for prior studies and work, where required, and one year for installation. This does not include feedback on habitat monitoring and continuity of the funding mechanism (at least two years).

Task 2: large yacht anchorages
What
This task seeks to support and boost the development of lower impact anchorage zones for medium to large yachts.
Several steps are necessary for implementing this type of project:
Step 1: sea bed survey
Step 2: economic, social, financial and legal study
Step 3: definition of the project specifications and method (carried out by the anchorage zone manager, public service concession, etc.) and completion of procedures (particularly for administrative authorisations).
Step 4: works and roll-out of anchorages.
Step 5: ZMEL management
Step 6: monitoring actions for the environment, zone user numbers and finances, in order to assess the environmental efficiency and test the proposed business model.

How
The AFB will support the performance of these projects in any of the steps. The project officer for the Mediterranean sea will be responsible for defining and requesting external assistance to facilitate project progress, working with the relevant stakeholders, including site managers, anchorage zone managers, yachtspeople or their representatives and when possible, involvement of the private sector. This assistance could be for the technical, legal, financial or economic and social aspects. He or she will also be responsible for supporting the managers' search for funding, in accordance with Action C9, and will ensure links between the projects across different sites in order to facilitate experience sharing, which will be presented in a methodological guide.
This task will be performed alongside Action C9 for the analysis of a fee mechanism to fund the implementation of large yacht ZMEL projects and ensure their long-term future (funding to manage monitoring actions, maintenance and facility renovation), and Action C3 (for publishing methodological information), Action C8 (for raising user awareness) and Action D1 (for monitoring the impact of these techniques).

Where
For large yachts, 4 sites have currently identified a major challenge for this subject (damage to sensitive habitats, including Posidonia seagrass beds and corralligenous formations): "Corniche Varoise", "Cap Ferrat", "Baie et Cap d'Antibes, îles Lérins" and "Bouches de Bonifacio, îlots des Moines". Other sites, especially in Corsica, may also be interested in this task. The aim is to support at least two in implementing projects.

When
Studies on ZMEL projects have already been completed or are ongoing, with the projects set to be carried out from 2019/2020.
The support of the project officer for the Mediterranean sea and external assistance are regularly scheduled in each phase. The extent of support and assistance could vary depending on the progress of projects.

Task 3: marking

What
Similarly to Task 1, this task seeks to reduce the impact of sea mark systems placed in areas with sensitive habitats. Two types of sea marks will be considered in this task:

- Navigation marks in highly protected areas, which could be implemented in the project.
- Other types of sea marks (swimming areas, navigation channels, etc.) for which methodological support for implementing lower impact systems will be provided during this task. This support will target the competent authorities for sea marks (local authorities, government services, NGOs, etc.), with a special focus on demonstrating the interest of these techniques for saving money in the long term.

How
The methodological guide will be produced by the sub-regional project officers for the Mediterranean sea and for the Channel and North sea, with the support of permanent staff.

For the implementation of navigation marks, the topic of lower impact sea marks will be included in the funding possibilities for calls for expression of interest and invitations to tender issued by the AFB. The selection criteria will also be based on justification of the challenges in terms of habitat protection and on the commitment of the Natura 2000 site manager to ensuring system continuity.

This task will be carried out alongside Action C3 (for publishing methodological information), Action C6 (for highly protected areas), Action C8 (for raising the awareness of the relevant authorities) and Action D1 (for monitoring the impact of these techniques).
Where
Traditional navigation marks will be replaced by lower impact navigation marks in a highly protected area on the Bay of Brest site for maerl protection (PNRA). The other sites will depend on the results of calls for expression of interest.

The economic rationale for moorings for all types of yachts is that the user pays for the infrastructure in the long run. That is why such prerequisites will be sought in the calls for interest. Furthermore, the action will look for the involvement of the private sector such as the nautical industry to support the development of such techniques.
The dissemination of the techniques to the recreational boaters will be done through action C.8 and especially through tourism offices for touristic boaters.

Reasons why the action is necessary

Anchorages can have a negative impact on the conservation status of habitats, especially seagrass meadows (zostera in the Atlantic and Posidonia in the Mediterranean), but also reef subtidal habitats (gorgonians or coralligenous formations). Regulating and organising anchorages can help reduce pressure, but it is not always enough. In addition to organisational methods, many sites have listed the development of lower impact anchorages in their DOCOB (over 30 SACs). There are major expectations on this subject, which is why this action has been included in the project.

Innovative anchorage techniques have been tested, but the lack of hindsight and their cost could prevent implementation. This action aims to make these new techniques available to all and to boost their use, by paying for the current additional cost and by supporting the competent organisations in implementing them. The aim is to reach a lower cost than traditional techniques by the end of the project.

For the large yacht task, managing average large yacht user numbers on Mediterranean Natura 2000 sites is a major issue given the impact of the anchorage of these yachts on sea beds, especially Posidonia seagrass and coralligenous formations. This is a management issue specific to the Mediterranean, where large yachts have witnessed significant growth and now have major economic importance. Regulatory measures limit or prohibit the anchorage of ships in some very sensitive sectors and focus them in other, sandy areas. However, due to economic factors, regulations are not always possible and there are no projects to reconcile user numbers with environmental protection. The roll-out of lower impact anchorages goes far beyond the scope of this type of project (e.g. estimated €5 million to implement 80 anchorages on the "Corniche Varoise" site). However, initial studies have confirmed the technical and economic feasibility, showing that economic balance could be achieved in the long term (10 years). The action seeks to facilitate the implementation of these systems by supporting the relevant managers, particularly in seeking funding in accordance with Action C9.

For the navigation marks component, the action will focus on funding based on environmental measures such as highly protected areas. For other types of sea marks, such as swimming areas, funding these systems would largely exceed the project's scope due to their large number. In these instances, the action proposes methodological support from the competent authorities (e.g. local authorities).

4. Constraints and assumptions

For anchorages, the priority sites need to be selected as the action's budget cannot fund all sites where the action has been proposed. Selection will be based on various criteria, including the anchorage pressure and project maturity. In particular, this requires the long-term commitment of the anchorage zone manager. The existence of a funding mechanism to secure the future of ZMELs (zone maintenance and monitoring) will also be an essential requirement.

Several factors could hinder local implementation of the action, including:

- Acceptance by users. For example, the use of new materials such as textiles instead of traditional techniques that use more chains.
- The economic importance of yachting activities.
- The performance of prior impact studies.

The project will seek to reduce these risks as much as possible through strong support from the project coordination team and the selection of relevant sites. The risk also appears moderate as this issue already has significant support.

The expected costs and results have been defined on the assumption that the project funds implementation of anchorages at a level not exceeding 50%. The remaining sum and maintenance will be at the cost of the anchorage zone manager. The action is intended to promote the purchase of equipment with a lower environmental impact, without fully funding the cost of yachting infrastructure.

For navigation marks, the priority is for navigation marks in highly protected areas (excluding sea marks for swimming, etc.).

When possible, videoconference will be set up.

5. Expected results:

Task 1: small yacht anchorages

The ZMEL model of lower impact anchorages has been tried and tested and widespread roll-out is possible at a reasonable cost for anchorage zone managers.

Implementation of ten ZMELs for habitat protection. The zones will be managed in the long term and self-funded.

For yachts under 24 metres long, across the three marine sub-regions, lower impact anchorage techniques will be available at a cost that does not exceed that of traditional anchorages.

Habitats of community importance will be protected across a total area of at least 5 km^2 by implementing lower impact anchorages. These habitats are mainly Posidonia and zostera seagrass meadows, and to a lesser extent, maerl and reefs (reef subtidal habitats with gorgonians or coralligenous formations).

The expected numbers of anchorages installed are as follows:

- 2021: 100 anchorages installed
- 2023: 200 anchorages installed
- 2025: 300 anchorages installed

including, for beneficiaries, at least 60 anchorages installed on the Hyères Bay site (PNP-C, 30 for Phase 1, 30 for Phase 2, and then 30 throughout Phases 3 and 4, implemented by the anchorage zone manager on the basis of tests carried out during the first two phases), 2 anchorages installed on the Bay of Brest site (PNRA) and 60 anchorages installed on sites managed by the AFB (20 in Phase 1, 20 in Phase 2 and 20 in Phase 3).

Task 2: large yacht anchorages

For large yachts, at least two ZMELs will be installed by the end of the project, with long-term funding secured. A balanced technical and financial model will have been tried and tested and made available to other interested sites. Large yachting will be managed in a way that is compatible with the preservation of habitats of community importance, with anchorages that have an almost non-existent impact.

Task 3: marking

A guide will be available and 20 local authorities will be have been made aware of the impact of navigation marks on habitats and will have received training on implementing lower impact sea marks.
3 marked highly protected areas, including one within PNRA.

For task 1, 2 and 3:
Involvement of the private sector (nautical industry) in the development of least impact moorings and markings.

6. Cost estimation: €792,290

Cost calculations for anchorages and navigation marks are based on initial feedback from trials of these systems. The techniques vary depending on the type and depth of sea beds and the size of the units received. In the Mediterranean, costs are generally higher given the depth and absence of tides, requiring underwater work to install anchorages (which can be carried out at low tide in the Atlantic).
Pilot tests include:
- Within PNMI, cost of an anchorage system for units less than 8 metres long: €1,500 (including installation).
- Within the Agde coast site (managed by the municipality of Agde), average cost of an anchorage system for units between 6 and 17 metres long: €3,500 (including installation).
- Within the Estérel site, average cost of an anchorage system for diving: €3,500
- Within PNR Camargue, average cost of a lower impact sea mark (on shallow sea beds): €2,000.

AFB: €800,370

Personnel costs: €183,750

- Time taken by the marine sub-regional project officers for the Mediterranean sea and for the Channel and North sea (with the support of the PNMI project officer) to develop reference documents on the basis of existing pilot tests at the start of the project for providing a framework for action.

- Time taken by the marine sub-regional project officers (with the support of the PNM officers) to define the specifications for calls for projects, select cases, monitor projects and capitalise on the results after Phase 2.

- Time taken by the project officer for the Mediterranean sea (60 days per phase) to support the implementation of large yacht anchorage projects (Task 3).

Travel costs: €7,800, travel by marine sub-regional project officers and PNM officers to sites where the action is rolled out.

External assistance: €160,000

- €40,000 per assistance phase for actions prior to the implementation of lower impact large yacht anchorages (sea bed survey, impact studies, definition of the business model, implementation of partnerships).

Infrastructure costs: €300,000

- 3 calls for expression of interest (€70,000 each) for the installation of anchorages and navigation marks on sites not managed by the project beneficiaries. Funding of the selected projects will be organised in two instalments between two phases.

- €30,000 for Phases 1, 2 and 3 for implementing anchorages and sea marks on sites managed by the AFB (invitations to tender) and purchasing equipment for PNRA.

PNPC: €139,480

Personnel costs: €4,080

- €4,080 (9 days at €170 in Phase 1, then 15 days in Phase 2 for additional junior staff for defining anchorage plans and purchasing equipment).
- Support of permanent staff (cost not accounted for under the project; 20 days in Phases 1 and 2 for defining the two zones and relationships with stakeholders).

Travel costs : €1400 (meetings with Mediterranean partners)

Infrastructure costs: €134,000
- €62,000 for roll-out of 15 to 20 anchorages in Phase 1 (expected average cost of €3,500).
- €72,000 for roll-out of 15 to 20 anchorages in Phase 2 (expected average cost of €4,000 for deeper areas).

This cost has been assigned to the “infrastructure” category, as the equipment, although removable, is destined to remain attached to the sea bed for 15 years, and this complies with PNP-C accounting rules.

PNRA: €1,640
- Time taken for feedback and supporting the specifications for on-site implementation of two anchorages and lower impact navigation marks (bulk purchase of equipment by the AFB).

PNRGM: €7,770
- Time taken by additional staff (16 days for the project manager and 18 days for the task manager) to produce the yachting management guide.

Phase 1 costs:

AFB: € 167,081

PNPC: €68,405

PNRA: €6,474

PNRGM: €8,314

7. Deliverable products:

Task 1: small yacht anchorages
30/06/2019: a guide on implementation of ZMELs for habitat protection and lower impact anchorage techniques.
30/06/2025: a review of anchorages installed (including those on sites managed by the associated beneficiaries): list of zones, surface of habitats affected, spatial distribution of anchorages, number, photographs and costs of the different types of anchorage installed.

Task 2: large yacht anchorages
30/06/2021: a guide entitled "business model and technical guidelines for implementing large yacht anchorage zones."
30/06/2025: a review of ZMELs implemented with the project's support: number of zones, spatial distribution of anchorages and feedback on the technical, environmental, social and economic aspects.

Task 3: marking
30/06/2019: a guide on lower impact navigation mark techniques for local authorities.
30/06/2025: a review of navigation mark systems installed (including those on sites managed by the associated beneficiaries): list of zones, number and spatial distribution of navigation marks and photographs of systems.

8. Milestones:

31/03/2019 : publication of a guide on lower impact anchorage and navigation mark techniques.
30/06/2019: launch of the first call for expression of interest and the first invitation to tender.
30/06/2021: launch of the second call for expression of interest and the second invitation to tender.
30/06/2023: launch of the third call for expression of interest and the third invitation to tender.

ACTION C.7.2: Habitat restoration actions

2. Beneficiary responsible for implementation:
1-AFB
9-PNRA

3. Description (what, how, where, when and why):

What
This action covers the various methods of marine habitat restoration:

1. Eradication or reduction of invasive species, on highly-significant sectors where the source of these species and their propagation factors are now under control
2. Cleaning of the seabed by removing litter: lost fishing nets, ineffective artificial reefs, abandoned moorings, cables, etc.
3. Species propagation (seagrass)

On the basis of the census of actions planned under the DOCOBs, the marine habitats relevant to these actions are estuaries, zostera and posidonia seagrass meadows, maerl beds and reef habitats.

How
At the start of the project, PNRA will produce a methodology guide for managers, on the basis of experiments performed to eradicate invasive species (*Spartina alterniflora* and Japanese oyster) on intertidal habitats. Furthermore, PNRA will implement new experimental sites for the eradication of invasive species (*Spartina alterniflora*, exotic gracilaria, and Japanese oyster) on intertidal habitats with soft or reef substrates.

The AFB's project officers for the Mediterranean and Channel and North Sea will produce an inventory of existing restoration techniques, with the support of the PNM EGMP officer. This inventory will be used to frame the calls for expression of interest and public contracts, whose specifications will be produced by AFB staff.

The AFB will award three consecutive public contracts for the performance of restoration actions within sites management by the AFB and three calls for expression of interest will be made for the performance of restoration actions on sites not managed by project beneficiaries. Projects will be selected based on the following criteria:
- Substantiation of the issues on the habitats, and the short-term improvement expected on the status of marine habitats.
- Local acceptability: inclusion of the action in the DOCOB.
- The existence or development of a protocol for the action.
- The necessary authorisations being taken into account.
- Performance of the scientific monitoring required for assessing the impact of the action.
- The potential for transfer of the action to other sites.

The topic of invasive species will be considered as a priority within this action and will be promoted within the calls for proposals.

Among the sites managed by the AFB, estuary habitat restoration actions via eradication of invasive species (*Spartina anglica*) will be performed on PNM EPMO sites.

The calls for expression of interest will be made at the same time as those for Action C.7.1.

Project selection will involve relevant stakeholders (government services, scientists, etc.). The selection committee will ensure that at least half the restoration actions cover subtidal habitats and that the priority topic of invasive species is adequately addressed. Restoration actions could be managed by various bodies, such as local authorities, Natura 2000 site managers, port or anchoring zone managers, professional bodies (fishermen's associations, maritime cooperatives, etc.), user associations or environmental NGOs. They could be subcontracted to maritime works companies, by providing contractors with the required methodology.

AFB staff will ensure that projects are monitored and their results capitalised on.

This task will be performed in association with Actions C3 (for making methodologies available), C8 (for awareness raising among relevant users and authorities) and D1 (for monitoring the impact of these techniques).

Where
These restoration actions will be performed on areas where the pressures that caused the degradation are under control. They must enable or accelerate natural habitat restoration. For beneficiaries, restoration actions involve the bay of Brest site, managed by PNRA, and for the AFB, at minimum, within the sites managed by PNM EPMO.
Selection of other sites will depend on the calls for expression of interest. The objective is to implement around 10 projects on different sites.

When
The methodology guide will be produced by PNRA during the first phase of the project.

The inventory of restoration techniques will be produced in 2018 by the AFB.

The calls for expression of interest and public contracts will be launched in a coordinated manner in 2019, 2021 and 2023, at the same time as those of Action C.7.1.
The mean expected duration of projects is two years: 1 year for preliminary work and studies, where necessary, then 1 year for performance. This does not include the experience feedback from monitoring the habitats (at least two years).

Reasons why this action is necessary
This type of action corresponds to the definition of concrete actions which are at the heart of LIFE nature projects, and many Natura 2000 sites have identified this type of action in their DOCOB. However, interventions on the marine environment are complex and potentially expensive. This action is therefore necessary to test innovative techniques to reduce high pressures on habitats, thereby directly contributing to their natural restoration.

4. Constraints and assumptions
It is difficult to propose expected results in terms of surface areas. For example, for two experiences of eradicating *Caulerpa racemosa* by the Agde municipality and PNCC, the surface areas were of the order of a few square metres (test of a treatment technique on patches where the species had developed) and several hundred square metres (manual treatment by divers) respectively.

Furthermore, the cost of these operations can be very high when they require underwater interventions. The idea of this action is to test techniques, in intertidal and subtidal areas, and to measure their effectiveness in terms of achievement of favourable conservation status compared with the cost. To optimise the cost/effectiveness ratio, projects with high potential for transfer to other sites (i.e. moderate cost) will be given preference in the selection process.

Removal of lost fishing nets could be performed under this action, as the French operational programme of the European Maritime and Fisheries Fund (EMFF) does not permit this type of action. In contrast, the clean-up of abandoned oyster farms, which is in the DOCOBs of many sites, will not be eligible for the calls for expression of interest, as it can be funded by the EMFF.

5. Expected results:
Experimental restoration actions performed on 10 sites, with experience feedback, of which half the actions are underwater and at least five projects will target invasive species, which return habitats to a good long-term conservation status over the experiment surface areas.

Including:

For PNM EPMO (AFB):

- restoration of a hectare of estuary habitats, currently colonised by invasive species.

For PNRA:

- production of a methodology guide for combating invasive species on intertidal habitats with soft or reef substrates.
- restoration of a hectare of intertidal habitats, currently colonised by invasive species.

6. Cost estimation: 266,647€

The cost estimate is based on experience of restoration actions. For example, the cost of removing a lost net ranges from €3,000 to €10,000 depending on surface and depth. Underwater actions for eradicating invasive species have recently been performed (2014 and 2015) on Agde Municipality and PNPC sites, costing €11,000 and €13,000 respectively.

1-AFB: €249,850

Personnel costs: €93,250

- Working time for project officers for the Mediterranean and Channel and North Sea marine sub-regions and the PNM EPMO officer) to produce the inventory of restoration techniques at the start of the project to frame the action.
- Working time for marine sub-region project officers to draw up the specifications for calls for projects, project selection and monitoring, and capitalising on the results from Phase 2 onwards.
- Working time for PNM EPMO officers for implementation of the action on the relevant sites.

Travel costs: €6,600, travel on the sites where the action is implemented for marine sub-region and PNM EPMO project officers.

External assistance: €150,000

- 3 calls for expression of interest (€30,000 each) for implementation of restoration project. Funding of selected projects will be in two instalments, overlapping two phases.
- €15,000 per phase for Phases 1, 2 and 3 for implementation of restoration projects within sites managed by the AFB (public contracts).

9-PNRA: €16,797

Personnel costs: €16,135

- Field staff: 75 days at €155
- Additional staff: 22 days at €205

Travel costs: €662 for two trips in France for sharing experience.

Phase 1 costs:

AFB: €63,879

PNRA: €6,035

7. Deliverable products:

31/12/2019: methodology guide for combating invasive species, on intertidal habitats with soft or reef substrates (PNRA).
30/06/2025: assessment of the restoration actions implemented.

8. Milestones:

30/06/2019: launch of the first call for expression of interest and first contract.
30/06/2021: launch of the second call for expression of interest and second contract.
30/06/2023: launch of the third call for expression of interest and third contract.

1. ACTION C.8: Change behaviours to limit the impact of activities on sensitive habitats

2. Beneficiaries responsible for implementation:

1-AFB, its public policy support department (marine environment department) and the department for Marine Nature Parks, National Parks and Territories.
8-PNPC
9-PNRA
10-PNRC
11-PNRGM

3. Description (what, how, where, when and why):

What

The aim of this action is to raise awareness of the impacts of activities and change behaviours in order to sustainably limit the impacts of activities.

The action will target habitat/pressure pairings where awareness-raising is a real lever for reducing the pressure and improving the habitat conservation status in the long term.

The first phase of the IP will target the following habitats as a priority: zostera seagrass beds, Posidonia seagrass beds, maerl, honeycomb worms, laminariaceae fields, coralligenous formations and tidal caves.
The main target audience for this phase includes:

- users of professional and recreational "regulated" activities, when potential representatives struggle to raise the awareness of these users
- users of activities being outside any organisational setting.

The main activities targeted are recreational seafood hand harvesting, recreational boat fishing, yachting and water sports, especially diving.

1. Implement existing awareness-raising measures

4 types of measures are planned:

<u>1/ development and distribution of teaching materials</u>

- Development and publishing of guides, laminated and paper datasheets, flyers and tide tables to raise awareness of habitats (by all beneficiaries involved in Action C8);
- A recreational fishing kit to encourage the use of a sea anchor (AFB);
- A map of marine habitat sensitivity, developed for at least 5 Natura 2000 pilot sites, published on their websites (AFB).

These tools will be distributed:

- during awareness-raising campaigns in direct contact with users;
- *via* the national network for sustainable recreational seafood hand harvesting (*réseau national pour une pêche à pied récréative durable*) for dedicated materials;
- during awareness-raising training courses (connected to Action C2) for organisations in contact with the general public (such as tourism offices) or training planned in specialist maritime schools;
- in the toolkit (Action C3) for the most relevant tools.

Example block diagram used by PNM Iroise to raise awareness of the impact of anchorage:

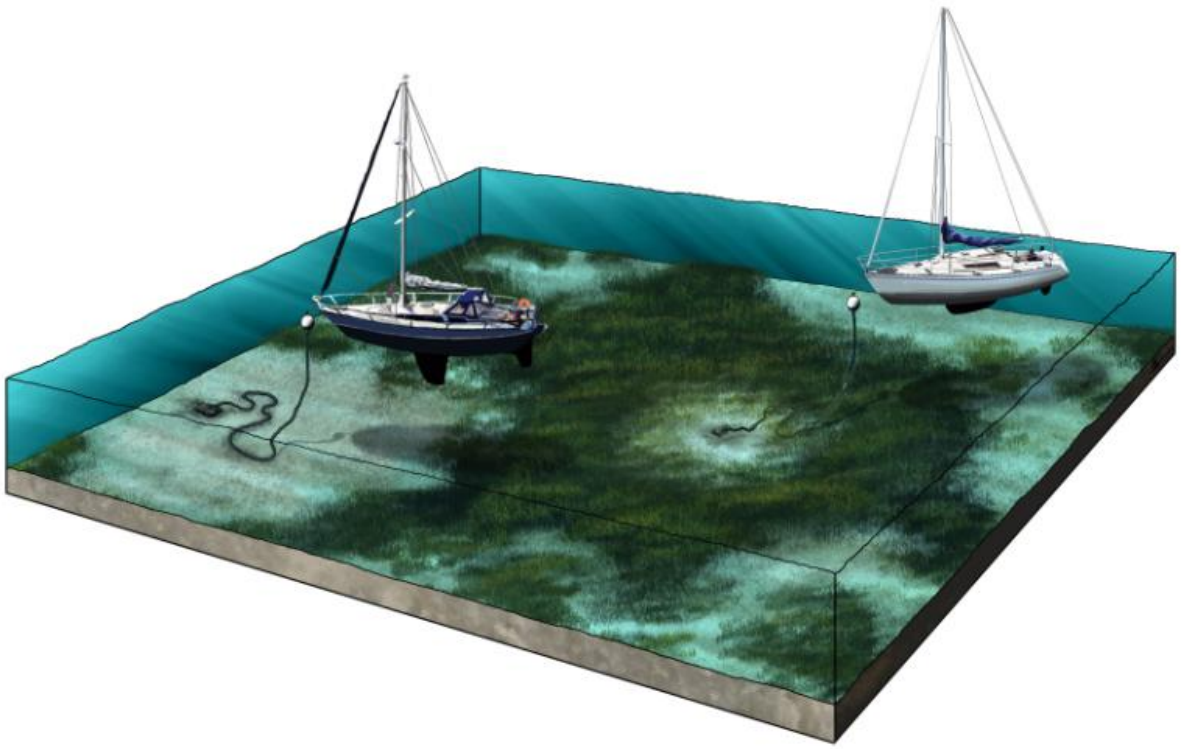


Figure 1: Illustration of the impact of two types of anchoring on zostera beds on the Crozon peninsula. Innovative anchorage on the right, traditional anchorage on the left (credits: *Maxime Aubinet*)

2/ Awareness-raising campaigns

These campaigns establish direct contact with users during their activity. The technique has been proven effective, particularly during the LIFE + Recreational seafood hand harvesting project.

Various campaigns are planned to raise awareness of the protection and management of Natura 2000 habitats:

- on land:
    - Awareness-raising campaigns for recreational seafood hand harvesting by the AFB (with the support of the network for sustainable recreational seafood hand harvesting), PNRGM and PNRA.

- on the water:
    - Underwater camera campaigns organised by PNRA and water sports centres;
    - Campaigns aimed at raising the awareness of stakeholders on the water, concerning compliance with the regulations in force (2 highly protected areas), organised by PNRC;
    - Campaigns aimed at water sports club instructors (connected to C2), organised by PNRGM.

- Underwater
    - Implementation and management of 4 underwater trails and monitoring of their effectiveness throughout the IP period (AFB).

3/ Development of digital tools

- Development of a digital application on anchorage best practice in the Atlantic Ocean, based on the DONIA tool experimented in the Mediterranean sea (AFB);
- Development of local sea bed imaging for diving in each marine sub-region, in accordance with the MSFD diving strategy (Mediterranean MO31 programme of measures) (AFB);
- Publishing of information on sensitive habitats in navigation software and on smart buoys (AFB);
- Development of the “marine habitats” component in the PNRA Natura 2000 site’s “Vivez l'Armorique” app;
- Development of an underwater landscape photographic observatory to raise awareness of the issues relating to PNRGM uses and habitats.

4/ Broadcast of messages

- Continued broadcast of messages on local radios for large yacht users (AFB);
- Broadcast of messages about marine habitats on the VHF radio for yachtspeople, fishermen and marine traffic users (AFB).

2. Develop recommendations to identify new tools to be implemented

- Capitalise on work already carried out, particularly by LIFE + recreational seafood hand harvesting;
- Use the results of studies that draw on human and social sciences under A3 to determine the most effective awareness-raising methods, tools and means for the activities;
- Produce recommendations based on feedback for each activity after 4 years, then revise these recommendations by capitalising on the experience obtained at the end of the IP.

3. Implement the new tools identified in Point 2.

4. Assess and promote the tools developed

Opinion surveys will be carried out locally, particularly by PNRC. However, general assessment of these measures will be performed under Actions D1 and D2.
The best tools will be entered for the European Natura 2000 Award (connected to Action E2)

HOW

The outreach/citizen science manager will oversee implementation of the AFB measures for this action and will coordinate the measures implemented by the beneficiaries involved in this action. The graphics designer will be involved for 163 days during the first phase of the IP for graphic design of the tools. 5 PNM and GNB (Normandy-Brittany Gulf) project officers will be involved in local implementation of these measures.

At the end of each phase, the choice of awareness-raising measures will be reviewed by the LIFE board in accordance with the new priorities, based on changes to pressures and understanding of those pressures, and depending on the results of the IP actions (Actions A3, C7, C9, D1, D2 and E2).

Action C8 is a cross-cutting action in the IP:

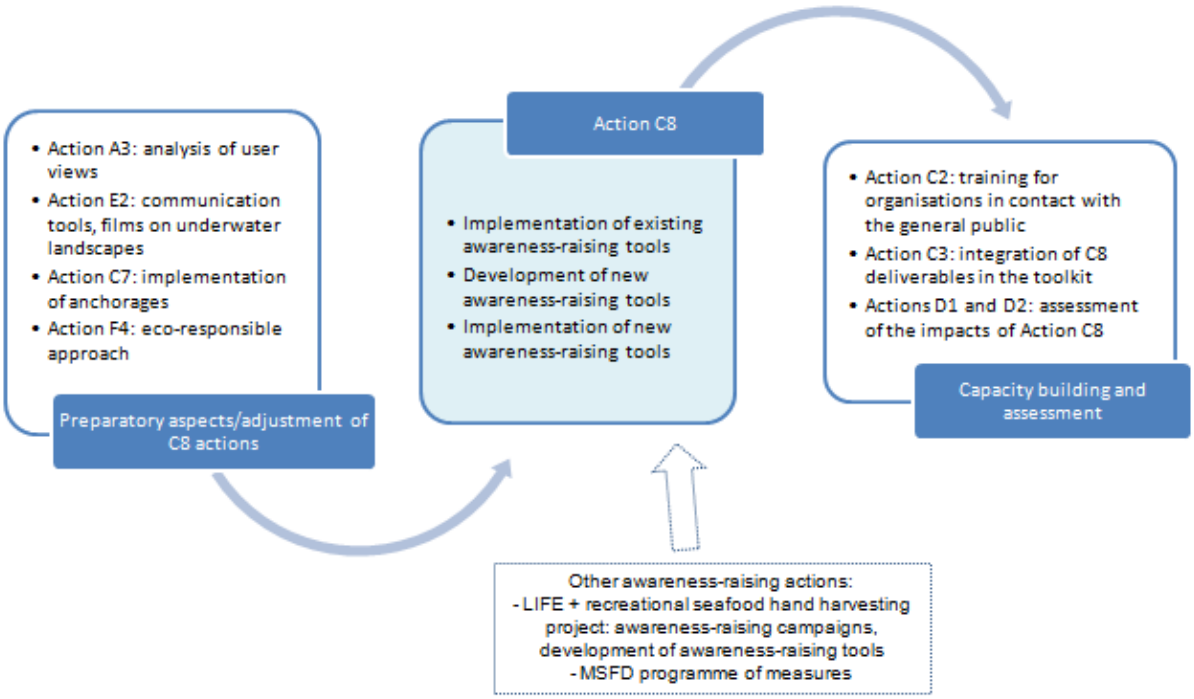


Figure 3: Relationship between Action C8 (awareness-raising) and the other IP actions

The sites involved in implementation shall be those managed by the beneficiaries (70%) and other sites from the marine SAC network (30%). The sites will be chosen following calls for expressions of interest at the start of each phase.

WHERE

10 Natura 2000 sites in the Atlantic region will be involved in each phase of this action, with 5 sites covered by the associated beneficiaries and 5 others from within the Natura 2000 network. During phase 1, the sites covered by the beneficiaries are the Bay of Brest (PNRA), Gulf of Morbihan (PNRGM), and 3 sites from PNMs (AFB).

5 Natura 2000 sites in the Mediterranean region will be involved in each phase of this action, with 3 sites covered by the associated beneficiaries and 2 other from within the Natura 2000 network. In phase 1, the sites covered by the beneficiaries are the Natura 2000 site “Bancs sableux de l’Espiguette” and “Camargue” (PNRC) and the Hyères bay site (PNPC).

Reasons why this action is necessary:

Users of the marine environment sometimes do not understand or are not aware of the effect of their activities on the environment. Awareness-raising must therefore be adapted to the level of knowledge and awareness of the potential impacts on the marine environment perceived by stakeholders.
Each activity can use different tools and it is vital to know the preferred communication methods of users in order to make it the most relevant mechanisms.
Awareness-raising actions can be more effective than other management actions in improving the conservation status and they are therefore a key addition.
Indirectly, these actions will help increase the profile of the Natura 2000 network.

4. Constraints and assumptions

The underlying goal of awareness-raising actions is to reduce the impacts of users, which can make users feel guilty. Their success requires users to take responsibility, despite the fact that the impacts on habitats are not caused by a single factor. The feeling that damage is due to other pressures tends to release users from their responsibility. The project plans to manage these difficulties *via*:

- Opinion surveys and perception studies in A3, which will develop an awareness-raising strategy adapted to the target audience.
- Modification of the habitat status and the monitoring of pressures on habitats, in order to justify in communications whether these changes are linked to natural alterations, climate change or other types of pressure.

This action is concerned by interactions between land and sea waters through the awareness-raising regarding the impacts of terrestrial activities on marine habitats, and will be linked with WFD.

5. Expected results:

- Elaboration of measure 21 of the PAF
- The main results expected are changes to behaviour in order to reduce the pressure on marine habitats and changes to the perception of marine stakeholders towards a view of the environment that is more favourable to the protection of marine habitats.
- Production of 100,000 guides and 200,000 other tools (e.g. laminated information sheets/anchoring kit): 300,000 people reached during awareness-raising campaigns;
- 1 app on anchorage issues and 4,000 users each year for the final year of the IP
- 1 “Vivez l’Armorique” marine habitats application: 1,500 users.
- 5 sea bed sensitivity maps: 5,000 people reached
- 1 underwater trail developed, 15,000 visitors each year for 4 years: 60,000 people reached
- Users of the toolkit will add to these awareness-raising activities.

6. Cost estimation:

AFB:

- Personnel costs: €346,750
  Outreach manager, 740 days over 8 years: €185,000
  Graphics designer, 163 days for phase 1: €40,750
  5 PNM + GNB officers, 484 days: €121,000
- Travel: €24,000
- Production of awareness-raising tools: €50,000
- On-the-ground awareness-raising actions: €60,000
- Purchase of space in specialist journals + writing of articles: €500
- Development of apps: €60,000
- Technical development and maintenance of 1 underwater trail: €30,000
- Management of awareness-raising on trails: €15,000
- Field equipment (boots, oilskins, T-shirts, etc.) : €10,000

Total AFB cost: €596,250

PNRA (land and sea awareness-raising campaigns, digital application)

- Personnel costs: €40,375
- External assistance (development of tools, application): €41,860

Total PNRA cost: €82,235

PNRGM (land and sea awareness-raising campaigns, photographic observatory for diving, development of tools)

- Personnel costs: €82,270
- Ship fuel: €4,500
- External assistance (photos, development of tools): €54,000

Total PNRGM cost: €140,770

PNRC

- Personnel costs: €107,160
- Travel: €2,400
- External assistance: €1,400
- Equipment (signs: €3,000 and boat: €30,000): €33,000
- Consumables (including fuel): €7,900
- Other costs: €6,105

Total PNRC cost: €157,965

PNPC

- Personnel costs: €17,000
- Travel: €200

Total Port Cros cost: €17,200

Total C8 = €994,420

Phase 1 costs:

AFB: €174,143

PNPC: €18,404

PNRA: €23,545

PNRC: €56,635

PNRGM: €49,841

7. Deliverable products:

31/12/2019: “awareness-raising” guidelines and action plans presenting the actions to be carried out and recommendations for each habitat/pressure pairing in phase2.
31/12/2019: a phase 1 two-yearly review of the awareness-raising tools used in the Natura 2000 network and their effectiveness for the public and habitats targeted.
31/12/2021: Review of the awareness-raising tools used during the two first phases: published tools (site signs / paper leaflets / flyers), digital tools (mobile anchorage app, digital sea bed imaging solution for divers, navigation software integration, radio and VHF broadcasts) and teaching content used in Action C2.
31/12/2024: Guidelines and recommendations on awareness-raising tools, stakeholder methods, rhetoric and approaches produced/tested during the IP and analysis of their advantages/disadvantages
31/12/2024: Review and technical recommendations concerning roll-out of the underwater trail

8. Milestones:
31/03/2018: recruitment of an outreach manager
31/03/2018: recruitment of a graphics designer

Phase 1 (then repeated similarly in the three following phases):
31/03/2018: Two-yearly awareness-raising action plan
30/04/2018: Calls for expressions of interest and tool distribution service
30/04/2018: Development of awareness-raising tools and on-site distribution
30/06/2018: Launch of calls to tender for the first digital awareness-raising tools
31/07/2018: Production of the first guidelines on awareness-raising tools and their effectiveness

1. ACTION C.9. Propose and implement a sustainable and coordinated funding strategy

2. Beneficiaries responsible for implementation:

1- AFB, particularly the public policy support department (“marine environment” service)

Beneficiaries jointly responsible for implementation
2- CNRS
6- IFREMER (only the AMURE maritime economy unit for this Action C9)

3. Description (what, how, where, when and why):

Action C9 seeks to characterise the funding mechanisms and costs of the network and implement a sustainable funding plan.

A. Characterise the funding mechanisms and costs of the Natura 2000 network	A.a. Characterise existing and potential funding mechanisms	1-AFB	2018
	A.b. Assess the costs of the Natura 2000 network	2-CNRS 6-IFREMER	2018-2019
	A.c. Assess the cost-effectiveness of Natura 2000 measures	2-CNRS 6-IFREMER	2024
B. Draw up and implement a sustainable and coordinated funding plan	B.a. Draw up a funding strategy for the next European programmes (2021-2027) and organise coordination between financial institutions	1-AFB 2-CNRS 6-IFREMER	2019-2025
	B.b. Study and test new and innovative funding methods	1- AFB (+ outsourcing) 2-CNRS 6-IFREMER	2020-2025

This ac
tion will be coordinated by the AFB Natura 2000 financing manager. Permanent AFB staff, not accounted for in the IP, will be involved in this action.

Action C9 will be linked to governance actions (A1, C1), actions on habitat conservation status (A2, D1), regulatory actions (C6) and conservation actions (C7.1 and C7.2).

In general, it will seek to involve business sectors such as the private sector.

The entire French Natura 2000 network is affected by this action.

A) Characterise Natura 2000 network funding mechanisms and costs

A.a. Characterise existing and potential Natura 2000 funding mechanisms

The aim of this task is to ensure coordination between the different sources of funding and to make the use of funds by project leaders easier to understand.

An inventory of the different sources of funding will be carried out with all authorities responsible for managing these funds, on the basis of work started by the AFB (initial classification of measures). It includes:

- refining the national classification of Natura 2000 measures for the specific Action C9 use;
- listing the possibilities provided by each fund;
- collecting feedback from funding applications granted in recent years;
- summarising these funding opportunities for each type of measure with the aim of optimising funds *via* the collective assessment of funding applications;

- performing benchmarking of funding methods for Natura 2000 in Europe.

The same process will be applied to new potential sources of funding, such as fees and/or taxes (wind turbines, cruise ships), carbon credits and other so-called “innovative” funding mechanisms.

Task Aa will be carried out by the financing manager.

A.b. Assess the costs of the Natura 2000 network (marine habitats)

This task is entrusted to IFREMER and the CNRS, during Phase 1 of the IP.
The characterisation of the Natura 2000 network cost will be based on the following criteria:

- the costs of measures, for each type of measure according to the classification established en Aa :
    - collect and apply feedback;
    - extrapolate to Natura 2000 network level, when possible.
- the transaction costs (“operating costs of a coordination mechanism”) of Natura 2000 policy in order to improve its efficiency, in accordance with governance actions (A1 and C1):
    - define a classification to identify all types of costs (contracting costs, monitoring costs, etc.);
    - assess the transaction costs.

These costs may be of different types: personnel costs, operational costs, etc.

The action will be implemented at the scale of the Natura 2000 network (marine habitats sites).

A.c. Assess the cost-effectiveness of Natura 2000 measures

This task is entrusted to IFREMER and the CNRS, at the start of Phase 4 of the IP.

The aim is to identify the most cost-effective measures for supporting management and improving efficiency in a context of restricted budgets. Cost-effectiveness analyses will be developed to support decision-making regarding the measures to be implemented for a given DOCOB objective.

The task will determine the effectiveness of each measure (in terms of environmental benefits) and will establish the initial ecological status of the site before implementing certain actions in a standardised format for comparison between the various possible measures. The task will be carried out at different scales (site, coastline, panel of measures, etc).).

This task will be linked to actions implemented for knowledge and assessment of the conservation status (A2 and D1) and the assessment of the costs of measures carried out in Ab.

B) Draw up and implement a sustainable and coordinated funding plan

B.a. Draw up a funding strategy for the next European programmes (2021-2027) and organise national coordination between financial institutions

A needs assessment will be performed to support the funding strategy by analysing the progress of implementation of the sites and measures planned. This needs assessment by geographical location and time period for each financial instrument is key to determining the amount of funding requested and for establishing priorities in terms of measures.

The funding plan will be developed by characterising the costs of the Natura 2000 network and on the basis of existing and potential funding sources. It will seek to meet the needs identified in order to ensure a long-term impact, coordination between the various public policies (especially ensuring that the Natura 2000 policy is properly taken into account in future European funding programmes) and the efficiency of funding mechanisms for programmes from 2021.

In order to optimise and/or reduce costs, the following aspects will be included in the funding plan:
- identification of the most efficient scale for managing the Natura 2000 measure, in order to save money: e.g. coast-specific contracts or inter-site measures (for the integration of new Natura 2000 measures not initially planned in the DOCOBs during the DOCOB revision phase);
- identification of the economic value of having numerous managers spread across the coastline, similarly to the implementation of monitoring networks by the RNF;
- improvement of information sharing between sites in order to carry out inter-site measures.

The task also includes the implementation of annual regional or inter-regional meetings for all 8 coastal regions in order to guide funding applications and to coordinate responses, on the basis of DOCOBs and priority needs identified by AFB and government services. The strategy will be developed with all financial institutions, based on the results of the needs assessment.

- *An annual regional or inter-regional meeting will be organised for all 8 coastal regions;*
- *A national meeting will be organised each year for national funding.*

When possible, videoconference will be set up.
The results of this work will be transferred to the fund management authorities and government services involved in preparing the 2021-2027 programmes, with the possible support of the AFB. It will also enable to update the PAF.

At the end of the project, implementation of this strategy will be assessed to prepare the programmes due to start in 2028.

As part of this task, the involvement of the private sector in the project will be reported and the financial contributions will be quantified as much as possible.

B.b. Study and test new and innovative funding methods

<u>Feasibility studies for new funding methods</u>
This study will be based on:
- Work by the MTES Green Economy Committee and in particular by the 'biodiversity' and 'sea' working groups, which tackled the compensatory measures and the payment for environmental services issues for example.
- The experience of Corsica, Port-Cros and the IUCN Andalusia in testing the introduction of carbon credits;
- The feasibility of fees for wind turbines, cruise ships, anchorages and car parks for access to Natura 2000 sites;
- The use of passenger maritime transport tax in protected areas.
- The feasibility of reproducing public access fees as used in the assignment of the maritime public domain to the *Conservatoire du Littoral* in the Chausey Natura 2000 site. One aim of this study is to promote the introduction of these fees in order to one day manage Natura 2000 within the overall budget of the local authorities that benefit from it.

<u>Testing new funding methods</u>

This experiment will be carried out with external assistance and supervised by the AFB Funding Manager.
A call for interest will identify 3 areas for testing innovative funding mechanisms in the Mediterranean.
Based on the experience gained during this test, the replication will be sought in 3 others sites, potentially using complementary funding.

The funding plan developed under B.a. will be implemented.

Reasons why this action is necessary:

With pressure on the State budget, it is important to study the efficiency of Natura 2000 implementation. This a theme that has hitherto been the subject of little research, despite the EU identifying this as a priority need in its Biodiversity Strategy.
The need to improve the understanding of different funds has been identified and the system needs to be better organised in order to better match funding with the network's conservation measures.
Improved understanding of funds, especially for the terms of their use, would also improve their use by managers in planning their management measures.

4. Constraints and assumptions

Access to data is required and the conditions for data sharing need to be clearly established with financial institutions from the start of the action.
There are a number of institutional changes in progress (regional reform, new AFB structure, changes to the involvement of water agencies in marine Natura 2000). The network of financial institutions will facilitate/specify the links between these bodies in Natura 2000 funding.
For the cost-effectiveness analyses of measures, the low number of measures in place, particularly along the Atlantic Coast, can be a difficulty. Also, these analyses require being able to assess the ecological effectiveness of the measures, which largely depends on results from action D1.
The number of sites for testing innovative funding methods is limited to 3 considering that it is essential to provide sufficient means to each site to facilitate success of the mechanisms. Replication of the approaches tested will be sought through other means.
This action involves coordination with the Water Agencies for the funding of the conservation of marine habitats, and will be linked with WFD.

5. Expected results:

- better use of funds: the amounts estimated in the complementary actions will be used in full.
- none of the classification measures will go without funding.
- 3 innovative funding methods will be tested and 2 continued in the long term.
- 3 other sites will benefit from the replication of innovative approach(es).
- continuity of the project actions will be ensured by the funding plan.
- coordination of funding between public policies.
- reporting on the involvement of the private sector in the project and its contribution.

6. Cost estimation:

1-AFB (Phases 1 - 4)
Personnel costs: Financing manager working at 80% over 8 years: €305,800
External assistance (B.b) (cost based on consultation with economic and environmental experts): €40,000 per phase for Phases 2 and 3: €80,000
Travel (3 trips per phase): €7,200
Total AFB cost = **€393,000**

2-CNRS (Phases 1 and 4)
Personnel costs (174 days): €44,718
Travel: €4,500
External assistance (in the CNRS consortium): €25,000
Total CNRS cost = **€74,218**

6-IFREMER (Amure) (Phases 1, 3 and 4)
Personnel costs (3 staff members): €85,988
Travel: €7,500
Total IFREMER cost = **€93,488**

Total Action C9: €560,706

Phase 1 costs:

AFB: €89,238
CNRS: €64,433
Ifremer: €70,540

7. Deliverable products:

15/12/2018: Inventory of existing funding (AFB)
15/12/2019: report assessing the costs of implementing Natura 2000 (CNRS/IFREMER)
31/12/2020: a sustainable and coordinated funding plan (AFB)
31/12/2024: cost-effectiveness analysis for the selected Natura 2000 measures (CNRS/IFREMER)
31/12/2024: assessment of the funding plan strategy implemented during the IP (AFB)
31/12/2024: analysis of innovative funding methods (on terrestrial zones and abroad) (CNRS/IFREMER)

8. Milestones:

31/03/2018: Recruitment of the financing manager
15/12/2018: Publication of the inventory of existing funding
15/11/2018: Organisation of 1st regional and national annual meetings
15/12/2019: Publication of the report assessing the costs of implementing Natura 2000
15/03/2020: Launch for call for tender for outsourcing B.b
31/12/2024: Publication of cost-effectiveness analysis for Natura 2000 measures
31/12/2024: Publication of final analysis of innovative funding methods

Action C.10: Implement joint management actions on cross-border issues

2. Beneficiary responsible for action

1-AFB, for coordination and implementation of the action. Within the AFB, this involves the protected areas department and the marine environment department of the public policy support department.

7-IMA for support in drawing up the management plan on Zone 1.

3. Description (what, how, where, when and why):

What

The purpose of this collaborative action is to develop action plans, then implement joint management actions on habitats located in Natura 2000 sites in cross-border areas or located in a zone of international trade. Four zones are targeted for implementation of this action. They are located in the following cross-border areas: France-Spain (2 zones), France-Belgium (1 zone), France-Italy (1 group of sites). The AFB is involved in the management of Natura 2000 sites in these four zones, either directly managing or providing enhanced support.

For all zones, the initial aim (1st phase) is to jointly specify the conservation issues for the habitats and draw up an action plan for the remainder of the project. The remainder of the project will be devoted to implementing concrete management actions.

These actions will be specific to each zone and could cover reducing pressures on shared habitats via implementation of technical management measures, methods for assessing conservation status and joint implementation of monitoring protocols, sharing good practices, enhancing stakeholder capacities in both countries, awareness raising or communication.

Zones 1 and 4 are special cases. They are, respectively:

- a zone where the Natura 2000 site designated by France overlaps waters claimed by Spain (Zone 1). For this zone, the preparatory phase consists of proposing management methods, in particular for governance, which would be acceptable for both countries, in order to be able to proceed to launching joint production of a management plan;
- an international cooperation zone under the RAMOGE agreement for protecting the marine environment (RAMOGE is an acronym from Saint RAphael, MOnaco, GEneva). On this zone (Zone 4), the action will specifically cover the subject of luxury yachting. It could lead to awareness-raising actions, with multi-lingual materials disseminated regarding the impact of yacht anchoring in posidonia beds and good practices to follow.

How

During the first phase, AFB staff (permanent for Zone 1, additional for Zones 2, 3 and 4) will be responsible for initiating cooperation on each of the zones: involvement of relevant stakeholders and drawing up the action plan. In the following phases, AFB staff will coordinate, in association with local partners, implementation of concrete management actions, which will be performed using external assistance. Depending on the choices made in action plans, this external assistance could consist of scientific support, concrete conservation actions, production of awareness-raising tools, implementation of training courses, etc.

In the specific case of Zone 1, external assistance for a legal study will be mobilised from the first phase. This will involve suggesting a management system (governance and coordination of management) suitable for the legal provisions of both countries, given the differences in the way Natura 2000 is implemented in national law. A trainee placement to study governance will provide support for specifying management methods for this site. As a second step, the IMA will provide support for production of a management plan, with regard to ecological, social and economic diagnostics.

At the end of the project, an action plan will be produced for each zone, for pursuing cooperation actions.

This cooperation will occur via shared work meetings (bilateral meetings, administrative meetings and technical workshops), in addition to discussions via the usual channels. As well as these meetings, field trips will be organised to facilitate technical discussions between managers and the development of shared tools.

Concrete implementation of management actions will remain the responsibility of the relevant national authorities.

Where
The four pilot zones adopted for these actions will be used to test various governance situations and various management actions suitable for the habitats to be conserved.

Zone 1: Natura 2000 site – Chingoudy bay (FR7200774). Habitats: 1110 (1110-1: fine, clean or slightly silty sand, Zostera marina and noltii seagrass) and 1130-: estuaries. Chingoudy bay is located at the border between France and Spain. Actions will be coordinated by both States, with support from the AFB's Atlantic annex, the IMA for the diagnostic phase and the State-designated site manager.

Zone 2: Natura 2000 sites - Albères coast posidonia beds (FR9101482) and Cap de Creus (ES5120007). Habitats: 1120 – posidonia beds and 1170 reefs (1170-14: coralligenous).
The action will be developed on the continuous space of the reef coast of PMN GdL, from the Cerbère-Banyuls marine reserve to Cap Creus on the Spanish side. It will be led by the PNM GdL team of the FR9101482 site manager in association with the team of the PNM Cap Creus / Cap de Creus Natura 2000 site.

Zone 3: Natura 2000 sites – Banks of Flanders (FR3102002) and Trapegeer-Stroombank (BEMNZ0001). Habitats: 1110 – sandbanks with shallow permanent seawater cover (and 1110-2: medium dune sands).
The action will be on those sites where there is continuous 1110 habitat. It will be led by the AFB's project officer for the Channel and North Sea, with technical support from site managers (the Dunkirk port authority and the Hauts-de-France regional committee for maritime fisheries and fish farming (CRPMEM) for drawing up the DOCOB, in association with the Belgian Federal Public Service (marine environment department), the Royal Belgian Institute for Natural Sciences and the Flanders Marine Institute, responsible for management and monitoring of marine Natura 2000 sites.

Zone 4 (group of sites): the following Natura 2000 sites in France: Cap Martin (FR9301995), Cap Ferrat (FR9301996), Antibes bay and cap, Lerins islands (FR9301573), Estérel (FR9301628), Corniche Varoise (FR9301624) and sites in Italy (Fondali capo Mortola - San Gaetano; Fondali San Remo – Arziglia). Habitats: 1120: posidonia beds and 1170: reefs (1170-14: coralligenous)
Action plans will be proposed for marine Natura 2000 sites located on the coast of Alpes Maritimes and Var in France and of Ligurie in Italy. It will be led by the AFB's Project officer for the Mediterranean, in association with the management structures of the relevant Natura 2000 sites.

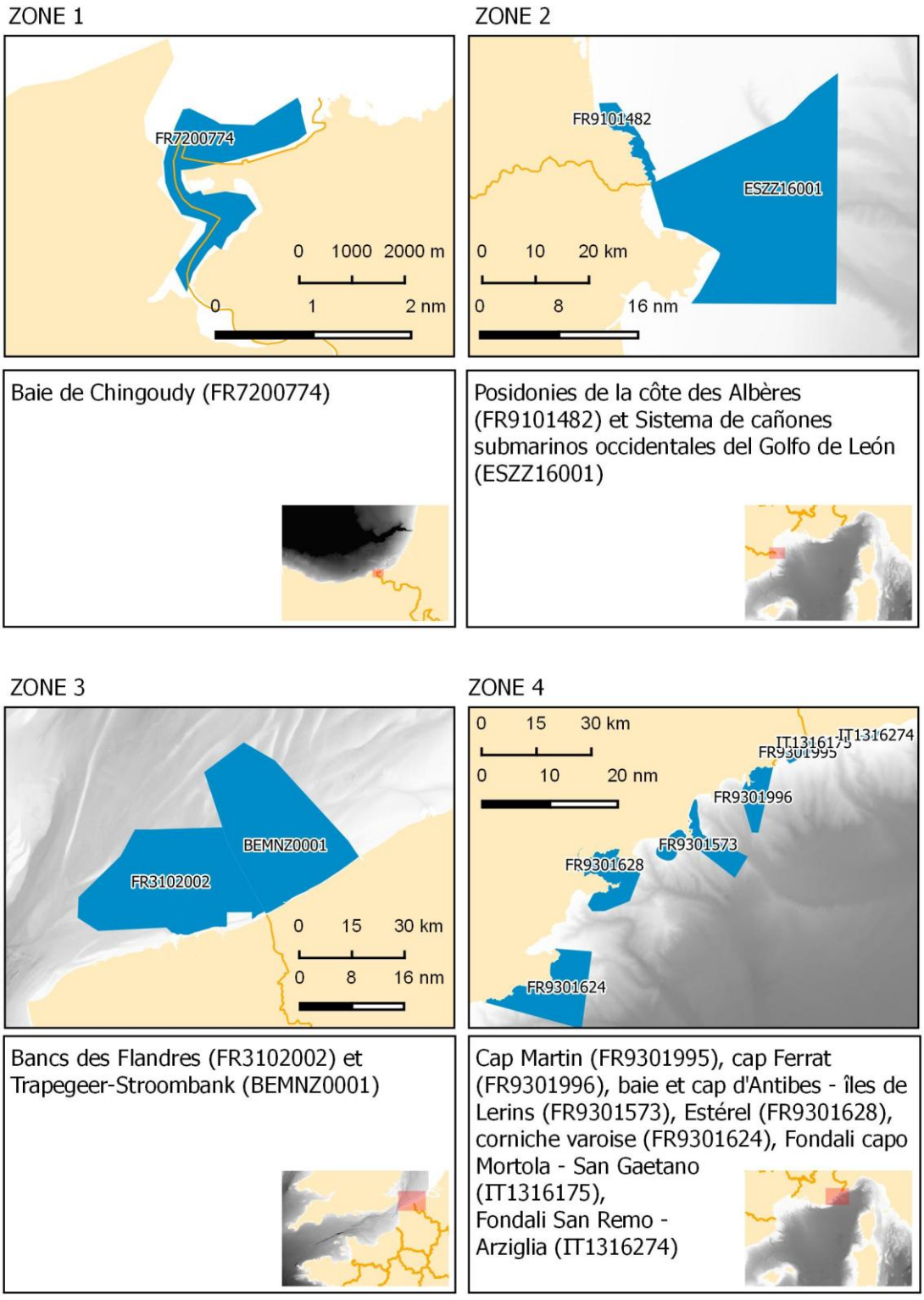


Figure: maps of the four areas targeted by the action.

When

The phases for diagnostics and specification of the action plan will be performed during the first phase of the project. Implementation of the actions adopted will be proposed during the following three phases.

In Zone 1, the site's cross-border governance will be implemented and the management plan drawn up during the first two phases.

Reasons why this action is necessary:

The Habitats Directive encourages cooperation between member States and the directive's objective is Favourable Conservation Status at biogeographic scales, which are not limited by national borders of member states. As shown during the kick-off seminar for the management of marine Natura 2000 sites, implementation of the directive on marine environments is at an early stage, and member States have not yet put cooperation mechanisms into place. The conclusions of the seminar included the need for technical discussions. The scale of cross-border or neighbouring sites presents an opportunity for implementation of concrete cooperation actions.

4. Constraints and assumptions

The willingness of the authorities of member States is essential for performance of this type of action. Sticking points could arise over sovereignty issues and the positions of national borders. To avoid this, it is proposed that the action is focussed on technical cooperation and habitat conservation issues.

National organisations in charge of Natura 2000 have been contacted since early stages, as the letters of support from the various governments annexed to the concept note show. Beyond the acknowledgement of national authorities which is necessary, the target organisations of the action are the ones in charge of the management of the Natura 2000 sites. They can be national or local authorities as well as NGOs. Regarding the Spanish counterparts, the two situations are different. In the case of the "baie de Chingoudy" site, no counterpart exists as the site was supposed to be designated as a French site only at the beginning and the IP action (C.10) intends to set up the basis of the cooperation. In the case of the "Cap de creus" site, AFB staff of the PNM du Golfe du Lion has informed their counterpart of the IP action. Regarding the Italian sites par of the zone 4, they were not contacted individually. This topic stems from various discussions, especially within the MedPAN network, which express the need to develop management actions targeting luxury yachting.

Another limitation could be the lack of availability, or financial means, of counterparts for engagement in the project.

Understanding of issues and habitat conservation objectives varies between member States and could compromise implementation of joint actions. The first phase of the project will seek to optimise convergence in a joint action plan.

Franco-British cooperation has already been launched on the following sites: ridens and hydraulic dunes of the Pas-de-Calais straits (FR3102004) and Bassurelle sandbank (UK0030368). This zone has not been included in project actions, but relevant links will naturally be made.

5. Expected results:

For Zone 1:

- Validation by both countries of the site governance method.
- Production of the site management plan.

For Zones 1, 2 and 3:

- Production of an action plan for target habitats.
- Production of diagnostics on the conservation status of the target habitat(s) (for cross-border Zones 1, 2 and 3) using a shared method at the scale of the cross-border zone.
- Performance of a joint management action on each zone.
- Production of an action plan for continuation of cooperation actions after the project.

For Zone 4:

- Analysis of governance of the activity and joint management methods on the sites studied on either side of the border. Production of an action plan.
- Performance of 3 joint management actions for the activity.
- Production of an action plan for continuation of cooperation actions after the project.

For all zones:

Production of bilingual summary brochures describing the management actions in place on cross-border sites.

6. Cost estimation: €274,089

The main costs are associated with HR time, technical and scientific studies, and communication costs. The travel budget is also significant for this action, which aims to facilitate technical and scientific discussions with cross-border partners, in meetings and on the field.

1-AFB: €227,900

Personnel costs: €121,700

- Working time of Project officers for the Mediterranean, Channel and North Sea and PNM GdL (40 days)
- Support by permanent staff, Project officer for the Atlantic (40 days per phase, cost not accounted for under the project).
- Trainee placement during the first phase, to support the study of shared governance on the Zone 1 site.

Travel costs: €34,200

€8,400 per phase for travel for additional project officers for regular meetings with foreign partners. Plus €600 in Phase 1 for trainee travel.

Cost of external assistance: €68,000

- €8,000 in Phase 1 for the legal study (cost estimated on the basis of a quote).
- €5,000 per relevant phase and per zone for performance of management actions: field monitoring, technical study, communication materials.

Other costs: €4,000 (translation of action materials, €1,000 per phase). Translation could concern other languages than French and English if considered necessary for the action, although translation into English will be favoured in general to facilitate dissemination beyond the local case study.

7-IMA: €46,189

Personnel costs: €44,735

Working time for the first two phases for an engineer (119 days) and support of the manager (10 days, consultancy) to perform ecological, social and economic diagnostics for the zone's DOCOB.

Travel costs: €1,454 (local meetings with partners).

Phase 1 costs:

AFB: €55,854
IMA: €19,370

7. Deliverable products:

31/12/2021: DOCOB for the Chingoudy bay site.
31/12/2025: Assessment of joint actions led by managers of cross-border sites.

8. Milestones:

30/06/2018: recruitment of additional project officers.
31/12/2019: end of the preparatory phase for cooperation actions on each zone.
31/12/2021: validation of the Chigoundy bay DOCOB
30/06/2025: validation of action plans for continuation of cooperation actions after the project.

1. ACTION C.11: Moderate an international technical plateform on Natura 2000 marine habitats

2. Beneficiary responsible for implementation:
1-AFB, organising seminars and coordinating the online platform
5-GIS Posidonie (Posidonie Scientific Interest Group), involvement in organising a workshop on deep reefs

3. Description (what, how, where, when and why):
What

This action aims, via meetings and sharing information, to facilitate the sharing of experience on marine habitat management, including knowledge of habitats and methods for assessing the state of conservation, management measures or actions, and stakeholder involvement.
This action will be performed in collaboration with the relevant authorities for marine implementation of Natura 2000 in Member States and the stakeholders needed for these actions (scientific experts, Natura 2000 site managers, maritime activities, etc.).
The project will also rely on current networks of managers, such as the MedPAN network in the Mediterranean, and collaboration initiated for the Atlantic and the Channel via the MAIA and PANACHE projects.

How

<u>Organisation of 4 thematic biogeographic seminars</u>

Mediterranean

- Organisation of a biogeographic seminar on the management of luxury yachts, in Toulon in 2020.
- Organisation of a work cycle on deep reefs:
    - Workshop on the mobilisation of preventive tools and monitoring instruments, in Perpignan in 2019.
    - Workshop on the assessment and reporting of the state of conservation of deep reefs, in Marseille in 2020 (organised by *GIS Posidonie*)
    - Workshop on climate change and canyon management, on the Giens Peninsula in 2021
    - Biogeographic seminar on the management of deep reefs, in Perpignan in 2022

Atlantic

- Organisation of a biogeographic seminar on the management of reef habitats, in Brest in 2021
- Organisation of a biogeographic seminar on the management of soft-substrate habitats, in Boulogne in 2024

Organisation of the luxury yacht seminar will be coordinated by the project officer for the Mediterranean Sea. The other seminars will be organised by the local marine nature park teams: Gulf of Lion (deep reefs), Iroise (Atlantic reefs), and Picard estuaries and the Opal sea (EMPO) (Atlantic soft-substrate) with the support of the project officers for the Mediterranean Sea, Atlantic Ocean, and Channel and North Sea and AFB permanent teams.

On the basis of work performed under Action A.2.2, *GIS Posidonie* will provide scientific support to the work cycle on deep reefs and organise a second workshop.

The seminars mainly concern the biogeographical regions indicated, but participation of stakeholders from other regions will be possible, in particular in the case of deep reefs, where the work cycle will include actions performed by Ifremer as part of a project on Atlantic deep reefs. Similarly to Action A5 at the national level (strategic management documents), these seminars will contribute to the collaborative production of strategic documents for the management of the various habitats of the directive: objectives for conservation at the European scale, major sites of importance for tracking, influencing factors to cover for good status of habitats, and management measures.

Making project results available

1. The project will contribute to content for the marine page of the European Commission's Natura 2000 platform. Relevant experience feedback datasheets will be translated into English and made available (for example, assessment method for the state of habitat conservation).

2. In addition to the resources made available on the Natura 2000 platform, the necessary links to project information published via the toolkit (Action C3) will be created to be made available on a page specific to international cooperation. In particular, documents from biogeographic seminars will be made available and documents regarding methodology and essential capitalisation on earlier work will be translated. The website will facilitate cooperation via provision of a collaborative space and by making available a directory of collaborators that specifies their respective specialisms.

Several audiences are targeted: users, organisations responsible for the management of Natura 2000 sites, scientists, government services and local authorities, so that the issues of marine habitat conservation are properly integrated into the various public policies of Member States.

The toolkit will be the dedicated tool to disseminate products of the IP to facilitate replication of the activities carried out during the IP. An international webpage will enable to disseminate products in English. A specific page will be created for information for government services and professional organisations responsible for management of sea fishing. By publishing relevant information (analyses of fishing/habitat interactions, taking into account of social and economic aspects, existing measures, etc.), it will provide technical support for the association of other Member States needed in the context of the CFP for implementation of measures within Natura 2000 sites.

At this stage, and considering discussions in the international meetings (like the first biogeographic seminar for the management of marine Natura 2000 sites in 2015 and discussions within the Marine Expert Group) the main common topics seem to be habitats assessment methodology and fishing activities management, but the project will adapt to potential changes. This may lead to changes regarding which documents should be translated in priority.
The products issued from the IP (and complementary funds) linked to these topics will be translated and disseminated through the webpage. The translation on other products will be based on the needs that are expressed by other countries while trying to be complementary with the other projects (such the IPs BNIP or INTEMARES) as well as the biogeogaphic seminar process under the Marine Expert Group activities in which the AFB and the Ministry are already involved. The IPs officers will collect those needs during the networking activities within various international fora. In particular, the project will link with the Eurosite Marine and Coastal Protected Areas (MCPA) Working Group.

3. The project will rely on the international networking tools of managers (websites, newsletters, etc.) to pass on technical information associated with the project:
MedPAN: http://www.medpan.org/organisation, funding will provide for participation at the biogeographic seminar by the coordination team and managers from the MedPAN network

MAIA: http://www.maia-network.org/homepage
PANACHE: http://www.panache.eu.com//home_panache

Where
All sites are potentially involved.
The locations of biogeographic workshops and seminars were chosen based on the themes, but could change if necessary.

When
Throughout the project. First workshop from Phase 1 and first seminar from Phase 2.

Reasons why this action is necessary:
The kick-off seminar for the management of marine Natura 2000 sites concluded that it is necessary to pursue and deepen discussion on the chosen themes for suitable management, based on the issues targeted and activities involved. This seminar also illustrated the need for sharing information on the implementation of management by the various Member States.

4. Constraints and assumptions
The proposed themes correspond to existing dynamics within the network of Natura 2000 sites, the scientific community, and users of the marine environment. Nevertheless, the content of the seminars could be revised on the basis of international meetings organised elsewhere or if new subjects seem to take priority.

In particular, co-ordination with the BNIP and INTEMARES integrated projects is planned (under Action E4) to ensure consistency in cooperation actions. Similarly, cooperation actions within international bodies should help avoid any redundancy.

Beyond the experience feedback from the project itself, the content of the systems for capitalising on earlier work will depend on the contributions of other Member States. The project coordination team has allocated time for facilitating this participation.

5. Expected results:
Organisation of 4 biogeographic seminars.

Organisation of 3 workshops on deep reefs.

An international page for the toolkit (in association with Action C3), including a page dedicated to sea fishing.

Production of 5 management strategy datasheets for a habitat at the European level.

Sharing of 40 summary datasheets in English on the management or assessment of marine habitats.

6. Cost estimation: *€345,950*

AFB: €334,800

AFB costs are mainly associated with organising the biogeographic seminars. These costs are based on the experience of organising the kick-off seminar for the management of marine Natura 2000 sites. Given that the seminars proposed here involve a more limited number of people, as the themes are more targeted, they will last two days and the cost is calculated on the basis of covering the cost of the midday meal only.

Personnel costs: €155,000

- Support of local teams for organisation
- Coordination of the technical platform

Work cycle on deep reefs: PNM Golfe du Lion project officer: 241 days.
Atlantic reefs: help within PNM Iroise: 102 days

Sand banks: PNM EMPO project officer: 68 days

Mediterranean, Atlantic and Channel-North Sea project officers:

- Platform coordination time: 3*8 days per phase = 96 days.
- 10 additional days for organisation of each seminar (when covered by the biogeographic region) and special case of the luxury yacht seminar organised by the Mediterranean project officer (54 additional days). 104 days.

Support by permanent staff (cost not accounted under the project): 156 days

Travel: €23,800

- Project team travel for the workshops: 3*€600
- Project team travel for the biogeographic seminars: 4*€3,000
- Travel for members and coordination team of the MedPAN network for the Mediterranean seminars: 2*€5,000

External assistance: €120,000

- For organising the 4 seminars: €120,000

Consumables

- For organisation of 2 workshops on deep reefs: €6,000

Other costs: €30,000 (translation: €7,500 per phase)

GIS Posidonie: €2,150

Organisation of a workshop: €2,000 travel and €1,150 consumables.

Phase 1 costs:

AFB: €32,207

7. Deliverable products:
31/12/2024: Proceedings of the 4 biogeographic seminars.

31/03/2025: List of management strategy datasheets and experience feedback datasheets.

8. Milestones:
Biogeographic seminars in:
2020 – Mediterranean luxury yachts
2021 – Atlantic reefs
2022 – Mediterranean deep reefs
2024 – Atlantic soft-substrate habitats

ACTION D.1: Assess habitat conservation status

2. Beneficiaries responsible for implementation:

1-L'AFB will support sites managers in the implementation of habitat monitoring and the elaboration of sites dashboards (*via* its departments “Resource Centres”, “Marine Environments” and “Marine Nature Parks, National Parks and Territories” “Marine Nature Parks, National Parks and Territories”). The Mixed Unit Service « Natural Heritage » (UMS PatriNat) is responsible for the scientific coordination and the validation of indicators, protocols and results of conservation status assessments at sites and biogeographic levels.
3- The commune d’Agde for the assessment of impacts of action C.6.
4- The foundation Tour du Valat, as the *Pôle-relais lagunes méditerranéennes*, for supporting the implementation of the assessment of the Mediterranean coastal lagoons habitats (1150-2).
5-The GIS Posidonie will provide scientific support to PNR Camargue and carry out the deployment of Mediterranean habitats conservation status indicators.
6-IFREMER for the assessment of Atlantic (mainly) habitat conservation status: seagrass beds, intertidal reefs, subtidal reefs and deep-sea reefs
7- IMA for monitoring the conservation status of four habitats (1170-4, 1170-5-7, 1170-9, and 8330-1) in SACs of the Basque coast.[2]
9-PNRA for monitoring the conservation status of three habitats (1110-3, 1130; 1140).
10-PNRC for the assessment of the evolution of two habitats (1110 and 1110-1).
11-PNRGM for monitoring the conservation status of two habitats (1110-1 and 1170).
12-RNF for the integration of two habitats in the Littoral Natural Heritage Observatory for (1110-1 and 1130 and 1140).

3. Description (what, how, where, when and why):

What

This action aims at assessing the conservation status of marine habitats and the impacts of project actions on the conservation status. It also aims at implementing evaluation devices within the Natura 2000 sites network.

It includes:

D.1.1) the evaluation of habitats conservation status. The evaluation will be based on existing and foreseen (in the MSFD context) methodologies. It will be complemented by protocols and indicators set up as part of A.2 action.

The action will also develop evaluation devices to meet the sites management needs (DOCOB’s objectives) and the European reporting obligations (at the biogeographic level, HD article 17). At the site level, it will consists in supporting sites managers in the adaptation to the Natura 2000 context and implementation of dashboards. Dashboard is the steering tool for management developed in other protected areas and is based on the assessment of the level of achievement of objectives (favourable conservation status in this case).

[2] Les sites concernés sont : Côte Basque rocheuse et extension au large (FR7200813), Domaine d’Abbadia et corniche basque (FR7200775), Falaises de Saint-Jean de Luz à Biarritz (FR7200776), Rochers de Biarritz : le Bouccalot et la Roche ronde (FR7212002), Baie de Chingoudy (FR7200774)

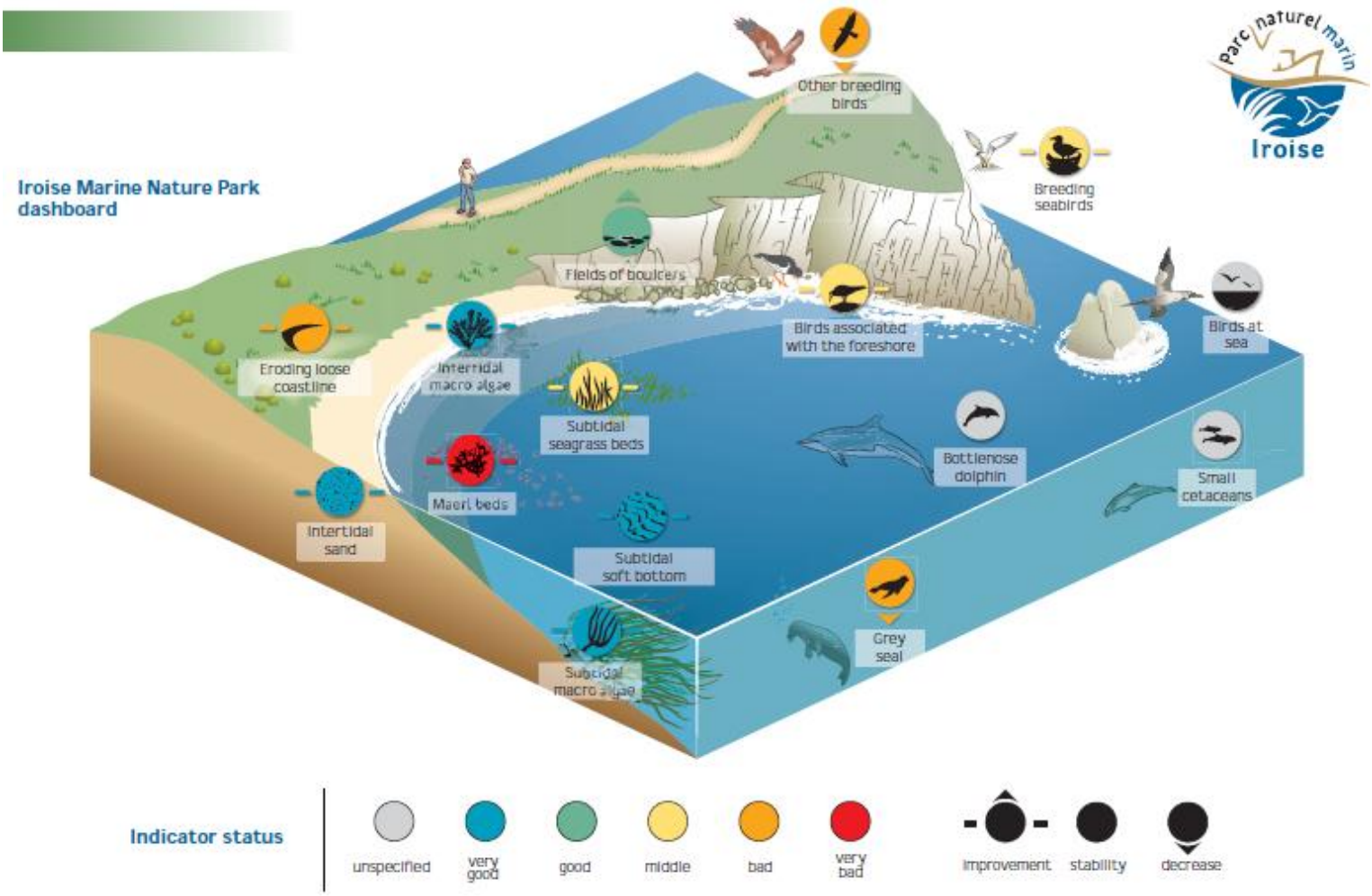


Figure: extract from the PNM Iroise annual dashboard.

D.1.2) The monitoring of the effectiveness of management actions developed during the project. This assessment will be based on regular monitoring of habitats conservation status along with the implementation of concrete actions. The cause-effect relationships between actions and conservation status will be analyses following methodologies set up in A.2 and C.4, while ensuring the various factors of influence on the habitat are considered (anthropogenic pressures, climate change, invasive species, etc.)

As well as the whole project the habitat of interest are habitats 1110 to 1170 habitats and 8330 habitat for both marine biogeographic regions Atlantic and Mediterranean (1120 only in the Mediterranean). As detailed in subaction A.2.1, groupings or division of habitats are proposed, in the interest of consistent monitoring and management.

Existing devices at the national (MSFD monitoring programme) and local (existing monitoring within Natura 2000 sites) levels will be the basis of the monitoring networks. They will be complemented with set-alone sites entailing significant conservation stakes.

The local implementation of some monitoring will be handled by beneficiaries in charge of managing Natura 2000 sites et will involve other managers in a monitoring/training perspective.

With the support of F.3 action, all data acquired during the action will be organised and made available, by national referent databases, in line with the national strategy for data management under the HD and the MSFD.

How and where

D.1.1) Conservation status evaluation of habitats will build on preparatory work carried out in action A.2, providing a global monitoring strategy and methodologies for habitats assessment (metrics, indicators, protocols).

Role of beneficiaries within the D.1.1 task:

1-AFB:

- The scientific manager with the support of permanent staff from AFB-UMS PatriNat will be in charge of scientific coordination of the assessments of habitats conservation status at sites and biogeographic levels. The scientific manager will also be in charge of: validation of evaluation protocols and indicators, as well as their dissemination, the organisation of workshops for experience sharing on conservation status assessment (one per phase and per biogeographic region) and the production of synthesis reports of evaluation actions.
- The marine subregions officers will support sites managers (other than beneficiaries) in the implementation of habitat monitoring consistently with existing monitoring and those carried out by the associated beneficiaries involved in the action.
- Atlantic PNM and GNB officers will be in charge of monitoring implementation for intertidal habitats and of the involvement of other sites managers in a monitoring/training perspective. As well as Mediterranean PNM officers, they will be in charge of transferring the protocols developed by beneficiaries for other habitats. Their involvement will be directed in priority towards habitats for which the area has a major responsibility according to the monitoring strategy (for instance the SAC located in the PNM bassin d'Arcachon hosts 47% of the surface of *zostera nolteii* in France).

AFB, through the scientific manager and with the support of other officers will also organise the implementation of monitoring with external assistance by scientific organisations or consultancy firms. Those monitoring aim at being complementary with those developed by beneficiaries and the monitoring network planned by the MSFD, while incorporating the Natura 2000 of major importance for the conservation status of the habitats. To date and unless the monitoring strategy set up in A.2.1 will provide changes, the following monitoring are foreseen for each phase:

- 5 monitoring stations for boulder reefs.
- 2 monitoring stations for the other intertidal reef habitats (complements to MSFD).
- 2 surface and stations monitoring for *sabellaria reefs*.
- 4 monitoring stations for subtidal reefs (complements to MSFD).
- 6 monitoring stations subtidal sediment habitats (complements to MSFD).
- 5 monitoring stations for maerl beds.

For the last 3 habitats, monitoring will require nautical means (boats or diving) and will be supported by technological developments validated in action A.2.4 as well as purchased material.

Last, marine subregions, PNM and GNB officers will support managers in the implementation of SAC dashboards. The existence of monitoring and the calculation of standard indicators being a prerequisite for dashboard implementation, the work will consist mainly in providing a methodological support for adapting to Natura 2000 the method used in other protected areas and in layout developments to produce didactic materials directed to the governance bodies. Those dashboards will therefore be developed for sites benefitting from validated conservation status indicators, independently whether there are based on monitoring carried out as part of the action of not.

3-The commune d'Agde will carry out regular monitoring in phases 2, 3 and 4 of the conservation status of coralligenous reef, consecutive to the implementation of a strong proctection area as part of C.6 action and to the baseline produced in subaction A.2.3. Monitoring will be implemented according to the methodology developed by GIS-P, with the use of nautical means acquired for the project and on a basis of 32 dives per phase.

4-Regarding habitat 1150-2 « Mediterranean coastal lagoons», following developments made in action subaction A.2.3 (*in-situ* testing) of the 2013 MNHN methodology, the TDV foundation in its role of network coordinator will support the implementation of the assessment of this habitat by sites managers. Especially through annual workshops, 35 sites will benefit from this support which will target the technical aspects of the assessment as well as financial ones (estimating the necessary human and financial costs according to the targeted surface). This work will be done jointly with the implication of TDV in action C.2 to adapt the training offer.

5-GIS Posidonie, in line with subaction A.2.3 will implement monitoring in 80 stations geographically distributed over the French Mediterranean region and for each of the following habitats: *Posidonia oceanica* seagrass beds, infralittoral rock with photophilious algae, coralligenous formations and submerged caves. The monitoring will be carried out according to the protocols validated in A.2.3 and until the end of phase 3 and will widely require nautical means. This network aims at following the evolution of the ecosystems quality over time, and therefore to assess and better understand their conservation status. This work will partly use existing data et will enable to monitor the evolution by return on the same site in some cases.

In phases 1 and 2, the GIS-P will support evaluation work of the PNRC.

Starting on phase 3, the GIS-P will propose, on the basis of bibliographic analysis, existing data and preparatory work carried out in A.2.3, an evaluation of the other Mediterranean habitats: 1110 (1110-5, 6, 7, 8 et 9), 1140 (7, 8, 9 et 10), 1160 (1160-3) and 1170. Two workshops will be convened for the involvement of relevant scientific experts in those developments.

GIS-P will involve scientists from its network through external assistance.

6-IFREMER, in line with its implication in the subaction A.2.2, will target in this action:

Coastal habitats:

- The assessment of the conservation status of seagrass over the 5 sites addressed by subaction A.2.3. This assessment will be based on the combination of data from the field and modelling results for the development of integrated indicators, using various approaches (surface index, biodiversity index and indicative species for the functions of the habitat), and it will offer a readership grid of indicators compared to their baseline situation. Comparison of the conservation status and the various indexes between different sites, along with environmental gradients and local pressures will be realised.
- The dissemination of methodologies validated in action A.2.3 for the assessment of intertidal and subtidal reefs, and for the integration of southern variations of the intertidal reefs.

Deep-sea habitats (reefs) with two complementary approaches:

- Surface monitoring: acquisition of a new optic and acoustic mapping following the same strategy as the one developed in A.2.3 and algorithms developments of automatic changes detection of acoustic and optic data.
- Stations monitoring through the implementation and the maintenance of demonstrative deep-sea observatory for the evaluation and regular monitoring of

the conservation status of deep-sea reefs within an SAC. The observatory will be installed at a depth around 1,000 metres. It will allow daily video acquisition of a reef habitat and zooming on a structuring coral species, enabling the observation of polypes behaviour, the assessment of their activity intensity and to estimate the growth rate of a colony. The video acquisition could be triggered by particular events such turbidity rises. Correlations will be sought with activities data on the area (such as fishing). IFREMER will ensure long-term future of the observatory in order to make it a wide scale research infrastructure in the frame of the EMSO project (European Multidisciplinary Seafloor and water column Observatory).

Significant human resources will be used for adequate implementation of this work involving permanent and additional staff such as post-doctorate fellows.

The deep-sea part will require 15 to 20 days of oceanographic campaign for the deep-sea reef mapping and the observatory deployment, followed by 5 to 6 days of annual campaign for maintenance during 3 years (the costs are not accounted for the project).

7-IMA will work on the implementation of assessment of intertidal reefs (*sabellaria* and boulder reefs), subtidal reefs and underwater caves on the Basque coast SACs. In particular IMA will be in charge of validating protocols adapted to the southern area of the Bay of Biscay where the habitats present different facies from the rest of the biogeographic region. Subtidal monitoring will be carried out by certified divers of IMA. The monitoring of intertidal habitats will be performed in a complementary way using aerial drones surveys and field surveys.

9- and 11- In line with A.2.2, PNRA and PNRGM will be involved in the development of the Littoral Natural Heritage Observatory within their sites for the sediment intertidal habitats and seagrass beds, being a priority within their management plan (for instance, the PNRGM site includes 16% of the national surface of *zostera marina*). In addition to seagrass, PNRGM will monitor the reef habitat 1170 and more precisely the gorgonian subtidal reefs with aboveground fauna, corresponding to a rarity criterion and conferring them a high level of priority for their conservation. The maerl beds habitat (1110-4) will be monitored by PNRA with the bay of Brest SAC which will become a reference area (containing 23% of the national surface of this habitat) for the assessment of the conservation status of this habitat and therefore for the HD/MSFD monitoring network. A monitoring will also be realised to monitor the effects of innovative anchorages devices implemented in C.7.1 subaction and a dashboard will be developed for the PNRA site.

10-PRNC will assess the conservation status of sandbanks (including partly seagrass beds) within two strong protection areas. The assessment will enable having a referent area in terms of conservation status evolution, 10 years of effects after the implementation, and in comparison with the baseline carried out in 2008. In particular a new seagrass area have been detected but not assessed accurately. The monitoring will be done by external assistance with the support of GIS-P for the scientific framework. The technique used will be a mapping with lateral sonar of the Beauduc gulf (4.5 km²) and the bay of Carteau (10 km²) and the testing of a multi depth-finder method allowing for mapping very shallow depths (below 1 metre depth). Those techniques will enable assessing the various parameters of the conservation status in particular habitat structure, the resolution making visible the impact evolution.

12-The strengthening and the deployment of the evaluation devices for the conservation status of intertidal sediment habitats (1130 et 1140) and seagrass beds (1110-1, *z. marina* et *z. noltii*) will be coordinated by RNF and integrated in the Littoral Natural Heritage Observatory. In coordination with scientific expert developing the indicators (action A.2) and with the support of IFREMER, the objective of the involvement of RNF will be to support managers in the implementation of assessment protocols meeting the management needs of the site. This will be done by recurrent working cycles, the organisation of regular workshops with managers and scientists (a workshop for each habitat on a yearly basis

and an integration into the Littoral Natural Heritage Observatory seminar on a yearly basis) et the activation of scientific support for the protocol implementation and the data analysis. At minimum, as well as A.2.2 action, 10 monitoring sites will be implemented for each habitat.

D.1.2) The assessment of the impacts of the project actions on the conservation status of habitats.

1- Additional staff of AFB will carry out a synthesis work of the impact of the following project actions:

- Action C.4, on the basis of reference areas monitoring and the impact of the evolution of pressures with a feedback from the concerned activity sectors.
- Action C.6 regarding the impact of strong protection areas on the basis of the monitoring carried out by beneficiaries on these areas (independently whether there are financed by the project or not).
- Action C.7 to assess the impacts of least impact anchorages and habitats restorations. On the basis of feedbacks from anchorages areas managers which will have in charge the monitoring of the impact of these new techniques on habitats.
- Action C.9 through cross-analyzing and looking for correlation between the evolution of habitat conservation status and the awareness-raising actions developed.

Standardized protocols by management measures types and a BACI-like (Before-After-Control-Impact) approach will be favored, in order to adequately identify the impacts of concrete actions on the conservation status of habitats. The missing assessment protocols will be based on the methodological work of A.2 action. In a qualitative way, the work will seek to value feedback from marine users regarding the impacts of action on habitats.

All the results of the action will be made available and will allow feeding the online toolkit (action C.3).

When

The action will occur mainly in phases 2, 3 and 4 except from the study within the PNRC territory which will be carried out in phase 1 since it will provide useful information for the development of C.6 action.

The deployment of habitat monitoring will start in 2020, which is the time required to collect: (1) the indicators and protocols for the habitats evaluation, (2) the network monitoring strategy according to the level of stakes carried by the habitats and (3) the implementation of first project concrete actions. The progressive analysis of results issued from habitats monitoring will therefore be developed all project long and will enable an evaluation of conservation status and their evolution. The analysis of impacts of projects actions will depend on the calendar of the implemented concrete actions.

AFB, Agde, TDV, PNRA, PNRGM and RNF will have a regular involvement during the three phases, the GIS-P will be involved in all phases but consecutively on different topics, IFREMER will have regular involvement in phase 3 and 4 and PNRC will be involved in phases 1, 2 and 4 (valorisation).

Reasons why the action is necessary:

The evaluation of conservation status is the cornerstone of the directive and its implementation in France where the management of protected areas is organised following an assessment/action logic. However the development of the marine Natura 2000 network being quite recent, the implementation of the monitoring network is still in progress. This

action aims at catalyzing the implementation of those evaluations within the SAC network and for the whole set of habitats targeted by the project. The action is organised in order to make a technical leap between the 2018 evaluation, for which the use of expert judgement will be predominant and the 2024 evaluation, which will rely on a monitoring network and which results will be disseminated in the first half of 2025, concurrently with the end of the project

The action involve a large number of beneficiaries since it combines complementary input from the scientific coordination, the presence on the field of site managers and the dissemination capacities of networks coordinators such as AFB, TDV and RNF. This will contribute to optimize monitoring means in allocating efforts on local resources.

The high level of intervention regarding seagrass beds corresponds to a major stake within the network and it follows a strong demand from sites managers due to the sensitivity of this habitat and the high level of interaction with users and activities. Regarding this habitat, IFREMER and RNF are complementary in targeting respectively surface and stations monitoring. They will be closely linked and benefit from one to another.

4. Constraints and assumptions

The operational implementation of monitoring as well as the analysis of the conservation status of habitats depends highly on the work planned in action A.2. Delays or difficulties to implement this action could have consequences on the D.1 action. This action is a flagship one of the project and benefit from extensive involvement and support by beneficiaries and the coordination team, which will make all the efforts to adapt the action if necessary.

Deep-sea oceanographic campaigns depends on the selection mechanism of the French Oceanographic Fleet for offshore campaigns, which relies on call for projects and assessment by the national offshore fleet commission; of which IFREMER takes part.

The change of method of assessment (monitoring versus expert judgement previously) could lead to discrepancies in the results and a deterioration of the conservation status of the habitats. This is unlikely insofar as the current situation is unfavourable in many cases and therefore cannot deteriorate according to the assessment system. But if this were to happen, it would nevertheless be regarded as a progress. Indeed, it is better to be aware of a degraded situation and take measures accordingly than to believe that the situation is better and do nothing. One of the fundamental principles of the evaluation of management advocated in France implemented as part of the dashboard approach is adaptive management: putting resources where the situation is unfavourable ("putting money on the red"). This approach will be supported by this action and unfavourable results will therefore be an argument for intensifying actions on the habitats concerned (regulatory measures among others). The lack of robustness of current results is sometimes invoked, leading to uncertainty about the need to implement measures, rightly so. This progress is therefore necessary to maintain a trusting relationship with stakeholders and to put in place appropriate measures.

Regarding the impact of project actions, it can be difficult to distinguish the effects of external factors.

This action is concerned by interactions between land and sea waters through the assessment of habitats and will be linked with WFD.

5. Expected results:

It is expected that the action will contribute to the direct or indirect implementation of 250 local assessments of habitats conservation status (meaning the monitoring of an habitat in one site, which can be iterative), including:

- 90 evaluation coordinated by AFB : 30 evaluations on intertidal habitats for sites managed by AFB and 60 evaluations performed by external assistance.
- 1 annual evaluation of coralligenous reefs carried out by the commune d'Agde.
- 35 evaluations of Mediterranean coastal lagoons sites, coordinated by the Tour du Valat foundation.
- 80 evaluations Mediterranean habitats (*Posidonia oceanica* seagrass beds; infralittoral rock with photophilious algae; coralligenous formations and submerged caves), coordinated by GIS Posidonies.
- 10 evaluations on Basque Country sites, implemented by IMA.
- 7 evaluations of zostera seagrass bed by IFREMER (as part of a global assessment) and an evaluation of deep-sea reefs in one offshore site.
- 3 evaluations on the bay of Brest site and habitats of maerl beds, zostera seagrass beds and intertidal sediment habitat implemented by PNRA.
- 2 evaluations of sandbanks in Camargue, coordinated by PNRC.
- 3 evaluations in the golfe du Morbihan site of intertidal sediment habitat implemented zostera seagrass beds and subtidal reefs implemented by PNRGM.
- 20 annual evaluations of intertidal sediment habitat and zostera seagrass beds (10 for each habitat) coordinated by par RNF.

Those evaluations will be at the heart of the conservation status assessment that will be carried out and reported by France before the 30th of June 2025, in compliance with article 17 of the HD.

Furthermore a deep-sea observatory will be implemented, enabling scientific monitoring of the deep-sea reefs and dissemination to the large public of deep-sea habitats.

In terms of dissemination, the involvement of 30 sites managers (apart from beneficiaries) is expected in evaluations implemented by AFB and the organization of the following meetings:

- 6 managers/scientists workshops (1 per phase and per biogeographic region) of experience sharing on assessment methods, by AFB (40 participants for each).
- 2 workshops for the assessment of other Mediterranean habitats (1110, 1140, 1160 and 1170-deep-sea reefs) by GIS Posidonies (30 participants for each).
- 15 managers/scientists workshops for Mediterranean lagoons by Tour du Valat foundation (30 participants for each).
- 6 managers/scientists workshops « zostera seagrass beds» and « intertidal sediment habitat» (for each habitat), by RNF (15 participants for each).
- 6 Littoral Natural Heritage Observatory integration seminars, by RNF (30 participants for each).

Reports and participants lists will be shared on the collaborative space of the project.

Regarding assessment devices for management, it is expected that 20 SACs will have developed a dashboard at the end of the project.

Last, a synthesis of the impacts of projects concrete actions on the concrete actions is expected, especially for actions C4, C6, C7 and C8.

6. Cost estimation: 2,718,134€

1-AFB: €923,400

Personnel costs: €447,000

- Working time of scientific manager: 605 days for the 3 phases.
- Working time of marine subregion officers: 487 days for the 3 phases, including 150 days for the evaluation of impacts of project actions.
- Working time of PNM and GNB officers: 696 days.

Travel and subsistence: €20,900 for attendance of meeting by biogeographic regions and local travels for monitoring implementation.

External assistance: €414,000.

€138,000 per phase for the following monitoring actions:

- *Sabellaria reefs*: €10,000
- Boulder fields: €8,000
- Other intertidal reefs: €20,000
- Subtidal reefs: €35,000
- Subtidal sediment habitats: €40,000
- Maerl beds: €25,000

Estimation cost is based on average cost proposed by scientific organisations and consultancy firms.

Consumables: €36,000

€12,000 per phase for field material (€5,000) and for the organization of workshops for the two biogeography regions (€7,000 in total including attendance of 5 experts).

3-Commune d'Agde: €49,440

Personnel costs: €49,440

€16,480 per phase for diving, based on a divers daily-rate of €515 (32 days), which includes two divers (senior manager and technical staff with the respective daily rates 315€ and 200€).

4-Fondation Tour du Valat: €52,588

Personnel costs: €30,907€

Working time of the project manager (5 days per phase) and PACA officer mission PACA (110 days) for the 3 phases.

External assistance: €10,181

For the working time of the Occitanie and Corse officers.

Consumables: €10,900

Organization of 6 workshops in phases 2 and 3, and 3 in phase 4 (€766 on average per workshop).

5-GIS Posidonies: €359,800

Personnel costs: €231,400

- Working time of research engineer (€250 per day, permanent): €217,000
- 4 internships: €14,400.

Travel and subsistence: €58,300

- €4,000 for meetings.
- €54,300 for field work.

External assistance: €35,900 for the involvement of scientists of the GIS network.

Equipment: €4,800 (hardware)

Consumables: €27,700

€3,000 workshop organization.

€13,000 small field material, lab stuff, diving material.

€6,900 fuel (car and boat).

6-Ifremer: €533,200

Personnel costs: €448,200

Permanent personnel, except where specified.

For coastal habitats:

- 63 days per phase for the coastal habitats officer (€332 per day).
- 34 days per phase of benthic ecology researcher (€376 per day).
- 41 days per phase of benthic ecology engineer (€340 per day).
- 151 days in phase 3 of post-doctoral fellow for seagrass spatial ecology (€304 per day, additional personnel).
- 151 days in phase 3 of post-doctoral fellow for seagrass spatial ecology (€304 per day, additional personnel).
- 28 days per phase of biology technician (€269 per day).
- 151 days in phase 3 of technician for species sorting (€209 per day, additional personnel).

For deep-sea habitats:

- 76 days per phase for the deep-sea habitats officer (€332 per day).
- 36 days per phase of deep-sea habitats researcher (€376 per day).
- 45 days per phase deep-sea habitats engineer (€376 per day).
- 101 days in phase 3 deep-sea habitats engineer (€289 per day, additional personnel).
- 151 days in phase 3 of post-doctoral fellow for the temporal monitoring of deep-sea habitats (€304 per day, additional personnel).
- 60 days per phase of deep-sea habitats technician (€269 per day).
- 10 days per phase of project assistant (€289 per day) for the deep-sea environment.

Travel and subsistence: €27,000 (€17,000 then €10,000 in phases 3 and 4).

External assistance: €33,000 for biological analyses of benthic samples in phase 3.

Consumables €25,000

€12,500 per phase (hardware and lab material).

7-IMA: €137,863

Personnel costs: €78,492

- 26, 16, then 16 days of professional divers for the 3 phases (€397 per day on average)
- 130 days of engineers for habitat monitoring and project management (€361 per day on average).
- 17 days of the director for expertise and coordination (€440 on average).

Travel and subsistence: €6,723

For diving and ROV boardings, local travel and national meetings.

External assistance: €39,538

- Divers certification: €2,200 (prorated calculation of diving days for the project: one third).
- Training to maintain divers qualification: €10,088 (prorated calculation of diving days for the project: one third)
- Chartering costs for professional diving vessel: €8,450 in phase 2 then €5,200 for phases 3 and 4.
- Aerial drone rental €2,000 per phase in phases 3 and 4.

Equipment: €6,150

- Bibliography for sample identification: €250.
- Renewal of mapping software license in phases 3 and 4 (€2,700 per phase).

Consumables €3,360

Per phase €880 for field equipment and €240 for diving material revision.

Other costs: €3,600

€1,200 per phase for project results valuing in various meetings

9-PNRA: €55,426

Personnel costs: €21,665

- 83 days on the three phases of the additional project manager (€205 per day).
- 10 days per phase of permanent field officer (€155 per day).

Travel and subsistence: €761 (2 travels in France for workshops and local travels).

External assistance: €33,000

- €10,000 per phase for the implementation of the maerl protocol.
- €1,000 per phase for the monitoring of impacts of anchorage on maerl.

10-PNRC: €84,590

Personnel costs: €8,600

- 25 days of the permanent officer in phases 1, 2 and 4 (€230 per day).
- 15 days of additional technician in phases 1, 2 and 4 (€190 per day).

External assistance: €75,990

- For the development of conservation status habitat mapping (€53,193 then €22,797 in phases 1 and 2 for field work and results analysis).

11-PNRGM: €40,150

Personnel costs: €15,150

- 54 days of the additional project officer in phases 2 and 3 (€230 per day).
- 16 days of the additional project manager in phases 2 and 3 (€190 per day).

External assistance: €25,000

€12,500 per phase in phases 2 and 3 (€5,000 of scientific dives and €7,500 of sediments core sampling).

12-RNF: €482,176

Personnel costs: €344,064

- 1 444 days of the additional project officer in the three phases (€234 per day).
- 200 days of the permanent project manager in the three phases (€296 per day).

Travel and subsistence: €53,700

On a per phase basis of:

- 22 travels at 350€:10 for pilot monitoring sites and 6 for workshop attendance (2 persons).
- 6 five days travels, per phase (€1,700 each).

External assistance: €54,000

Per phase: scientific support for seagrass bed, sediment habitats and biostatistics €6,000 each).

Equipment: €4,000 (hardware and field equipment in phase 3).

Consumables €19,212

€6,404 per phase: €800 of field material, €5,604 for catering (15 persons) and seminars (30 persons on 2 days).

Other costs: €7,200

€2,400 per phase for accommodation during seminars (30 persons).

Phase 1 costs:

GIS-P: €4,013
PNRC: €59,206

7. Deliverable products:
Assessments of each phase will be carried out by the scientific manager. Those assessments will include the list of monitored sites and concerned habitats as well as results and they will detail dissemination and experience sharing events that have been organised. The final deliverable entails the assessment of the involvement of each beneficiary on this action.

31/12/2021: phase 2 assessment of habitats conservation status evaluation developments.
31/12/2023: phase 3 assessment of habitats conservation status evaluation developments.
31/03/2025 : analysis of the impact of project action on the conservation status of habitats.
30/06/2025: phase 4 assessment of habitats conservation status evaluation developments and overall assessment of D.1 action.

8. Milestones:
31/12/2019: first delivery of methodologies from A.2 action.

31/12/2020: validation of the evaluation strategy (action A.2.1).

31/12/2021: second delivery of methodologies from A.2 action.

30/06/2025: presentation of results to the final conference.

Dependence on complementary funds: the activities of Ifremer on deep-sea habitats within this action are dependent on the offshore campaign that will be realised under the complementary fund provided by the UMS French oceanographic fleet. Ifremer has applied in September 2017 to carry out the offshore oceanographic campaign in 2019.

ACTION D2: Assess the impact of project actions on activities and users

2. Beneficiary responsible for implementation:
1- AFB: responsible for coordinating and implementing the action on sites in the Gulf of Lion Marine Nature Park (PNM GdL) with respect to the impact of anchorages on diving
2- Agde municipality: responsible for assessing the impact of a highly protected area
3- CNRS: responsible for jointly completing five assessments with IFREMER
6- IFREMER (AMURE maritime economy unit): responsible for jointly completing five assessments with the CNRS
9- Armorica Regional Nature Park (PNRA): responsible for assessing the impact of a highly protected area and awareness-raising actions
10- Camargue Regional Nature Park (PNRC): responsible for assessing the impact of awareness-raising actions
11- Gulf of Morbihan Regional Nature Park (PNRGM): responsible for assessing the impact of awareness-raising actions

3. Description (what, how, where, when and why):
What?
This action aims to assess the impact of project actions on activities and users, in terms of user acceptance, economic consequences on activities, and visitor numbers in these areas. The action will build on methodological preparatory work completed under action A3. It will also take into account information on habitat conservation status from actions A2 and D1. The project actions assessed during action D2 will include, for example, strong protection measures (C6), measures to create anchorages (C7.1), awareness-raising measures (C8) and measures on new funding mechanisms (C10). Action D2 mirrors action D1, but focuses on societal impacts. These assessments will be conducted as part of the Natura 2000 tool, in line with the goal of habitat conservation. Joint analysis of results for D2 and D1 will provide an overview of each action's ecological and socio-economic impacts will be established.

Action D2 meets four assessment needs resulting from specific LIFE integrated project actions:

<u>Need 1 resulting from Action C7.1: "Develop lower impact recreational anchorages and marking"</u>
Managers (of marine protected areas, existing anchorage areas, government services, etc.) wish to understand how implementing these new areas will affect users, especially in terms of economic impact and acceptance, and the conditions required.

<u>Need 2 resulting from action C6: "Contribute to implementation of marine strategy measure M03 by developing strong protection for Natura 2000 site habitats"</u>
This involves assessing the impact of regulatory measures on the activity sectors concerned: economic impacts or impacts on actions, such as the postponement of an activity or reduced social acceptance.

<u>Need 3 resulting from action C8: "Change behaviours to limit the impact of activities on sensitive habitats"</u>
This involves assessing how awareness-raising actions affect activities and users from a quantitative point of view. Examples include assessing visitor numbers and practices.

<u>Need 4 resulting from action C9: "Propose and implement a sustainable and coordinated funding strategy"</u>
The implementation of innovative funding mechanisms, such as crowdfunding, requires an assessment of how contributors view the action's impact.

How

The action will be coordinated by AFB staff (human science managers, additional staff and permanent staff).

1. During the first phase, in parallel with action A3, the AFB human science manager will complete all preparatory work for implementation of the action. This work involves identifying the required reference states (before implementing the action to be assessed) so they can be completed or improved under action A3. This means prioritising the actions to be assessed, identifying the site(s) for implementation and setting schedules. Assessments may cover local project actions or sites identified during the project (for example, following calls for expression of interest under other actions). A maximum of around 12 assessments will take place (given that one action may apply to several sites and one site may be affected by several actions).

2. Implement assessment methods to measure the impact of actions on activities and users.
These methods must answer questions such as:
- Is the activity made easier? More difficult? Why?
- If the impact is negative, is this acceptable for the stakeholders concerned? What would make it acceptable?
- Have actions helped prevent activities that damage the environment?
- How have actions impacted users (changes in perceptions, attitudes, etc.)?

The tools developed under A3 must be “generic” so they can be used by managers of Natura 2000 sites. In theory, IFREMER and CIRED (Center for International Research on Environment and Development) will support this action on the four sites they cover during A3 (task 2.ii). Other assessments and support for the sites not covered will be performed using external assistance. However, the goal will still be to develop tools and protocols that managers can implement almost independently (in other words, with methodological support only).

The methods used include multi-agent modelling, which can be used to understand these effects, because it builds a dynamic vision of the socio-ecosystem. It will be tested for at least two needs, preferably on sites that assessed ecosystem services using this tool under A3 (this methodology will be implemented by AFB, the CNRS, IFREMER and PNRGM).

A total of around 12 assessments will be completed. Associated beneficiaries responsible for site management (AFB, Agde Municipality, PNRA, PNRC and PNRGM) will complete some of these analyses, in particular by implementing protocols in the field (see “where?”). Associated scientific beneficiaries, the CNRS and IFREMER, as well as any external assistance involved, will support other beneficiaries and complete some assessments (the CNRS and IFREMER will complete around half, and external assistance the other half).

As for action A3, external assistance will involve scientific partnerships where the other parties provide at least 20% in co-funding.

3. Consider how these assessments will be incorporated into the Natura 2000 tool. This involves considering the approach to be adopted if assessments and results are in conflict with the network’s goal, *i.e.* habitat conservation. For example, what strategy should be adopted if a conservation measure is necessary but has a strong impact on an activity?

4. Share assessment results with other Natura 2000 sites and get feedback to develop and implement Documents of Objectives (DOCOBs) with regard to actions C2 and C3.

Where?

- Need 1: measures to manage small yachts
    - Sites managed by PMN GdL: study the impact of new anchorages on diving activities

    - Other sites from calls completed under action C7.1
- Need 2: reinforced protection measures
    - Brest bay (PNRA): study the impact of opportunistic implementation of highly protected areas
    - Natura 2000 site on the Agde coast (Agde municipality): study visitor numbers and survey users following the implementation of the regulated area and the initial diagnostic study completed in A3
- Need 3: awareness-raising measures
    - Brest bay (PNRA): study the impact of awareness-raising actions
    - Gulf of Morbihan site (PNRGM): assess changes in perceptions following awareness-raising actions targeting recreational fishermen and pleasure boaters and the initial diagnostic study completed in A3
    - Sites managed by PNRC: study visitor numbers and survey users following awareness-raising actions and the initial diagnostic study completed in A3
- Need 4: actions for the implementation of new funding mechanisms
    - Sites selected during action C10

When?
Action D2 runs for the duration of the project, but especially starting in Phase 2 and gaining in momentum during Phases 3 and 4. This is because it is closely linked to the initial diagnostic studies completed on sites (A3) during phase 2, and actions to implement measures that are assessed under D2 (C6, C7 and C9).

More specifically, for the various beneficiaries:
1- AFB: coordinates all phases and implements the action on PNM GdL sites during Phases 2 and 3
2- Agde municipality: Phases 2, 3 and 4
3- CNRS: Phases 2, 3 and 4
6- IFREMER: Phase 4
9- PNRA: Phases 2, 3 and 4
10- PNRC: Phases 2, 3 and 4
11- PNRGM: Phases 3 and 4

In terms of external assistance, D2 applies to Phases 3 and 4.

In summary, Action D2 involves:
- During Phase 1: identifying/adjusting measures to be assessed and relevant sites, monitoring initial methodological developments, and completing reference states under A3
- During Phase 2: developing methodologies, implementing the action and completing around two assessments (at a minimum, need 1 for the PNM GdL; need 2 for the Agde coast and need 3 for the PNRA and PNRC)
- During Phase 3: completing around five assessments (at a minimum, need 1 for the PNM GdL, need 3 for the PNRA, PNRC and PNRGM, and need 4)
- During Phase 4: completing around five assessments (at a minimum, need 2 for the PNM GdL; need 3 for the PNRA, PNRC and PNRGM). Results will be disseminated and experience capitalised on, in connection with Actions C2 and C3.

Reasons why this action is necessary:
This action is necessary to improve involvement of users in the Natura 2000 policy, by taking steps to determine the impact of project actions on activities and users. D2 also makes it possible to substantiate these actions, improve acceptance and refocus actions with unacceptable impacts. It mirrors Action D1, but focuses on societal impacts. It compares expected improvements in habitat conservation status (Action D1) with the social and economic impacts of actions.
Coordination between scientific expertise and field studies is also necessary to establish a methodological framework while accurately portraying reality.

4. Constraints and assumptions

The following risks have been identified:

- The difficulty in preparing for the performance of an *ex-ante* diagnostic study to assess the impact of the action after its completion;
- The large volumes of field data required by the action;
- The difficulty in distinguishing between the impact of the action and external factors;
- The difficulty in linking potential assessment results with the main goal of the directive;
- The lack of hindsight in identifying project impacts;
- The implementation of other management actions on which this action relies.

Steps taken to anticipate these risks:

- One task will focus on the upstream identification of measures for which *ex-post* assessment is required, so a reference state can be produced under action A3;
- The action will be designed to ensure that data collection is feasible and support will be provided to site managers;
- The contextual description and external influencing factors will be included in the action itself to facilitate the impact assessment;
- One task will focus on considering how these assessments will be included in the Natura 2000 policy;
- All management actions linked to this action cover several sites, meaning the action can be reoriented at other sites.

This action is concerned by interactions between land and sea waters through terrestrial users or activities that can impact the marine habitats, and will be linked with WFD.

5. Expected results:

The impact of project actions on activities and users will be measured through 12 assessments, including:

- At least five assessments completed or supported by CNRS and IFREMER, including two site assessments completed by multi-agent modelling and an assessment of the implementation of funding mechanisms;
- At least five assessments completed or supported through external assistance;
- Assessments completed partly or totally by beneficiaries:
    - To study the impact of new anchorages on diving activities in the PNM GdL;
    - To study the impact of implementing a highly protected area in the Agde municipality;
    - To study the impact of implementing a highly protected area and awareness-raising actions in the PNRA;
    - To study the impact of awareness-raising actions in the PNRC
    - To study the impact of awareness-raising actions in the PNRGM.

All these assessments will contain feedback, including methodological aspects and their inclusion in the Natura 2000 initiative.

6. Cost estimation: €388,924

<u>1- AFB:</u> €174,100

<u>Personnel costs:</u> €95,500

- Work time (322 days) for the human science manager to prepare, coordinate and implement the action
- Support by permanent AFB staff (70 days for the human science manager, cost not accounted for under the project)
- Work time (60 days) for the PNM GdL officer to implement the action at PNM GdL sites

<u>Travel costs:</u> €3,600 (two trips per phase to the sites assessed)

External assistance: €75,000 (€50,000 in Phase 3 and €25,000 in Phase 4 for scientific support during site assessments)

2- CNRS: €106,496
Personnel costs: €45,232 (176 days, work time for the postdoctoral student in Phase 2 to assess ecosystem services at two sites)

Travel costs: €18,000 (€3,000 per person per phase for trips to assessment sites)

External assistance: €45,480
This includes experts from the social science institution EHESS (22 days at €350 per day during Phases 2 and 3, then 20 days during Phase 4) and Agrocampus (20 days at €379 per day during Phases 3 and 4) to complete assessments at two other sites (and to support the postdoctoral student's work during Phase 2)

3- Agde municipality: €23,940
Personnel costs: €23,940 (for the completion of Phases 2, 3 and 4 and a five-month internship each year to assess visitor numbers, complete surveys and monitor changes)

6- IFREMER: €19,521
Personnel costs: €15,521 for the evaluation of one site during phase 4 (17 days at €365 per day for a senior researcher and 34 days at €274 per day for a junior researcher)

Travel costs: €4,000 (€2,000 per person for trips to the assessment site)

9- PNRA: €4,967
Personnel costs: €4,306, work time for additional staff (21 days at €205 per day) during Phases 2, 3 and 4 to develop and implement assessment tools and feedback)
Travel costs: €661

11- PNRC: €22,800
Personnel costs: €22,800, work time for additional staff (field officer, 120 days)

11- PNRGM: €37,100
Personnel costs: €37,100, work time for additional staff during phases 3 and 4 (technical manager, 75 and 50 days at €205 per day; project manager, 20 and 25 days at €250 per day) to monitor and assess awareness-raising actions and to complete perception surveys

Phase 1 costs:

AFB: €10,700
PNRC: €4,066

7. Deliverable products:
31/12/2015: report on completed assessments analysing the impact of project actions on activities and users, including 12 feedback sheets

8. Milestones:
31/03/2018: recruitment of a human science manager by AFB
31/03/2019: recruitment of a postdoctoral student for 22 months by CIRED in January 2019 (in connection with actions A3 and C10)
31/12/2019: inventory of the initial diagnostic studies required for assessment actions
30/06/2022: commencement of the assessment completed in partnership with external assistance
30/06/2025: completion of 12 assessments

ACTION D3: Assess the impact of governance actions

2.Beneficiary responsible for implementation:

1-AFB

3. Description (what, how, where, when and why):

This action aims to define and test a system for assessing the quality of Natura 2000 site governance and its development over the course of the project.
It will therefore involve (in chronological order):

- putting forward an analysis grid, based in particular on the results of Action A1, corresponding to a set of relevant indicators for characterising the governance of the Natura 2000 sites;
- testing the robustness and sensitivity of indicators during the implementation of Action C1 on about ten pilot sites;
- assessing changes in governance quality on these sites;
- stabilising the indicator grid and distributing it to site managers so they can integrate it in their monitoring-assessment tool (in conjunction with Actions D1 and D4).

Task 1 will be focused on the sites sampled in Action A1, to survey existing governance assessment systems for these sites.
The other Tasks will specifically target changes to governance of sites involved in Action C1: sites selected under calls for expression of interest and IP beneficiary sites.
The action will be performed in parallel with Action A1 for surveying existing governance assessment systems and analysing the inputs/experience feedback from assessment of governance systems implemented in other protected sites.
The action will then be performed in parallel with Action C1 based on the schedule of the call for expression of interest.
It will be possible to reassess Action D3 in line with Actions A1 and C1.

Task 1: Coordinate the action

This Task aims at monitoring the assessment of governance quality for sites participating in Actions A1 and C1.
An intermediate report will be issued by the end of 2022 and a final report in the 1st quarter of 2025.
The following tasks (2 to 6) deal with the content of the service entrusted to scientists for Actions A1, C1 and D3.

Task 2. Draw up a grid of indicators for assessing governance

This grid will be based on:

- performance of a review using a variety of research work and experiences carried out by the managers of protected areas;
- a workshop organised over two days with the aim of gathering managers and scientits around this theme. The first day will be devoted to presenting the review and the second will be given over to developing indicators (working groups on various themes).

The aim will be to create a generic grid with a large panel of indicators and to make it available to the sites involved in Action C1.

Task 3. Experiment with the indicator grid
The experiment will be implemented in around ten Natura 2000 sites involved in Action C1 on a voluntary basis. Adaptations will need to be made for each site, which will require methodological support from external assistance by scientists.

Two workshops will be organised for monitoring and improving the indicator grid. The suggestion will be to periodically gather the ten sites involved (about every 6 months) to fill in the grid and readjust or validate specific indicators.
An intermediate report will be issued by the end of 2022.

Task 4. Final report on the impacts of the project for improving governance

This task will perform an overall review of the impact of governance actions (A1, C1 and D3) and will determine the relevance of the indicators proposed and consolidated during Action D3.
A final report will be issued in the 1st quarter of 2025.

Reasons why this action is necessary:
Assessing the quality of governance for the purposes of continuous improvement with a view to improving current management practice is a powerful lever for identifying areas for improving management efficiency.
In a marine context which creates specific relationships between the State and local stakeholders, combined with questions of nested scales and policy couplings, it is important to take into consideration the complexity of governance and make it assessable using an tool accessible to managers.
The IP is an opportunity to develop, test and validate new indicators collectively with managers.
In addition, this assessment is necessary for obtaining “IUCN Green List” recognition (pillar 1 “good governance”).

4. Constraints and assumptions

This action assumes a strong commitment on the part of sites to a system for assessing their management. This requires acceptance by all participants. In order to mitigate the risk of non-commitment by these key players, a special effort will be made to raise awareness of governance issues for improving management quality and supporting managers.
This action is concerned by interactions between land and sea waters through the governance and will be linked with WFD.

5. Expected results:
- a grid of indicators developed with managers around questions of governance, including at least 10 validated and transferable governance indicators.

6. Cost estimation:
- Personnel costs: 165 days of the human science manager (AFB): €41,250
- Travel: €7,200
- External assistance for the call for expressions of interest: €185,000

Total Action D3: €233,450

7. Deliverable products:
31/12/2019: first version of the grid of relevant indicators for characterising the governance
31/03/2022: intermediate report on implementation on sites selected under calls for expression of interest
31/12/2022: intermediate report incorporating the input from the survey and a participatory workshop with the Natura 2000 sites managers and the first version of the tested indicator grid
31/03/2025: final report on the action

8. Milestones:
31/12/2022: Publication of the first version of the grid of tested indicators on the selected sites
31/03/2025: Publication of the final report on the impacts of the IP for improving governance

ACTION D4: Facilitate “IUCN Green List" certification for pilot sites

2. Beneficiary responsible for implementation:
1 – AFB will be the coordinator for the action.
8 – PNPC will experiment with certification of a Natura 2000 site managed by a national park
9 – PNRA will experiment with certification of a Natura 2000 site managed by a regional nature park

3. Description (what, how, where, when and why):
What
The Green List is an international certification system created by the IUCN in 2014 that provides a standard for management and governance quality for protected areas. The certification provides international recognition for the best-managed sites and is also an initiative for improving the entire network, which can draw inspiration from these examples.
The criteria of the Green List identify protected areas that have effective and equitable planning, governance and management to deliver successful biodiversity conservation and governance outcomes.
The aim of the action is to obtain Green List certification for marine Natura 2000 sites (SAC) that will submit their applications during the project. The outcomes of the action will reflect the management quality of these sites.

How
The action will be coordinated by the AFB Marine Protected Area assessment manager (permanent staff) and will be responsible for establishing the partnership with the IUCN. The action will be organised into two components:

1) Adaptation of the Green list methodology and national standard to marine Natura 2000 sites
The Green List application process requires an evaluation based on global criteria (indicators) that need to be adapted to the specific management and governance characteristics of the Natura 2000 status.
The indicators established for this evaluation focus on a wide range of aspects, including natural values, cultural, economic and social benefits provided by the site, consultation and communication with local populations on management, incorporation of global changes and successful conservation outcomes.
During the first year of the project, the Green List’s current set of 49 indicators will be analysed and adapted to the marine Natura 2000 context in order to identify the sources of data for each of them, along with the shortcomings and development and/or adaptation needs. This analysis will be conducted with the site managers and scientific experts involved in the development of conservation status and governance indicators for the project (Actions D1 and D3).
Based on this analysis, a Green List standard and its indicators will be developed and adapted to the marine Natura 2000 (one sheet per indicator, including a description, means of verification and examples from pilot site feedback). This adaptation initiative is iterative and will benefit in the following years from improvements made to the indicators by experts/scientists and from successive feedback from the pilot sites that have tested them.
After the Green List standard adapted to marine Natura 2000 has been drafted, a user manual will be prepared for managers to explain and provide a step-by-step guide to the application process.

2) Assistance for Natura 2000 sites with the Green List certification application process
The Green List certification process has three successive steps for assessing the eligibility of candidate sites (Application, Candidate and Green List phases) The aim of the action is to engage at least 20 SACs in this process. Applications will be prepared with help from IUCN and will be partially based on evaluation actions carried out during the project. If applicant sites have evaluation tools such as dashboards, it will help achieve a large

number of standards required for certification. The gradual deployment of evaluation tools under the project's D Actions, including dashboards for Natura 2000 sites (Action D1) will therefore be a useful prerequisite for certification.
The existence of necessary prerequisites such as a management plan, data collection for the indicators, and outcome analysis on the site will be a factor for selection amongst the sites that volunteer to participate in the initiative. Applications may concern individual sites or groups of sites.
PNPC will experiment with certification of one or several SACs managed by a national park, especially with respect to its own governance mechanisms. Similarly, PNRA will experiment with certification of a Natura 2000 site managed by a regional nature park.

Where
The action will take place on Natura 2000 sites applying for Green List certification

When
The analysis and adaptation of Green List indicators to the marine environment and the specific characteristics of the Natura 2000 tool will take place during the first two years of the project.
Assistance will be provided to the applicant sites at a later time as it requires several prerequisites.

Reasons why this action is necessary
A number of marine protected areas in France have received certification, however none are Natura 2000 sites.
This action is necessary to show that the Natura 2000 network meets international criteria for good management of protected areas. This action will promote the Life project's success and quality in managing French marine Natura 2000 sites. Certification requires the success of other actions (A, C, D) upon which it directly depends, such as assessment actions that will summarise the results used in the application process.
It will also contribute to facilitating the sharing of experiences and best practices between French and Foreign managers involved in the Green List certification process. Although this action will target Natura 2000 sites with marine habitat issues, its working method and user manual could be easily applied to the other marine Natura 2000 sites and land sites.

4. Constraints and assumptions
The success of this action will require the validation of numerous prerequisites within the sites and will therefore be partially dependent on the other actions that come before it. If these other actions (A1, A2, A3, C1, C2, C3, D1, D2, D3) are not successfully completed, it will be difficult to obtain the Green List certification. The substantial project resources allocated to the evaluation action will help mitigate this risk.

5. Expected results :
- Development of a methodology adapted for the Green List certification of Natura 2000 sites.
- The certification of 20 marine SAC including those in the PNPC and PNRA.
- Global recognition of the methods and tools developed by France to support the Green List certification of marine Natura 2000 sites at the IUCN World Parks Congress 2024).

6. Cost estimation: €128,359

AFB: €111,000

Personnel costs: €0
The action will be coordinated by the AFB Marine Protected Area evaluation manager (20 days per phase – permanent staff for which the cost is not taken into account in the project).

External assistance: €99,000 as follows :

Phase 1: €24,000
Cost calculated based on 4 months of work for an IUCN agent.

Phases 2,3, 4: €75,000
The Green List certification process costs €5,000 per site, corresponding to the time spent helping prepare the application (15 days over a period of about 6 months), the costs for the reviewer site visit (1 to 2 days depending on the site), and for the application review phases conducted by national and international experts (3 days of consultants). The action plans to engage 3 then 4 Natura 2000 sites in the process per year (6 sites certified in Phase 2, 6 sites certified in Phase 3, and 8 sites certified in Phase 4). Applications for grouped certifications will be tested.

Travel costs: €10,000
Promotion of certified marine Natura 2000 sites at international events: International Marine Protected Areas Congress-IMPAC 5 (2021) and IUCN World Parks Congress (2024)

Other costs: €2,000 for publication of the user manual

PNPC: €9,100
- 50 days of work for temporary staff for preparing the application.
- 1 trip for preparing the application.

PNRA: €8,259
- 29 days of work for temporary staff for preparing the application.
- 7 trips for preparing the application.

Phase 1 costs:

AFB: €27,820
PNRA: €792

7. Deliverable products:
31/12/2019: User manual and standard for the Green List certification of Natura 2000 sites.
30/06/2025- Assessment of the green list certification
It will include: list of certified sites (applications will be available on the project's website), presentation and communication documents on the marine Natura 2000 Green List.

8. Milestones:
30/06/2018 – launch of the partnership with IUCN.
31/12/2019 – availability of methodology information for the certification of marine Natura 2000 sites: User manual and standard.
31/12/2021 – Green List certification of 6 marine SACs.
31/12/2023 – Green List certification of 6 marine SACs.
30/06/2025 – Green List certification of 8 marine SACs.

1. ACTION D.5: Monitor the impact of capacity-building actions

2. Beneficiaries responsible for implementation:

1-AFB; its public policy support department (marine environment department) and professional development and resource centre departments will be responsible for implementing this action.

Beneficiary jointly responsible for implementation

4-TDV will monitor training actions on lagoons.

3. Description (what, how, where, when and why):

This action will be associated with the actual capacity-building actions (see Actions C2 and C3).

1- Assessment of the impact of capacity-building actions will cover assessment of the impact of actions for training, networking and making information available. This assessment will be performed with respect to the increased capacity of the people trained to contribute to achieving Natura 2000 objectives. It will be based on the deliverables of the many beneficiaries involved in Action C2, and on surveys performed by GIS Posidonie and RNF on their training courses (accounted for under Action C2). TDV will provide assessment of the impact of its training actions, which are central to its involvement in the IP. These assessments will cover the capacities of the people trained, in particular *via* analysis of the impact of actions performed by these people following C2 training courses.

2- The toolkit will be assessed once, at the end of the IP, *via* surveys and analysis of the number of users of each component. The assessment is to measure the impact of the tool for the user with regard to:

⇨ knowledge of habitats
⇨ number of monitoring actions performed
⇨ number of indicators used
⇨ managers' understanding of the issues on their site and their marine natural habitats
⇨ implementation and selection of measures
⇨ sourcing of funding for measures

These two actions will be performed through surveys and analyses of the impact of capacity-building actions to improve implementation of Natura 2000.
Assessment of possible continuation of these actions will also be performed.

Reasons why this action is necessary:
In addition to reporting on the means implemented for building capacities (number of training courses and of people trained), it is essential to assess the impact of actions on the development of marine Natura 2000 site management and on the conservation status of habitats, in order to:

- reduce their number, or continue with them when they are found to be effective.
- be able to adjust them or cancel them as needed, and learn from what has worked or not worked.

4. Constraints and assumptions
Information contained in the toolkit and delivered by training courses will be available through other tools and the toolkit's share in impact will be difficult to discern.

5. Expected results :

- Assessment of the impact of the capacity-building actions of the IP.
- Recommendations for continuation of capacity-building actions.

6. Cost estimation:

AFB

-Personnel costs: €83,000

	Number of days	Costs (€)
PNM EGMP officer	74	18,500
GNB officer	60	15,000
PNM EPMO officer	74	18,500
PNM BA officer	64	16,000
PNM Cap Corse officer	60	15,000

The outreach/citizen science manager will be involved in this Action D5, according to the courses organised in Action 2. His working days are not accounted for under this action D5.

-Travel: €1,800 **Total AFB: €84,800**

TDV

- Personnel costs: €1,593 **Total TDV: €1,593**

Total action D5: €86,393

Phase 1 costs: €0

7. Deliverable products:

31/03/2025: Final report on assessment of the impact of the courses implemented in Action C2 and publication of the recommendations on the pursuit of these actions
31/03/2025: Final report on assessment of the impact of the toolkit implemented in Action C3

8. Milestones

31/03/2025: Publication of the final report on assessment of the impact of the courses implemented in Action C2 and publication of the recommendations on the pursuit of these actions
31/03/2025: Publication of the final report on assessment of the impact of the toolkit implemented in Action C3

1. ACTION D.6: Assess changes in perceptions of stakeholders and the general public

2. Beneficiary responsible for implementation:

The AFB will be responsible for implementing this action.

3. Description (what, how, where, when and why):

The objective of this action is to carry out an initial study and regular surveys (every 2 years) to help assess the changes in perceptions or the image of marine habitat protection issues among stakeholders and the general public following IP dissemination actions.

Two types of action will be carried out:

1/ A national survey on the perception of marine Natura 2000 habitat protection issues.

- The first stage of this action involves collecting previous perception surveys:

    - perception survey that will be carried out by the AFB under national measure MO28 from the MSFD's programme of measures;
    - survey on Natura 2000;
    - 4 national surveys on “French citizens and the sea” carried out by the former *Agence des aires marines protégées* (AAMP) since 2007;
    - national survey on marine protected areas (MPAs) carried out by the former AAMP in 2015 concerning all French national waters (including overseas territories) and all categories of marine protected areas;
    - surveys of Marine Nature Parks.

    Through analysing results and cross-referencing existing data, this stage will define an initial situation for target audience perceptions and establish a format for further surveys.

- The second stage of this national survey will involve carrying out 2 surveys and collecting complementary data to track the evolution of perceptions of marine Natura 2000 - first in phase 2, then in phase 4.

The target group is:
- Steering committee: how do you perceive communication efforts around the IP?
- Stakeholders in the marine environment (users, scientists, protected area managers, administrations, associations, elected officials, etc.)
- The general public living near the sea and those more generally representative of mainland France.

2/ Media opinion survey

A quantitative and qualitative media survey on Natura 2000 will be carried out in phases 1 and 4 of the IP. The survey will isolate habitat-related content so as to determine the IP's impact. This will help measure the impact of the communication strategy and of the actions carried out by the IP on media coverage and the position of articles in the press.

The AFB's communication manager will be responsible for coordinating this action, which includes selecting a service provider, setting up a contract and monitoring the contract.

Reasons why this action is necessary:

This action is necessary to help develop the messages conveyed under IP dissemination actions, particularly communication ones (Action E2).
This action is cross-cutting. It will help the IP whilst providing better understanding of perceptions or image among stakeholders.
For example, the national survey on MPAs carried out in 2015 to assess the perception of MPA strategy implementation showed that participants valued 'acceptance by stakeholders' as the main criterion for an MPA's success, above meeting its ecological objectives.

4. Constraints and assumptions

The assumption on which this action is based is the completion - at the start of the IP - of national measure MO28 from the MSFD's programme of measures. Implementation of this measure has been coordinated by the AFB since its launch in 2017.

5. Expected results :

- an initial understanding of the perception or image of marine Natura 2000 and marine habitat protection issues among stakeholders and the general public.
- two assessments (in 2021 and 2024) of changes in these perceptions and image.
- two media content analyses on marine Natura 2000 and habitats of community interest.

6. Cost estimation:

1/National survey: Total = €80,000

- Personnel costs: Communication manager: 2 months x 3 surveys (accounted for under Action E2)
- External assistance: public contracts for conducting surveys: €40,000 per phase for phases 2 and 4.

These costs are calculated based on the former AAMP's experience for this type of survey, including the national survey on MPAs carried out in 2015 (costing €70,000 for a study about all type of MPAs and both mainland and overseas areas).

2/ Media opinion survey: Total = €40,000
- Personnel costs: Communication manager: 8 days (accounted for under Action E2)
- Media opinion survey costs: framework agreements: €40,000; estimate provided by experts.

Total cost of Action D6: €120,000

Phase 1 costs: €0

7. Deliverable products:

31/12/2021: Report on the 1st national survey
31/03/2025: Report on the 2nd national survey
31/03/2025: Report of media opinion survey.

8. Milestones:

31/12/2018: Publication of the results of national measure MO28 from the MSFD's programme of measures.
31/12/2021: Publication of the report of the 1st national survey
31/03/2025: Publication of the report on the 2nd national survey
31/03/2025: Publication of the report of media opinion survey.

1. ACTION D.7: Report on socio-economic impacts of project actions and restoration of ecosystem services

2. Beneficiary responsible for implementation:
1-AFB

3. Description (what, how, where, when and why):

WHAT
This action aims to make a synthesis of IP impacts on social and economic aspects as well as to assess the impact of IP on ecosystem services.
This action will respond to the assessment and valorisation of marine ecosystem services agreed under Action 5 of the EU Biodiversity Strategy 2020.

HOW
To carry out this action, a cross-analysis of A3, D1, D2 and D3 will be carried out in order to summarize:
- socio-economic impacts of IP actions (job creation, etc.);
- the impacts of IP actions on the services provided by marine ecosystems.
External assistance will be necessary for the realization of this action.

WHERE
The action covers the entire Natura 2000 network covered by the IP.

WHEN
The action will take place on Phase 4 of the IP, in 2024 and 2025

Reasons why this action is necessary:
This action will allow to report on the the impacts of the IP and, in particular, the impacts on maintaining and restoring the functions of marine ecosystems (connected to Action D1).
This action contributes to the improvement of the knowledge required for management, as well as the improvement of the monitoring and surveillance of Natura 2000 habitats and their state of conservation (connected to action A3 and D2).

4. Constraints and assumptions
The main difficulty in carrying out this work is to have the mapping of the marine ecosystem services provided as a result of action A3.
On the other hand, there may be no major changes in ecosystem services during the IP implementation period, which is too short at the ecological level.
A comprehensive view of ecosystem services on habitats can be difficult to obtain, and all the more difficult to account for the impact of IP actions. This action will give the relevant elements on these impacts within the limits of the exercise.

5. Expected results :
- an IP impact study on marine ecosystem services.

6. Cost estimation:
10 days of the human science manager (not included in the costs)
External assistance costs: **€25,000**

Phase 1 costs: €0

7. Deliverable products :
31/03/2025: IP impact Study Report on Marine Ecosystem Services.

8. Milestones
31/03/2025: Publication of the IP impact Study Report on Marine Ecosystem Services.

1. ACTION D8: Complete indicator tables

2. Beneficiary responsible for implementation:
1-AFB

3. Description (what, how, where, when and why):
This action will involve defining project performance indicators (qualitative and quantitative) and regularly completing tables to comply with the requirements of the LIFE multiannual work programme for 2014-2017. The LIFE coordination team is responsible for this (Action F1).

Phase 1:
In line with the general guidance provided by the European Commission:
- Define and complete indicator tables, for both mandatory indicators (indicators 1, 10, 11, 12, 13 and 14), according to project-defined objectives (indicator 7.3 “Natural and semi-natural habitat”), and additional indicators.
- Compile data relating to project launch (baseline data)
- Send elements with first interim report

At the end of phase 1, then between each phase:
Analyse indicator changes and adjust actions as required to ensure project-defined objectives are met.

Phases 2, 3 and 4:
- Update performance indicators at each phase.
- Compile information for final report (Phase 4) - any deviation from objectives will be discussed.

Completed tables will be available from phase 1 for any European Commission report using the indicators completed through this project.

Reasons why this action is necessary:
This action is mandatory.

4. Constraints and assumptions
The single difficulty identified is compiling forecast outcome data (project time frame), to be delivered 5 years after the end of the project. This action will be integrated in the After Life Plan. The AFB will be responsible for long-term monitoring of indicators and the coordination team will ensure that this is included in the AFB plan beyond the project.

5. Expected results :
Completed indicator table (qualitative and quantitative) at the end of phase 1 and phase 4.

6. Cost estimation:
This action does not have any associated costs. Its implementation (coordination team work time) is accounted for in Action F1.

Phase 1 costs: €0

7. Deliverable products:
31/12/2019: Indicator tables included in the first interim report
31/12/2025: Indicator tables included in the final report

8. Milestones:
31/12/2018: Performance indicators identified and described.
31/12/2019 - **2021- 2023**: project adaptation for next phases, if required to meet project objectives.

E. Public awareness and dissemination of results

1. ACTION E.1: Disseminate results in different activity sectors

2. Beneficiary responsible for implementation:
AFB

3. Description (what, how, where, when and why):
What?
The objective of this action is to strengthen incorporation of Natura 2000 into sectoral policies. First of all, it aims to facilitate the dissemination of results and to share the project's progress with relevant representative bodies in different activity sectors. It also seeks to bring stakeholders (including private companies) together in meetings to help facilitate experience-sharing between different activity sectors with a view to improving habitat-protection practices. In addition, it aims to further these collaborations by organising joint projects.
This nationwide action is related to Actions C4, C5, C6, C8, C9, E2 and F1.

How?
Regular collaboration with bodies from different activity sectors
This task involves participating in meetings with relevant bodies and regularly presenting the progress of the LIFE Integrated Project. It will be carried out by coordinators (both national and assigned to marine sub-regions) and the AFB's permanent staff (national and marine sub-regional managers for maritime practices: sea fishing and aquaculture, leisure and industrial uses). It will target bodies linked to the following activity sectors (non-exhaustive list): professional activities such as maritime planning, dredging and dumping dredged materials, renewable marine energies, aggregate extraction, sea fishing (national and regional committees) and scientific research; as well as leisure activities - via their federations or national bodies - such as recreational seafood hand harvesting, sailing, diving and water-sports. The tourism sector will also be targeted by this action.
Organise two forums, in 2020 and 2024
This task involves gathering stakeholders together for two events: “Forum on Natura2000 and the economy - giving hearing from marine environment users.” These events will be held over 2 days and will focus on the 2 following aspects:
o Maritime activities and protecting marine habitats: a day dedicated to feedback on best practices and using impact assessments and charters in the marine environment.
o A day dedicated to project-building workshops, based on the identification of calls for projects and funding available under Action C9 (European structural funds, H2020, “*Investissements d'Avenir*” programmes, calls for biodiversity projects: water agencies, French agency for the environment and energy management (ADEME), etc…).

Where?
Meetings between representative bodies may be held throughout mainland France. The venues for the two forums will be disclosed throughout the course of the project and after consultation with the project steering committee.
When?
Information will be disseminated to bodies from various activity sectors throughout the project.The two forums will be held in 2020 and 2024.

Reasons why this action is necessary:
A link to various activity sectors has already been established through Natura 2000 network management. However, it is important to strengthen this link and to disseminate project results. The connection with the fishing sector is particularly important, given that most of the sector's activities relevant to Natura 2000 are funded by the EMFF.
Furthermore, at present, there are no forums dedicated to technical discussions between

activity sectors. Such forums are necessary to allow the exchange of experience among activity sectors. Finally, progress in assessing conservation status will involve increasing integration of Natura 2000 objectives by activity sectors, so it is important to strengthen collaboration via joint projects, giving users the means to do so.

4. Constraints and assumptions
For the forums to succeed, marine environment users need to participate. The various collaborative tools that the project will set up with stakeholders (through specific actions or project steering in Action F1) must make this involvement possible.The precise approach of the project will depend on existing opportunities, but action C9 will help identify these opportunities. It will also depend on needs and on the level of collaboration with the various activity sectors. Actions C4 and C5 will contribute to strengthening these collaborations and will help identify needs for developments beyond the project's actions.

5. Expected results :
-10 presentations per year of project results in specific activity sector bodies.
-2 forums hosting at least 100 participants, half of which are marine environment users and one third are from private companies.
-10 presentations per forum providing feedback from various activity sectors.
-Support for the development of 3 projects which contribute to integrating Natura 2000 habitats of community interest into sectoral policies (budget for applications over €2,000,000).

6. Cost estimation:
Cost of the Action - AFB: €126,800
Personnel costs: €40,000
- Organising forums (50 days*2) and dissemination among activity sectors (20 days*2): 160-days of the human science manager.
- Support of 5 agents from AFB permanent staff (costs not accounted for in the project): 160 days (3 days per year for dissemination plus 4 days for organising and participating in the forums in phases 2 and 4).

Travel costs: €16,800
- €2,400 per phase for the human-science officer.
- €3,600 for the coordination team's participation in the forum in phases 2 and 4.

External assistance: €70,000
On the basis of an initial cost of €35,000 for organising a forum, including: venue rental, reception staff (€20,000), catering (€8,000: lunch and coffee breaks, on a basis of 120 participants), additional equipment (€4,000: side events, flipcharts, etc…) and signposting (€3,000: programmes, posters, badges, etc…). A field trip could be organised if the meeting's venue and budget allow it.

Phase 1 costs:
AFB: €10,593

7. Deliverable products:
30/11/2024: forum proceedings including feedback and the lists of participants.
Including the list of applications for projects related to habitats of community interest and involving activity sectors.
31/03/2025: List of meetings during which the project has been presented.
Summaries and presentations will be posted on the project's collaborative online platform.

8. Milestones:
September 2020: organise the first forum
September 2024: organise the second forum

ACTION E.2: Implement the project communication plan

2.Beneficiary responsible for implementation of Action E2:

1-AFB, in particular the public policy support department (marine environment department) will be responsible for implementing this action. The department of marine nature parks, national parks and territories, and MICOM will also be involved.

Beneficiaries jointly responsible for implementation of Action E2:

3-Agde municipality
4-Tour du Valat (TDV)
5-GIS Posidonie
6-IFREMER
7-IMA
8-Port-Cros national park (PNPC)
9-PNRA
10-PNRC
11-PNRGM
12-RNF

3. Description (what, how, where, when and why):

What:
The purpose of this action is to implement a communication action plan. The success of this communication plan is based on adapting the approaches, messages and tools used to the level of knowledge and involvement of the target audience. This action will facilitate communication on measures implemented on Natura 2000 sites during the IP. The project will rely on communication tools developed for LIFE projects and on the experience of the LIFE+ project on recreational seafood hand harvesting "*Pêche à pied de loisir*". This plan will be drawn up in collaboration with the associated beneficiaries involved in Action E2. Finally, communication actions to be implemented will be sought with an eye to their long-term nature.

1- Main objectives:
- improve sharing of knowledge on habitats, their profile and reputation, via dissemination of a positive, suitable joint message, promoting a fundamental idea;
- improve understanding of the Natura 2000 policy and its network of sites in France;
- harmonise messages and their means of communication within beneficiaries;
- create awareness of the IP, its actions and their added-value in implementing Natura 2000.
- create awareness of the LIFE programme.

2-Target audience:
The main target audience is made up of coastal inhabitants and users of the sea, whose ownership of marine habitat protection issues should provide leverage within society and lead to better consideration of these issues by decision-makers.
The secondary audience is stakeholders involved in the management of Natura 2000 sites. This includes elected officials who must be made aware of the added-value of Natura 2000 in their territory.
The general public (at national and local levels) is also taken into account in the development of manifold tools (local coordination platform, social networks, etc.).
As direct contact is a recognised means of communication, this action will also collaborate with actions that aim to modify the behaviour of users (Action C8).
The private sector, through the major events organized such as the *Salon de la plongée* and the *Salon nautique* and the *Assises de l'économie de la mer".*
The tourism sector.

3-The tools

The plan will be designed combining traditional communication tools with more participatory, collaborative, media-based actions and approaches, to showcase marine habitats, providing understanding of them and encouraging their protection.
The following traditional tools will be implemented to provide a framework.

-*Hardcopy materials for general presentation*

- posters (a national version for the IP and local versions);
- brochures;
- postcards;
- stickers;
- press releases;
- a national presentation document;
- the Layman's report;
- an "After LIFE communication plan".

Posters will be displayed in harbour master's offices, nautical centres, tourist offices, tackle shops, and on LIFE+ *Pêche à pied de loisir* project panels that have a display window available (see Figure 4). About fifty panels are available for a poster from the first phase of the IP.

Figure 4: Panel installed under LIFE+ *Pêche à pied de loisir* and display window (credits: *Margaux PINEL, AAMP 2016*)

Brochures will be translated into English for promoting the project at events abroad.

-*Information panels*

- In addition to the displays mentioned above, 60 panels will be installed on the Mediterranean and Atlantic coasts for Natura 2000 sites unaffected by recreational seafood hand harvesting.

-*Photographs and videos*

- A database of photographs and high-definition videos (4k) will be produced, including the rights for 7 years of use.
- 3 films will be produced to promote the actions of the IP: 2 in Phase 1 and a final one in Phase 4 to present the outputs of the IP.

-*Digital tools*

- A website for promoting the IP will be created, including a collaborative interface for IP beneficiaries. Electronic newsletters will be distributed.
- A Twitter and a Facebook account.
- A Wikipedia page on Natura 2000 marine habitats (and/or a wiki on marine habitats).

- An immersive, collaborative online platform will be developed and tested for the bay of Brest, Aulne estuary Natura 2000 site, managed by the PNRA. This platform will be attractive, dynamic and participatory. The purpose of this tool is to help all stakeholders take ownership of Natura 2000 issues and actions on habitats and to enhance the mobilisation and involvement of these stakeholders in habitat management. This platform will be designed and developed collaboratively so that it lasts beyond the IP itself.

-Events

In addition to IP conferences (Action E5) and networking with other projects (Action E4), the IP will be presented at events for the general public (maritime festivals, boat shows, local environmental events, etc.).
10 stand kits will be produced and made available to beneficiaries on the coast for presenting the IP during local events.

-Radio messages

Radio messages will mainly be broadcast in the summer.

How:

The AFB communication manager will be responsible for coordinating and implementing part of this action.
A graphic designer will be involved part-time (40%) for the first two years of the IP, to produce the IP's graphic charter and participate in the graphic design of the various tools (logo, posters, presentation brochures, etc.).
Marine nature park officers and the GNB officer, along with all associated beneficiaries involved in Action E2 will participate for at least 10 days per phase:
- in general IP communication: liaison with the local press, staffing stands during local events, communication on social networks, producing articles, checking communication documents, and distribution in their stakeholder networks.
- in communication on their actions: use of the communication messages, methods and tools produced and validated during Action E2.

Furthermore, liaison stakeholders (tourism bodies, diving clubs, nautical centres, marine centres, MPA managers, environmental associations, etc.) will contribute in their areas of expertise to the dissemination of tools and messages on marine habitats.

Action E2 is a cross-project action for all IP actions, in particular with:
- Other dissemination actions (E1, E3, E4 and E5)
- Actions for involving stakeholders (A3) and for governance (A1, C1, D3)
- Actions aimed at modifying user behaviour (C8)
- Actions for disseminating information on Natura 2000 to site managers via the toolkit (C3)
- Actions for knowledge (A2, A3, D1, D2) and analysis of the interactions between activities and habitats (C4), which will feed into Action E2.
- Action D6 for assessing public perception of habitat protection issues, meaning that Action E2 can be adjusted based on its impact.

When:
Action E2 will take place throughout the IP.

Reasons why this action is necessary

- With regard to communication, the IP is an opportunity to showcase knowledge and issues associated with Natura 2000 marine habitats. This project must be an instrument for developing the reputation of these habitats, which are often little known, hard to see and

hard to access; they are less attractive than species and their functions and services are barely perceived.
- The action is essential to the proper coordination of communication within the IP, to the dynamism of such a project over a duration of 8 years and its effective promotion. Communication actions are also needed to interest and mobilise stakeholders to a greater degree.

4. Constraints and assumptions

- Launch of the platform must be the subject of a dedicated communication action to make it known.

- The duration of the project is both an opportunity and a constraint in long-term planning of communication actions, which must meet needs which may change. The communication plan will be produced and revised with the beneficiaries involved in Action E2 at each phase, based on developments, results of IP actions and results of assessments performed in Action D6.

- Different points of view, poor involvement of associated beneficiaries, or lack of training of local coordinators could be a problem. To mitigate this difficulty, ownership of the communication plan will be ensured during joint meetings.

5. Expected results :

- the elaboration of measure 20 of the PAF
- better perception of marine Natura 2000 by stakeholders, the private sector, the tourists and the general public
- twice as many people in France becoming familiar with and gaining a better understanding of marine Natura 2000 over the course of the project
- 22,000 pieces of communication material distributed (400 national-level posters, 600 local-level posters, 200 posters for panels, 10,000 postcards, 500 brochures, 1,500 stickers)
- 1,000 followers on Twitter and 1,000 users on Facebook
- 20 press clippings annually
- 10,000 photos on habitats available in the photograph database.
- 1 project website
- 1 local coordination platform
- 3 “general public” films produced on habitats
- 1 Wikipedia page on marine habitats updated.
- participation of local stakeholders in maintaining the collaborative platform
- 10 stand kits designed and presented during 50 events
- communication plan implemented to 95% completion

6. Cost estimation:

- AFB:
Personnel costs: €558,750
Communication manager at 100% FTE over 8 years: €408,000
Graphic designer, at 40% FTE in Phase 1: €40,750
PNM and GNB officers: €110,000

	Number of days	Costs (€)
PNM EPMO officer	80	20,000
PNM BA officer	80	20,000
PNM EGMP officer	80	20,000
GNB officer	40	10,000

PNM GDL officer	80	20,000
PNM Cap Corse officer	80	20,000

- Travel (to beneficiaries/stand/events/press): €20,400
Other communication manager travel is accounted for under Actions E5 and E4
- External assistance
    - Film production:

Project presentation films: 1 in Phase 1, and 1 in Phase 4: €10,000
Teaser spot (Phase 1): €4,000

- 1 national press file and 8 regional and thematic press files: €1,500
- Development of 1 project website: €20,000
- Development of an immersive, collaborative local coordination platform: €40,000
- Development of 1 photograph and professional-quality video database dedicated to marine habitats, and acquisition of the rights over 7 years: €15,000
- Design and production of 10 stand kits to be used during events (€4000x10): €40,000
- Installation of 60 panels and signs on sites: €50,000
- Design and publication of the Layman's report (Phase 4): €3,000

-Consumables:

- Design and production of 1,200 posters, 500 brochures, 1,500 stickers and 10,000 postcards: €19,000
- Design and production of 1 national project presentation document (5000 copies for Phase 1 and 5000 copies for Phase 4): €8,000
- 2 cameras: €1,000
- 1 Creative Cloud software license: €5,760

-Other costs:

- Translation for the national project: €1,000

Total AFB: €797,410

-Agde municipality, updating teaser videos on highly protected areas: €49,400

TDV:
-Personnel costs: €15,687 **Total TDV: €28,039**

GIS Posidonie:
-Personnel costs: **€12,000**

IFREMER:
-Personnel costs: **€13,280**

IMA:
- Personnel costs: **€4,698**

PNPC:
-Personnel costs: **€13,430**

PNRA:
-Personnel costs: €21,130
-Catering for 2 workshops per phase : €3,200

-Oths costs : photo exhibition on marine habitats, competition for photos and sketches of underwater landscapes: €22,500

Total PNRA: €46,830

PNRC:
-Personnel costs:€21,700
- Posters for conferences: €800 **Total PNRC: €22,500**

PNRGM:
-Personnel costs: **€16,400**

RNF:
-Personnel costs: **€22,422**

Total cost of Action E2: €1,026,409

Phase 1 costs:
AFB: €266,098
Agde: €11,770
GIS-P: €3,210
Ifremer: €3,552
IMA: €3,755
PNPC: €2,546
PNRA: €11,529
PNRC: €4,494
PNRGM: €4,387
RNF: €5,566
TDV: €7,363

7. Deliverable products:
31/03/2019: a communication plan
31/03/2019: graphic charter + 1 logo
31/12/2019: a copy of poster, sticker, postcard, brochure, and national IP presentation document of the Phase 1.
31/12/2019: a project signature spot (teaser)
31/12/2019: 2 short films presenting the MarHa IP
31/12/2019: a photograph of a stand kit for events
31/12/2019: a photograph of an installed panel
31/12/2020: a Natura 2000 marine habitats wiki and a Natura 2000 marine habitats Wikipedia page
30/06/2024: a short film presenting the IP
31/12/2025: the Layman's report
31/12/2025: 1 After LIFE communication plan

8. Milestones:
- 31/03/2018: recruitment of the communication manager
- 31/03/2018: recruitment of the graphic designer
- 30/06/2018: creation of the Twitter account and a facebook account
- 31/03/2019: validation of the communication plan by all beneficiaries
- 31/12/2019: creation of a teaser spot for the IP and 1 short film presenting the IP
- 31/12/2019: creation of the photograph and video database
- 31/12/2020: creation of a Natura 2000 marine habitats wiki and a Natura 2000 marine habitats Wikipedia page
- 31/12/2021: website put online
- 30/06/2024: creation of a short film presenting the IP
- 31/12/2025: publication of the "After LIFE communication plan"
- 31/12/2025: publication of the layman's report

Action E.3. Facilitate citizen participation : citizen science and Educational Managed Marine Areas (EMMA)

Action E.3.1 Develop citizen science programmes for monitoring marine habitats

2. Beneficiary responsible for implementation

1- AFB will be responsible for implementing this action through its “citizen engagement” and “marine environment knowledge, assessment and monitoring” departments.
9-PNRA (*Parc naturel régional d’Armorique)* and 11-PNRGM (*Parc naturel régional du Golfe du Morbihan*) will act as pilot sites responsible for implementing the citizen science protocols in their areas. The PNRGM will be involved in implementing a protocol for monitoring reef subtidal habitats with scuba divers. The PNRA will develop a protocol for monitoring maerl and seagrass with divers.
7-IMA (*Institut des Milieux Aquatiques*) will set up a network of foreshore and marine environment sentinels made up of divers, pleasure boaters, recreational seafood hand harvesters and foreshore nature guides.
6-IFREMER will work in Phase 3 on the data from the deep-sea observatory.

3. Description

This action will involve the development of new citizen science protocols that are geared towards citizen habitat monitoring. They will improve public participation in habitat assessments while encouraging participants to take ownership of protection issues. Existing citizen science and scientific networks will be mobilised to develop and strengthen tools for exploring and collecting data on marine habitats.

- **Step 1: preparatory phase (late 2018)**

- Based on issues affecting habitats and actions planned in the documents of objectives (DOCOBs):
    - identification of key habitats that can be targeted by citizen monitoring,
    - identification of pilot sites that will be used to test the protocols.
- Means: organisation of workshops with citizen science programme managers and representatives. This work will be based on efforts to bring together marine citizen science stakeholders that are already underway for the *Vigie-Mer* project in close connection with the educational managed marine areas (EMMA) sub-action E.3.2.
- Deliverable: A list of key habitats and associated pilot sites on which associated scientists will work in Phase 2.

- **Step 2: development phase (2019-2020)**

1- Joint development of 3 marine habitat monitoring protocols adapted to citizen science which target different habitats and involve the relevant scientists, managers and public, with 2 adaptations for educational managed marine areas (EMMA) (Sub-action E3.2).
- Means: Organisation of working groups by habitat, bringing together citizens, managers, scientists and non-profit organisations. These working groups will be coordinated by the outreach/citizen science manager. The PNMBA, PNRGM and PNRA will each be responsible for managing the development of one or more citizen science protocols for monitoring reef habitats and maerl beds and seagrass with divers.
- Deliverable: A draft version of the protocols in the first half of 2019. Summer 2019: field tests on pilot sites with the relevant managers.

2- Organisation of working groups and discussion of data produced:
- consolidation of citizen data with other data collected under other Life Integrated Projects (Action F3, not accounted for here)
- development of a platform incorporated into existing tools for entering data online and sharing the outputs with participants and the public. To date an online platform in

responsive design seems the most appropriate choice to match the different needs, but the project will adapt to the development of innovative technologies not yet existing

- **Step 3 (deployment phase):**

1 – Coordination of monitoring surveys, data consolidation and analysis in real time.
In this phase, Ifremer will set up a citizen science programme on data from the deep-sea observatory. This tool will be deployed on a Natura 2000 deep-sea site. Following on from the citizen science programme, Deep Sea Spy, which validated data from Ifremer deep sea exploration campaigns, the observatory will contribute to increasing knowledge and protecting deep-sea reefs by letting the public explore a Natura 2000 site at a depth of 1000 metres as they learn about the characteristics of this environment.
In this phase, the IMA will coordinate the network of sentinels of the sea.
2 - Presentation of pilot research carried out in Phase 2 and opening of new sites
- Means:
    - Organisation of a national “Citizen Science Day” (2022): capitalisation on the experience of pilot sites and deployment of protocols on new sites.
    - Training on the protocols developed with the managers of new sites in order to disseminate them to the participants.

- **Step 4 (evaluation –2025)**

1- Evaluation of the data and analyses obtained during the project.
2- Wrap-up meeting and validation of action plans for the pursuit of programmes (integration in the After Life Plan, Action F5)

4. Constraints and assumptions

One difficulty lies in the creation of protocols that are both simple and stringent, allowing participants to be involved in long-term monitoring. The initial work of putting scientists in contact with potential participants (such as divers) will ensure that both these aspects of the action are carried out as best as possible.
Another difficulty is involving citizens in the initiative. The project will rely as much as possible on existing networks organised under the *Vigie-mer* programme and the dynamics developed within the Natura 2000 sites through citizen science actions planned within DOCOBs. The project will use outsourcing to engage environmental education specialists to help create scientifically sound actions that are fun and educational.

5. Expected results

- 3 operational citizen science protocols on habitats and underwater environments
- 10 pilot sites engaged in the process
- 1 online tool dedicated to citizen science incorporated into existing tools – 5,000 participants.
- 10 work meetings in Phase 1 and 2 with managers, outreach/citizen science managers in France and the public.
- 1 “Citizen Science Day”: 100 participants
- 10,000 visitors to the deep-sea observatory

6. Cost estimation: €431,275

AFB (total is €361,450)

Action implementation: outreach / citizen science manager (part time) (€250x309days)	€77,250
Travel and subsistence:	
- 10 Workshops on pilot sites (phase 1&2) travel for manager	€12,000
- Workshops (3 per year on pilot sites, phase 3 & 4) €600x3meetingsx2phases	€7,200

External assistance:
- development of 3 protocols for citizen sciences / 2 for EMMA and implementation €200,000
- development of the platform (phase1&2) €20,000
- Citizen Science Day (phase 3&4) €20,000

Consumables:
- One day first workshop (phase 1) €1,000
- 20 Workshops: logistics and catering (€10,000 x 2 phases) €20,000

Other costs:
- Evaluation of the action (phase 4): document production €4,000

PNRGM (Gulf of Morbihan): €4,050

- Develop a citizen protocol on reef subtidal habitats (phase 2)

Personnel costs **€2,050**
External assistance (dives - test) €2,000

PNRA (Armorica): €25,643

- Personnel costs (project manager 112 days & field tests) **€22,460**
- Travel for field work €1,983
- Catering for meetings €1,200

IMA: €34,571

- **-** Management of the network of sentinels, feedback: **€**28,081
- travel and field work €3,990
- printing and dissmenation of communication materials 2 €2,000

IFREMER: €5,561

- Personnel costs (17 days, project manager) : **€5,561**

Phase 1 costs:

AFB : €102,453

PNRA: €7,754

7. Deliverables

31/12/2020: Summary report of pilot sites and monitoring protocols.
30/06/2025: Evaluation document for the action

8. Milestones

- 31/12/2018: selection of the habitats and sites
- 31/12/2020: 3 protocols developed and networks of citizens mobilised.
- 31/12/2021: deep-sea observatory set up
- 31/12/2022: 10 pilot sites monitored and protocols tested
- 31/12/2025: action plan for continuation of the programmes

Dependence on complementary funds: the activities of Ifremer on deep-sea habitats within this action are dependent on the offshore campaign that will be realised under the complementary fund provided by the UMS French oceanographic fleet. Ifremer has applied in September 2017 to carry out the offshore oceanographic campaign in 2019.

Action E.3.2: Implement Educational Managed Marine Areas (EMMA) within Natura 2000 sites to involve pupils and associated stakeholders in site management

2. Beneficiaries responsible for implementation

The AFB will be responsible for implementing this action at the national level.
The IMA, PNRA and PNPC will implement the action at the local level.

3. Description (what, how, where, and when)
An Educational Managed Marine Area (EMMA) is a small coastal maritime zone which pupils from a primary school participate in managing, following the principles specified in a charter. It is an educational, eco-citizenship project to help young people better understand and protect the marine environment. Pupils meeting as the children's sea council collect data on the site and develop critical thinking on its management with relevant stakeholders.
The EMMA concept, which has been trialled on various types of marine protected area, has national certification, and the IP will be an opportunity to capitalise on the experience already acquired (underway since 2016 in metropolitan and overseas France) to develop the potential of EMMAs in the specific context of Natura 2000 sites.
This action will be coordinated by the AFB's outreach/citizen science manager, with the support of the following associated beneficiaries: IMA, PNPC and PNRA. It will take place in the 4 stages set out below.
The number of EMMAs developed throughout this action is high due to the important level of dissemination required. Given that, in the long run, the objective is that the Ministry of National Education integrates the EMMAs in school programmes.

A - Capitalising on experience and defining the methodology framework
During the first half-year of the project, a preparation phase will identify and formalise the links between EMMAs and Natura 2000 sites:

- Capitalise on experience from the EMMA national pilot programme
- Define habitats and key issues on which pupils could work (in close association with Action E.3.1 with availability of suitable tracking protocols)
- Study and test possible links between Natura 2000 governance and EMMA, in coordination with Actions A1 and D3.

This stage will include organising a meeting day for the action, involving managers, associations and teachers.
This first stage will lead to the production of specific pilot support documents on implementation of EMMAs in a Natura 2000 context and on criteria for selection of the EMMAs funded during the project.

B - Selection of EMMA projects on Natura 2000 sites
Over the entire project, 35 Natura 2000 sites will be selected and supported in implementing an EMMA. Implementation of an EMMA involves supporting the same primary school class on the same site over a period of 3 or 4 years.

<u>29 EMMAs implemented by beneficiaries (schools located in their areas and EMMAs within the relevant Natura 2000 site(s)):</u>

- The IMA will support 8 EMMAs over 4 years in the Aquitaine region:
  - 4 EMMAs directly (2 in Phases 1 and 2, then 2 in Phases 3 and 4) and
  - 4 others via environmental education associations (2 in Phases 1 and 2, then 2 in Phases 3 and 4).

- The PNPC will support 6 EMMAs over 3 years in its area (3 in Phases 2 and 3, then 3 in Phases 3 and 4), via external assistance from environmental education associations with the support of additional personnel.

- The PNRA will directly support 3 EMMAs in its area; the young representatives of these EMMAs will participate in the site's various governance bodies to present their management actions.
- The AFB will directly support 12 EMMAs over 4 years (in Phases 3 and 4), in PNM GNB, PNM Cap Corse, PNM GdL, PNM BA, PNM EGMP and PNM EPMO.

6 EMMAs implemented via calls for projects

Implementation of these EMMAs will take place in two 4-year stages:

- Initial selection of 3 EMMAs will be made in the first half of 2018 for a launch in September of the same year.
- A second selection of 3 EMMAs will be made in the first half of 2022 for a launch in September of the same year.

Funding of these EMMAs will gradually decrease over 4 years, with seeking of partners and supplementary sources of funding leading to financial independence at the end of this period.

Selection will be made, with respect to criteria defined in the first stage, on proposals that have planned, at minimum, the manager/school partnership (and/or the sustainable development education (EDD) partner).

Based on experience already acquired, EMMA projects will be launched on each site in compliance with the national certification charter.

The outreach/citizen science manager will provide technical support for EMMAs.

C - Development of specific support tools for EMMAs in Natura 2000 sites

Throughout the project, the outreach/citizen science manager will develop the necessary tools to contribute to making EMMAs long-term systems where pupils will gain understanding of site management, based on their observations and data collected.

This development will be aimed at:

- serving the Natura 2000 site manager
- providing a concrete basis for pupils to discover the environment and understand management issues
- helping teachers implement the school programme.

In concrete terms, this is about developing the following, in association with the chosen sites:

- Citizen science tools for the EMMA pupils to collect data on some Natura 2000 habitats, which offer teachers educational content in line with the school programme and Action E.3.1.
- The technological tools needed for young people to collect and view data, in particular on sub-sea habitats (e.g. video systems, augmented/virtual reality, etc.) in line with communication needs and Action C.8.

4. Capitalising on experience

Workshops for capitalising on experience involving various EMMA stakeholders will be organised each year during the forum for managers and/or the LIFE project two-yearly conference. These assessments will be used to redesign the second selection stage as needed, extending it to a larger number of sites if necessary.

Reasons why this action is necessary:

The action is to create strong, lasting links between Natura 2000 managers and local pupils in a long-term project. It involves the various local stakeholders (elected officials, environmental education associations, parents, etc.) around a federating project.

Marine environment protection issues, and the role of citizens, are not currently sufficiently represented in teaching programmes.

4. Constraints and assumptions

Natura 2000 managers have limited time available for inputting into classes. It will therefore be necessary to create partnerships with environmental education associations, and sites that have made progress on this issue will be given preference in calls for projects. Furthermore, the development of protocols with high educational value, that involve pupils in collecting data and in management discussions, will ensure the reality of this link.

When possible, videoconference will be set up.

5. Expected results

- Long-term implementation of **35 EMMAs** on habitats in Natura 2000 sites.
- 1000 pupils involved in Natura 2000 EMMAs.
- 10 relevant sustainable development education (EDD) associations involved in Natura 2000 EMMA development.
- 30 **children's sea councils** in place in association with management bodies of Natura 2000 sites.
- EMMAs in Natura 2000 sites included in the school programme of the French Ministry of Education.

6. Cost estimation: €538,614

Costs are calculated on the basis of the pilot project performed by the AFB in 2016/2017 for implementing EMMAs (outside Natura 2000 sites). The average annual cost of supporting an EMMA was €4,000.

AFB (€278,050)

Action implementation: Outreach/citizen science manager (part time) (€250 x 309 days)	€77,250
- Local project officers (417 days of Marine Nature Parks officers for all phases):	€94,000
Travel and subsistence: - Managers travels for meetings : 2 per phase Local travels 500€ per territory per phase	€16,800
External assistance: - Funding for EDD associations to support the Natura 2000 manager in coordinating the EMMA (€4,000/EMMA in Phase 1, €2,000/EMMA (decreasing) in Phase 2)	€60,000
Equipment: - Technical and educational tools for viewing sub-sea habitats.	€12,000
Consumables: - Organisation of workshops (catering)	€18,000

IMA: €138,273, including:

Support of 8 EMMAs:	
- 4 directly (personnel costs) 187 days	€65,933
- 4 via environmental education associations (external assistance)	€64,000
Travel (EMMA site visits)	€4,840
Laptop computer	€1,500
Communication materials	€2,000

PNRA: €39,841, including:

Supporting 3 EMMAs on site: prior discussion, call for projects, preparation meetings, testing protocols, feedback	
Total: 175 days x €205	€35,875
12 Trips in France	€3,966

PNPC: €82,450 (Phases 2, 3 and 4)

Support of 6 EMMAs	
25 days (Phases 2, 3 and 4)	€12,750
Visits to EMMAs on site	€ 1,000
External assistance (EMMA support by associations)	€68,000

Phase 1 costs:

AFB: €75,916
IMA: €49,243
PNRA: €15,502

Deliverable products

01/09/2018: Summary document on supporting implementation of EMMAs
30/06/2025: Final report on supporting EMMAs
- number of schools and pupils involved in the process
- habitats involved and results of the tracking
- assessment of the involvement and of the quality of observations on EMMAs

Milestones

30/06/2018: Meeting day on EMMAs; validation of selection criteria
01/09/2018: selection of the 3 initial sites
01/09/2021: technical and educational tools for viewing marine habitats
31/12/2021: assessment of the first phase of Natura 2000 EMMA implementation
01/09/2022: selection of the next 3 sites

ACTION E.4: Network with other projects

2. Beneficiary responsible for implementation:
1-AFB

3. Description (what, how, where, when and why):
What:
The objective for this action is to make the results of the project known and to find out about the progress of projects on similar themes. This consists of organising two meetings between LIFE projects, and attending other meetings relevant to the project.

How:
The action will be performed by the project management team within the AFB, with the support of AFB permanent staff.

1. Organisation of two inter-LIFE meetings:

- An inter-LIFE integrated Nature meeting in 2020: the format proposed will be a two-and-a-half day meeting, with one day for sharing information on projects, a one-day workshop to put in place common tools and methods for implementing these projects, and a half-day field trip.
- An inter-LIFE Nature France meeting in 2024: the proposed format will be the usual format for these meetings, with a day and a half of workshops to discuss good practices on implementation of LIFE projects (concrete actions for governance, communication and reporting) and a half-day field trip. Depending on the number of LIFE projects at this date, LIFE projects on governance and communication could be invited.

2. Dissemination of project results by participating in meetings:

This task will be partially performed by permanent AFB staff (cost not accounted for here).

Inter-LIFE project meetings:
The project coordination team will participate in annual Inter-LIFE meetings: 1 annual meeting in France and 1 annual meeting between LIFE integrated projects abroad. In addition, the coordination team will organise or participate in an annual meeting between LIFE Integrated Projects Nature, covering the marine environment (the BNIP and INTEMARES projects, and other future projects); this meeting will be a videoconference.

International meetings:
The project will be presented at annual meetings of the *ad hoc* groups for the regional OSPAR and Barcelona conventions (3 days annually) and the European Commission (Marine Expert Group: 1 day annually) and at one international meeting annually (International Marine Protected Areas Congress, World Conservation Congress, World Parks Congress, Mediterranean MPA Forum, etc.) and during technical seminars in Europe (marine biogeographic seminars or other meetings). In the Mediterranean, the project relies on the MedPAN network to publish the results of the project and share experience (in association with Action C12).
The project team will work with the INTEMARES IP team to provide content for the platform for European Projects on the marine environment developed by the INTEMARES project". In particular, the IP will seek to build on the experiences of traditional Life projects. Lessons learnt from this project will be shared on the platform (in accordance with INTEMARES) and closer cooperation will be sought with the organisations that have been in charge of marine habitat restoration and protection.
The project will link with the Eurosite Marine and Coastal Protected Areas (MCPA) Working Group.

National meetings:

The project will be presented in relevant national meetings: conferences on mapping of habitats, meetings of protected area managers, governance meetings for Natura 2000 sites, meetings of elected officials from coastal municipalities, etc.
Via the toolkit implemented under Action C3, the project team will coordinate a forum for projects on marine habitats covering information on relevant projects and a discussion forum.

Dissemination tools:
Communication materials for international dissemination will be translated under this action, at least into English, on the basis of resources produced within Action E2 (documents, etc.). In particular, to facilitate the spread of information on the project, a brochure presenting the project will be translated into English and kept up to date.
The results of meetings will be disseminated using the project's collaborative tools (website and toolkit).

Where:
National, European and international meetings.

When:
Throughout the project.

Reasons why this action is necessary:
The inter-LIFE Nature France or inter-LIFE IP Nature meetings are opportunities to share experience between projects pursuing similar objectives. While not all projects target marine habitats, they have similar methods of implementation in terms of protecting nature, and similar obligations for assessing the results of conservation actions and for reporting. These meetings are therefore very formative in terms of working methods, and represent a substantial saving in time by capitalising on the experience of existing projects.
The international bodies mentioned are suitable networks for spreading the results of the project on the marine environment and relating to other projects, in particular with EU Member States.
At the national level, the AFB and the other project beneficiaries have a large collaborative network, but it is important to capitalise on the links between projects in a common space.

4. Constraints and assumptions
The dates for these two meetings may vary depending on the dates of meetings planned between other French LIFE Nature projects or other LIFE IP Nature projects.
Lack of availability of project managers could hinder performance of these actions. Involvement of permanent AFB staff in the project will mitigate any lack of availability of project managers.
By nature, this action involves significant travel. The project team will seek to optimise travel as far as possible, with a view to managing costs and reducing carbon footprint. For example, this could be achieved by limiting the number of project team participants in meetings, and where possible, entrusting the work of project presentation to permanent AFB staff during travel already planned in their missions.

5. Expected results :
1 inter-LIFE Nature meeting organised
1 inter-LIFE IP Nature meeting organised
Participation at each annual meeting of inter-LIFE Nature France
40 project presentations in international meetings
100 project presentations in national meetings
4 versions of the project presentation brochure in English
1 platform for national projects on marine habitats

6. Cost estimation: €167,600

Personnel costs: €35,000

- Working hours for the project manager (not accounted for in this action, but under Action F1): 4 days annually (plus two days in the years meetings are organised).
- Working hours for Mediterranean, Atlantic, and Channel-North Sea project officers (100days total)
- Working hours for human science and habitats project officers: 2 days annually (plus two days in the years meetings are organised).
- Working hours for the financial and administrative manager (not accounted for in this action, but under Action F2): 2 days annually.
- Working hours (project presentation during national and international meetings) for permanent AFB teams (cost not accounted for in the LIFE project): international project officer (5 days annually), Mediterranean, Atlantic, Channel-North Sea and human science project officers (2 days annually).

Travel: €97,600

- 3 journeys annually (2 in France and 1 abroad) for the project manager and the communication and funding project officers.
- 2 journeys annually for the Mediterranean, Atlantic, and Channel-North Sea project officers and the financial and administrative manager.
- 1 journey annually for the human science and habitats project officers.

External assistance: €30,000

- Organisation of two inter-LIFE meetings: 2 * €15,000 (hiring rooms for max. 50 people, catering costs for breaks and lunches, logistics costs for field trip).

Consumables: €0 (use of communication materials planned under Action E2).

Other costs: €5,000 for translation (€1,000 per phase for participation in international meetings and €1,000 for translation of materials for the inter-LIFE IP meeting).

Phase 1 costs:

AFB: €32,528

7. Deliverable products:

30/06/2018: Project presentation brochure in English Version 1:
Other versions will be issued later.

30/06/2025: Assessment of the networking action
It will recap the proceedings of the inter-LIFE IP Nature meeting and the proceedings of the inter-LIFE Nature France meeting and the list of meetings where the results of the project have been presented and presentations performed. Sharing on the collaborative tool of presentations and reports from these networking meetings. And the list of projects on marine habitats and list of projects connected to the Integrated Project (i.e. representing at least one day of collaboration).

8. Milestones:

November 2020 and November 2024: Organisation of inter-LIFE meetings.

ACTION E.5: Project conferences

2. Beneficiary responsible for implementation:
1-AFB
2-CNRS
3-Agde
4-Tour du Valat
5-GIS Posidonie
6-IFREMER
7-IMA
8-PNPC (PN Port-Cros)
9-PNRA
10-PNR-C (PNR Camargue)
11-PNRGM
12-RNF

3. Description (what, how, where, when and why):
The project conferences will be held throughout the project. The objectives of the conferences will be to:
- communicate the objectives of the project and its actions (Phase 1)
- ensure that the actions are properly implemented in a transparent manner for the stakeholders, and integrated into French policies (Phases 1, 2, 3 and 4)
- prepare the action plan for the next phase (Phase 1, 2 and 3)
- assess the actions and capitalise on them (Phases 1, 2, 3 and 4)

These conferences will be opened to all interested and involved stakeholders. Geographically speaking, the conferences will be organised on a rotational basis, on each coast of Metropolitan France (Channel and North Sea, Atlantic and Mediterranean coasts).

5 Conferences are planned in total:
- 1 kick-off meeting will be organised in the 1st quarter of 2018 in order to ensure that the project starts in optimal conditions, to communicate the objectives and bring together the stakeholders.
- 1 conference at the end of Phase 1.
- 1 conference at the end of Phase 2.
- 1 conference at the end of Phase 3.
- 1 final conference at the end of Phase 4.

The coordinating beneficiary, and particularly the coordination team, will be responsible for organising the conferences (logistics) with the regional project officers. The associated beneficiaries will be involved in the technical content of the meetings.
The meetings of beneficiaries (meetings of the project board) and steering committees will be held in conjunction with the project conferences in order to limit travel, logistics costs and capitalise on the presence of the stakeholders.

Reasons why this action is necessary:
- These meetings are a way to involve project stakeholders implicated in the project which are outside the circle of beneficiaries.
- Regular meetings between the project beneficiaries, people responsible for implementing the PAF and the relevant stakeholders are required to assess the project actions, evaluate implementation progress and plan the next phases.
- Initiate routine national meetings on marine habitat conservation to be held every 2 years.

4. Constraints and assumptions

- Interest in the project will grow over the 8 years. Planning must therefore take into account increased attendance at the last two conferences, and be adapted accordingly.

5. Expected results :
- The 5 project conferences will have been organised.
- An increase in the number of organisations in attendance (100 people expected for the first conference, and 200 in Phase 4).
- In addition to the beneficiaries, all categories of stakeholders will be represented at each project conference, including institutional authorities, maritime activities, non-profit associations, managers of Natura 2000 sites and scientists.

6. Cost estimation : €523,521

- Coordinating beneficiary (AFB): **€ 335,000**

- Personnel costs: 0€ (costs covered under the actions for which staff work).
- Travel for 15 people: €9000 per conference: € 45 000 total
- External assistance: Organisation outsourced via framework contracts:
€35,000 for kick-off meeting, then €60 000 for conference at the end of Phases
Total €275,000 (calculated based on meetings organised by the *Agence des aires marines protégées* (AAMP)).
- Consumables: Proceedings: €3,000 per conference – electronic format preferred.

- Associated beneficiaries (each beneficiary will contribute and attend to the project conference): **total is €188,521**

- Personnel costs €85,180

- Travel costs €85,322

- External assistance GIS-P €7,000 (experts presentations and conference attending)
TDV: 2,455€ (time for officers attending and presenting at the conference, linked to the consortium agreement)
CNRS : €2,216 (time for officers attending and presenting at the conference)

- Consumables IMA : €948 - fuel and car rentals

- Other costs TDV €2000 Conference travel for Corsica and Occitanie experts
IMA €1,600 (car rental for attending)
CNRS €1,800 (one conference travel for CIRED experts)

<u>Phase 1 costs:</u>
AFB: €127,330
Agde: €4,430
CNRS: €2,384
GIS-P: €5,297
Ifremer: €18,156
IMA: €10,719
PNPC: €2,568
PNRA: €8,003
PNRC: €3,360
PNRGM: €4,537
RNF: €2,996
TDV: €6,829

7. Deliverable products:
2nd quarter 2018: Report of the kick-off meeting

4th quarter 2019: Report of the 1st project conference
4th quarter 2021: Report of the 2nd project conference
4th quarter 2023: Report of the 3rd project conference
4th quarter 2025: Report of the final conference

8. Milestones:

01/06/ 2018 Dissemination of the report of the kick-off meeting
01/09/2019 Dissemination of the report of the 1st project conference
01/09/2021 Dissemination of the report of the 2nd project conference
01/09/2023 Dissemination of the report of the 3rd project conference
01/09/2025 Dissemination of the report of the final conference

F. Project Management and monitoring of project progress

ACTION F.1: Project technical coordination

1. Beneficiaries responsible for implementation:
1-AFB
2-CNRS
3-Agde municipality
4-Tour de Valat (TDV)
5-GIS-P
6-IFREMER
7-IMA
8-PNPC
9-PNRA
10-PNRC
11-PNRGM
12-RNF

3. Description (what, how, where, when and why):
General project management (implementation and tracking) will be provided by the national coordination team recruited by the AFB.
This team will be supported:
- by personnel recruited by the AFB in coastal annexes of the AFB (Mediterranean, Channel-North Sea and Atlantic) – at the level of biogeographic coasts
- by personnel recruited by the AFB and geographically attached to the Marine Nature Parks of metropolitan France – at the territorial level
Each associated beneficiary will also be responsible for managing implementation of its actions, in line with project objectives.

National coordination team:

- 1 full-time project manager will be recruited; someone with acknowledged experience in the management and coordination of European programmes. He or she will be responsible for coordination, tracking and day-to-day oversight of LIFE IP activities, and for initiating and maintaining contact with all beneficiaries and stakeholders involved in the project. He or she will provide all associated beneficiaries with advice and technical support, and will coordinate with local managers. The project manager will be the key contact person for the European Commission and its external assistance team, and be the line manager for the rest of the team.
He or she will be responsible for tracking project actions and will also manage Actions E4 (Networking with other projects), E5 (Project conferences), F4 (Developing an eco-responsible approach), and F5 (Developing an “After LIFE Plan”). He or she will supervise the actions and the project team:
- 1 financial and administrative manager (Action F2)
- 1 communication manager (Action E2, E4)
- 1 outreach/citizen science manager (Actions C2, C3, C8, D5, E3)
- 1 Natura 2000 financing manager (Action C2, C9 and E4), also responsible for additional funds
- 1 data manager (Actions A5 and F3)
- 1 human science manager (Actions: A1, A3, C1, C3, C5, D7, D2, D3, E1, E4)
- 1 scientific manager for habitat assessment (UMS PatriNat post, Actions A2, C2, C3, C4, C5,D1, D5 and E4)

The national coordination team will therefore be responsible for:
- checking the consistency and correct performance of project action, in association with the local managers
- providing internal management for the coordinating beneficiary
- coordinating associated beneficiaries on project actions
- organising kick-off, progress and end-of-project conferences, and their reports (summaries).
- administering board and steering committee meetings
- supporting associated beneficiaries, as needed (twice-yearly reviews)
- production of mandatory deliverables (initial report, progress report, interim reports, final report, layman's report)

Project officers:
The coordinating beneficiary will recruit 10 project officers for the following areas, to implement project actions, during 7,5 years.

- 3 coast project officers for the whole duration of the project (Mediterranean officer, Atlantic officer, Chanel and North Sea officer): see annex 2.
- 7 project officers for the 7 marine nature parks and the Normandy-Brittany Gulf (GNB), for 75% of project duration for 6 of them, and 50% for PNMI officer: see Annex 2.

They are responsible for ensuring project implementation and its integration into local policies. They will be in direct contact with the national coordination team.

Organisational structure for project governance: See chart next page
Project board:
The coordinating beneficiary, associated beneficiaries and project co-funding bodies will meet during board meetings, organised every 6 months (see table below). The board will be responsible for tracking the project and its progress, for setting its direction, and for decision-making. The board will also discuss any new beneficiary involvement demand in the IP during phases 2, 3 and 4. Technical organisation of the board meetings will be the project manager's responsibility, and the meetings may be hosted by associated beneficiaries. Board meetings may be via video-conference from Phase 2 on.

Steering committee meetings:
Each year the project will invite representatives of stakeholders involved in the management and conservation of Natura 2000 habitats. The following composition is proposed with a view to ensuring balanced representation of the stakeholders involved, while maintaining a workable committee. However, this composition remains open, will be discussed again at project launch, and could change to include new relevant representatives.

Composition of the steering committee (48 people):
- One representative and one committee secretary for the coordinating beneficiary
- One representative per associated beneficiary (11 in total)
- One representative of the Directorate of Water and Biodiversity (DEB) of the Ministry for Ecological and Inclusive Transition (MTES)
- 4 Representatives of authorities managing additional funds (Department of Marine Fisheries and Aquaculture (DPMA) of the Ministry of Food and Agriculture, Water Agency, Regional Council responsible for managing the European Agricultural Fund for Rural Development (EAFRD) and Regional Council responsible for managing the European Regional Development Fund (ERDF)
- 8 Representatives of government services (Ministers of sports, foreign affairs, defence General Secretariat for the Sea (SGMer), regional directorates for development and housing, inter-regional directorates for the sea)
- One Representatives of public bodies (*Conservatoire du Littoral)*
- The president of a steering committee of a marine Natura 2000 site

- 4 Representatives of local authorities (French mayors association, *departments* and regions, coastal elected officials)
- 11 Representatives of sectors of industry (shellfish farming, yachting sector, ports, recreational and sport fishermen, marine energy sector, marine aggregates sector...)
- One representative of the forum for French marine protected areas
- Two representatives of nature conservation associations
- Two people qualified in marine ecology and marine human sciences.

With the exception of beneficiaries, the project will not bear the participation costs of members of the project steering committee.

Project conferences (Action E5) will be combined with board meetings and steering committee meetings, for practical and ecological reasons.

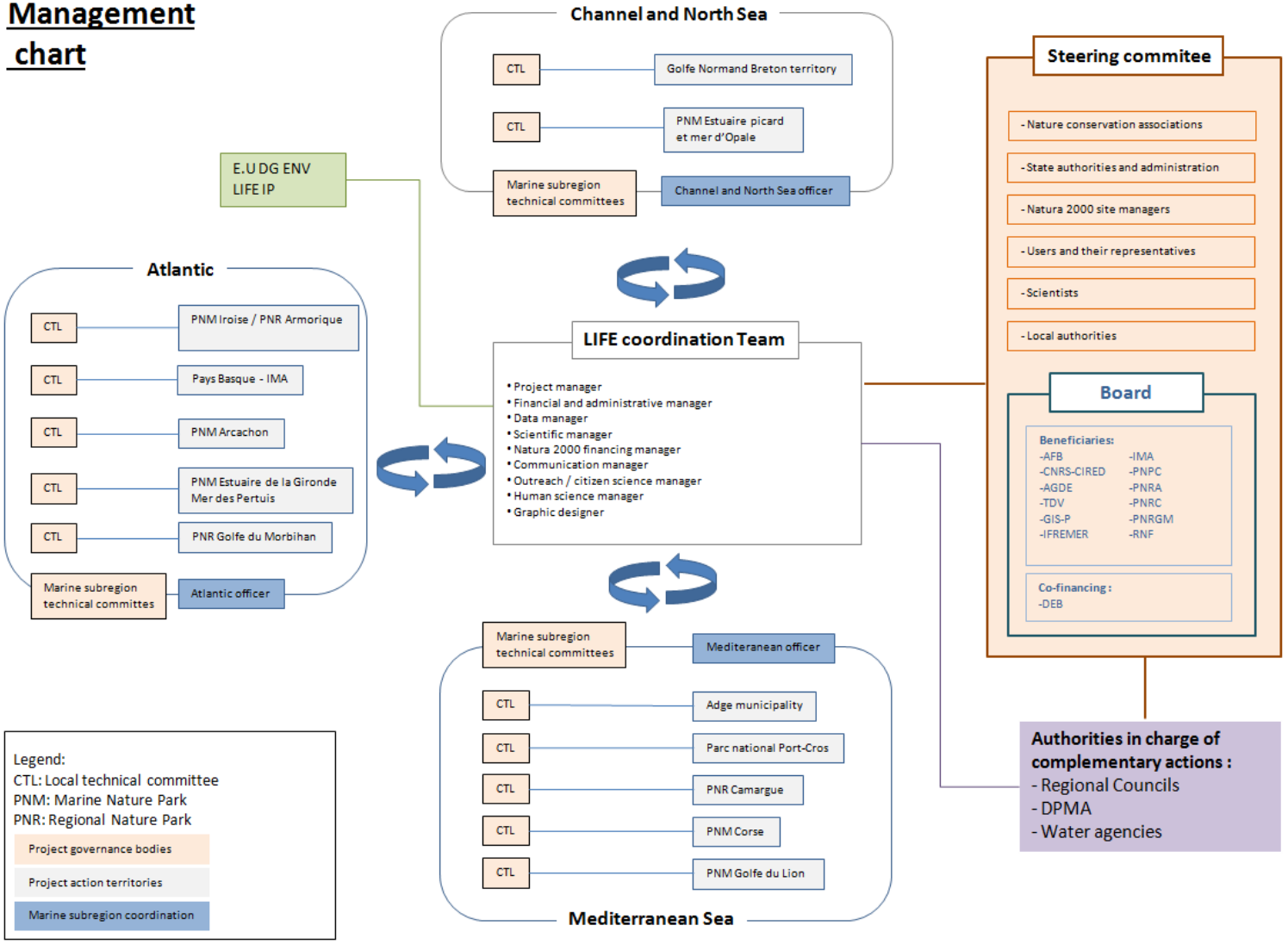
Local technical committees:
The project territories will be responsible for organising 2 local technical committee meetings per project phase, to inform and involve stakeholders in implementation of project actions.
These meetings must involve local stakeholders and create or enhance a dedicated network. At the end of each phase, each territory will submit a report on these meetings.
These committees are for technical discussions and not a substitute for the governance bodies (steering committees) of Natura 2000 sites.

Marine subregion technical committees
A technical committee will be organised annually for each biogeographic region. In particular, these meetings will group and involve relevant stakeholders at the biogeographic level (site managers, users, government services, local authorities, etc.). For the Atlantic region, the committees could be divided into two meetings, one for the Atlantic and one for the Channel-North Sea.
Project management will be financial responsible for their organisation.

DOCOB delivery through external contracts and calls for proposals
As many actions aims at delivering DOCOBs through external contracts and calls for proposals, this topic will specifically addressed as part of the technical reporting of phase 1 to assess the efficiency of the process and recommend changes of the delivery mechanism if needed.

Risk management:
A risk register will be implemented to prevent the risks of the project through adequate management and using usual methods such as risk mapping or inventory.

Project Management chart



Reasons why this action is necessary:
Implementation of a geographically large-scale project that involves many beneficiaries requires robust national management, whose success is based on local implementation of actions, and therefore significant coordination between project action levels.
Associating stakeholders affected by the project but not included in the beneficiaries is also essential for ownership of the project's results and effective dissemination.

4. Constraints and assumptions
Recruitment of the project manager could be early, as soon as notification is received from the European Commission. In the event of early departure of one of the staff recruited for the project, this person would be quickly replaced, and the complementarity of the coordination team from a thematic and geographical standpoint, along with support from permanent AFB teams, will mitigate any discontinuity.

5. Expected results:
- 15 board meetings organised
- 8 steering committee meetings organised
- 12 representatives of beneficiaries present at board meetings
- Participation in steering committee meetings from, at minimum, representatives from each of the following categories of stakeholder: management bodies for additional funds (at least 3 representatives), associations for nature conservation (at least 2 representatives), government services (at least 5 representatives), Natura 2000 site managers (at least 3 representatives), sectors of industry (at least 5 representatives), scientists (at least 3 representatives) and local authorities (at least 3 representatives).
- Local and marine subregion technical committees: organisation of 16 marine subregion technical committees and 80 local technical committees. Invitation, at minimum, of one representative from each stakeholder category mentioned above.
- The efficiency of calls for proposals for the delivery of DOCOBs is assessed at the end of phase 1.
- Both higher level risks and action levels risks are managed.

6. Cost estimation: € 932,264

Personnel : €703,693
- IP manager (full time) : Daily rate €380 due to required experience - 8 years and 2 month
- Working time for preparing reports, attendance at steering committee meetings and meetings with beneficiaries.

Travel : €161 136
- Board and Steering committee meetings for beneficiaries
- AFB : Regional kick-off meeting with contracting authority representatives (2 people x €1000, phase 1) - *AFB*

External assistance : €14,650
- GIS-P : Mediterranean expertise reporting €8,950
- IMA (phase 2) : Steering committee organisation - phase 2 €5,700

Equipment : €8000
IMA Visio conference €8,000

Consumables : €39,085
AFB : €33,500 : catering for Board, steering committees;Support for organisation of marine subregion technical committees: (€1000 per committee x 3 coasts x 2 years)
IMA : organisation of a local technical committee tool fees and car fuel. €2048€
TDV : Steering committee organisation - phase 3. €3537

Other costs : 5700€

- AFB: office equipment (€200 for visiting cards x 18 people + Hard drive: €500 + camera) = €4100 (AFB will pay for (outside integrated project budget) IT and telecommunications equipment under its bulk orders.)
- IMA : car rental (€1,600)

Phase 1 costs:
AFB: €170,601
Agde: €2,889
GIS-P: €11,770
Ifremer: €7,565
IMA: €27,286
PNPC: €4,173
PNRA: €4,315
PNRC: €2,557
PNRGM: €12,070
RNF: €15,387
TDV: €4,835

7. Deliverable products:
- For all governance meetings (board, steering committee, technical committees): the list of the meetings' minutes.
- 31/03/2020 Interim technical report (Phase 1)
- 31/03/2020: report on the progresses made in delivering DOCOBs through calls for proposals.
- 31/03/2022 Interim technical report (Phase 2)
- 31/03/2024 Interim technical report (Phase 3)
- 31/03/2026 Final technical report

8. Milestones:
31/12/17: Recruitment of the project manager
31/03/18: Recruitment of the LIFE team
1st quarter 2018: First board meeting – during the project kick-off meeting.

Table: schedule for project board meetings and steering committee meetings.
Project conferences are also shown (kick-off meeting and project conferences, Action E5)

	2017	2018				2019				2020				2021			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Kick-off meeting																	
Board																	
Steering committee																	
Conferences																	

	2022				2023				2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Board																
Steering committee																
Conferences																

ACTION F.2: Administrative and financial management

2. Beneficiaries responsible for implementation:
1-AFB
2-CNRS
3-AGDE
4-TDV
5-GIS-P
6-IFREMER
7-IMA
8-PNPC
9-PNRA
10-PNRC
11-PNRGM
12-RNF

3. Description (what, how, where, when and why): The AFB will be responsible for ensuring proper administrative and financial management of the project, and will provide the link between associated beneficiaries and the EC, for which it is the sole contact. The AFB will train beneficiaries in management tools and support them throughout the project.
All associated beneficiaries will provide the AFB with financial reports, as per the schedule specified at the start of the project. These reports will include documentation substantiating expenses along with the deliverables and appendices planned under the technical component. Partners are to reply to AFB requests within specified deadlines (in the case of preparing amendments, a request for specific substantiating documentation, etc.).
To facilitate administrative and accounting management for the whole project, a full-time post of administrative and financial manager, funded by the AFB, will be specially created for the duration of the project (8 years and 2 months).
The person recruited will be responsible for:
• financial monitoring of the project,
• production of financial reports,
• costs eligibility and accuracy of supporting document
• supporting the production of project performance reports (mandatory reports),
• monitoring financial flows,
• preparing documentation for mandatory audits.

He or she will also be responsible for supporting associated beneficiary staff responsible for the accounting and financial monitoring of actions performed under the project. To this end, the administrative and financial manager will organise a training session for associated beneficiaries at the start of the project (upgrading trainings will then be regularly organized). Each associated beneficiary of the project has also planned specific working days for the teams involved to facilitate the reporting of expenses to the AFB and to provide for close administrative and financial monitoring (the working hours of associated beneficiary staff are therefore also taken into account under this action).

The financial manager will also be responsible for management of the administrative monitoring tools to be implemented or used (if they already exist):
- milestones for reporting,
- staff timesheets and travel following
- filing system for administrative and financial documents.
The person recruited will work in close collaboration with the technical manager, to ensure the project's financial consistency with the schedule of planned actions. He or she will also support the production and monitoring of calls to tender (for public contracts) and partnership agreements.For beneficiaries seeking European funding over €300,000, the administrative and financial manager is also responsible for ensuring that the audit is

performed correctly. This audit is an integral part of the present action for each beneficiary affected.

Reasons why this action is necessary:
Administrative and financial management is an integral part of the project. This action ensures correct performance of the project, and optimisation and rationalisation of financial resources with regard to the technical objectives to be achieved.
The audit is a legal obligation.

4. Constraints and assumptions:
The only constraint foreseen is the possible departure of the administrative and financial manager during the programme. In this case, a replacement would be recruited. The structure of the AFB means that cover can be provided for a short interim period if needed to support the technical manager.

5. Expected results:
- 11 associated beneficiaries specifically trained on the financial aspects.
- 1 administrative and financial project monitoring tool operational.
- Mandatory reports and payment requests supplied no later than 3 months after the end of each phase.
- 1 shared schedule for compliance with the financial planning for project actions: compliance with the schedule for financial summary deliverables.
- Audits performed on time.

6. Cost estimation: €981,381
- Personnel costs: €786,641
All associated beneficiaries will provide the AFB with financial reports, and dedicated time is allowed to this action
Full time administrative and financial manager : €560,700
- AFB Travel costs are linked to administrative and financial manager only (€8,200), who will also attend the meeting with the contracting authority representatives.
- IMA Equipment : will work on a dedicated accounting software (€840) to ensure good financial reporting.
- IMA Consumables : charges for report and deliverables printing (€1600)
- Other costs :
Financial support to third parties (€25000/phase)
Translation of mandatory report (€9000/report)
Following beneficiaries charges for audit (€48100) : Agde, GIS-P, IMA, PNRA, RNF.

<u>Phase 1 costs:</u>
AFB: €157,611
Agde: €14,081
GIS-P: €13,375
Ifremer: €4,815
IMA: €13,287
PNPC: €14,178
PNRA: €13,111
PNRC: €6,420
PNRGM: €11,845
RNF: €9,510
TDV: €6,439

7. Deliverable products:
- 1st meeting of beneficiaries: Training of associated beneficiaries on financial aspects
- 31/03/2020: 1st management and financial audit report
- 31/03/2022: 2nd management and financial audit report
- 31/03/2024: 3rd management and financial audit report

- 31/03/2025: Draft end-of-project term management and financial audit report
- March 2026: Final management and financial audit report

8. Milestones:

- 1st quarter 2018: Recruitment of the administrative and financial manager
- 1st quarter 2018: Training session for associated beneficiaries during the project launch conference
- 31/03/2020: 1st management and financial audit report delivered
- 31/03/2022: 2nd management and financial audit report delivered
- 31/03/2024: 3rd management and financial audit report delivered
- 31/12/2025: Draft end-of-project term management and financial audit report delivered
- 31/03/2026: Final management and financial audit report delivered

ACTION F.3: Data management and dissemination

2. Beneficiaries responsible for implementation:
1- AFB, implementation of the data management strategy for the entire IP.

6- IFREMER
9- PNRA for the management of data collected from beneficiary actions.

3. Description (what, how, where, when and why):
What
This action aims to consolidate data collected during the project within national reference tools managed by the marine environment information system to facilitate interoperability with European reference tools.
In keeping with Action A5, this action will handle various types of data on habitats, maritime uses, data from impact assessments and monitoring carried out by the project leaders, data on Natura 2000 sites, document data, etc.

How
Support and coordination of IP data consolidation actions by AFB:
The project coordination team data manager will be responsible for helping the beneficiaries and stakeholders manage data consolidation.
In accordance with the principles in the summary of Action A5, the various data sets produced will be integrated into tools planned so that they can be used and disseminated. This action will involve ensuring that the data produced by the beneficiaries and other project stakeholders is properly consolidated and catalogued, either directly by those that produce the data or the project team.
If agreements are required with the database operators to define the terms and conditions of use of tools and any necessary upgrades to adapt to the new data sets, this action will coordinate the interactions between the producers and operators.
Data consolidation will not be possible for some types of data (due to volume, lack of organisation, etc.). In this case, archiving space will be made available. It will be accompanied by a catalogue providing the metadata required.

The data manager will define the specifications for external assistance concerning:
- Support for consolidating data on habitats.
- Support for consolidating data on uses.
- In addition, developments will be needed to transfer data into reference systems.
- The development of a document database to manage project deliverables and capitalise on impact assessments under Action C5.
- Archiving and cataloguing data that cannot be consolidated in existing systems.

These actions will recur throughout the project, including when data is collected.
To ensure consistent management of the project's data, an annual meeting will be organised between the data producers for the project and the relevant information system operators.
The data manager will also help develop the toolkit (Action C3).
Within the AFB, the data manager will interact with the observation and data systems department, the resource centre department and the mixed service unit (UMS), PatriNat, which is responsible for managing the National Inventory of Natural Heritage (INPN), and will be supported by the permanent staff of these departments.

Management of IP data by IFREMER:
In Phase 3 and 4, IFREMER will dedicate permanent staff (project manager and data managers) to the work of consolidating and disseminating data collected on coastal and deep-sea habitats within the Quadrige and Sextant systems.

Management of IP data by PNRA:

For each phase, PNRA will dedicate permanent staff (GIS officer) to the work of consolidating data collected on the site.

When
The action will begin in 2019, following Action A5 and for the duration of the project.

Where
Across the project's geographical scope of action.

Reasons why this action is necessary:
Under the law, public data must be made available.
Without this action, the data produced will not be able to be made available in an effective manner. Its purpose is to publish data and facilitate access to it, which requires a suitable format and visibility of data sets.
This action is essential for disseminating the results of the project while it is in progress and afterwards.

4. Constraints and assumptions
The integration of the data produced will depend on the upgrades to information systems that are outside the scope of the project. The upgrade priorities for different databases will be defined to take into account projects other than the IP. Some data sets could therefore remain "orphans" as long as these upgrades are unavailable. To offset this problem, the action will lead to new developments for consolidating data and will provide resources for storing and cataloguing data sets that cannot be consolidated.
This action is concerned by interactions between land and sea waters through the link between freshwater and marine information systems and will be linked with WFD.
When possible, videoconference will be set up.

5. Expected results:
The beneficiaries of the IP and project stakeholders will have complied with instructions concerning data submission (format – metadata – standards), publication, free access to data and interoperability with national and European reference systems. The data produced during the project will be publically available and integrated into the information systems or databases identified under Action A5 (managed by the marine environment information system that will feed into the N2000 and MSFD reporting system).
A document database will have been put in place and contain and publish the project deliverables so that the impact assessments can be capitalised on.

Performance indicators:
- Volume and percentage of data sets produced by the project that are publically available.
- Number of national reference systems that are fed with data from the project.
- Number of European reference systems that are fed with data from the project.
- Number of deliverables published via the document database.
- Number of impact assessments consolidated.

6. Cost estimation: €713,456
AFB: €679,100
Personnel costs: €331,500 (7 years for the data manager within the IP coordination team).
Travel: €19,600 (based on 3 trips within Metropolitan France and 1 trip abroad annually, for 7 years).
External assistance : €314,000
Data consolidation costs (which includes data dissemination) are estimated based on the experience of the information system on water, where the cost of consolidation accounts for 10% of the cost of collection:

- Developments for consolidating and disseminating data on habitats. €140,000 (€20,000 per year, based on a cost of data collection of €200,000 per year over 7 years).
- Developments for consolidating and disseminating data on uses: €35,000 (€5,000 per year, based on a cost of data collection of €50,000 per year over 7 years).

Development costs for the databases are based on experience from the national database on marine protected areas and the intertidal habitats database.

- Developments for the integration of data into existing databases: €70,000 (€10,000 per year over 7 years).

The development cost for a document database is based on the experience of document management within the former AAMP: €20,000 (€5,000 in 2019 then €5,000 per phase).
Storage requirements for the project data: €49,000 (€5,000 per year of storage based on production of 10 TB, as storage of one TB costs of less than €400, and €2,000 per year of cataloguing).
Other costs: €14,000 (organisation of meetings with data producers and information system operators, €2,000 per year over 7 years).

IFREMER: €25,776
Personnel costs for phases 3 and 4 (project manager and data manager).

PNRA: €8,580.
Personnel costs (11 days per phase for the GIS officer) for consolidating data collected during the IP.

Phase 1 costs:
AFB: €107,000
PNRA: €2,295

7. Deliverable products:
31/12/2024: report of the work arrangements agreed with the database operators
30/06/2025: catalogue of all data produced and made available (in databases or simply archived), information systems used for dissemination and access.

8. Milestones:
15/12/2018: publication of the general strategy and data management plans (Action A5), start of Action F3.
15/12/2020: Availability of the document database.
15/12/2021: progress report on the action, implemented agreements and procedures with operators.
31/12/2023: report on data sets published (catalogues – reports).
31/12/2025: availability of all project data.

ACTION F.4: Develop an eco-responsible approach

1.Beneficiaries responsible for implementation:

1-AFB
2-CNRS
3-Agde
4-TDV Foundation
5-GIS-P
6-IFREMER
7-IMA
8-PNP-C
9-PNRA
10-PNRC
11-PNRGM
12-RNF

The project eco-responsible approach will be coordinated by the AFB and supported by each associated beneficiary.

2.Description (what, how, where, when and why):

What
This action aims to assess the environmental impact of the project and to reduce it by defining and implementing an action plan in collaboration with all the beneficiaries.
Since implementation of the eco-responsible approach is cross-cutting, it will be applied to all LIFE actions.

How
In addition to the project coordination team, the AFB permanent officer in charge of sustainable development will be available for the action 8 days a year to monitor its development and facilitate the transfer of experience with AFB.
All the beneficiaries will be devoting at least one day a year to the action, consisting of half a day for the annual videoconference meeting and collaborative work that will contribute to:

- Defining an action plan for an eco-responsible project at the start of the project.
- Following up implementation of actions
- Ensuring the transferability of actions

A. Action plan

The action plan will draw on steps taken by the beneficiaries and focus on such topics as:
- Events organization: reducing packaging, banning disposable tableware, contractually requiring caterers to use local supplies, organizing “zero paper” events, making documents available for participants rather than providing participant folders, having limited and eco-friendly goodies.
- Travel management: banning air travel for trips below 500 km, implementing a system dedicated to encouraging carpooling, using public transport, using videoconference meetings when possible, fuel-efficient driving training for agents using company vehicles, incentives for green transport (bonuses for staff who cycle).
- Digital footprint management: responsible use of e-mails and storage areas.
- Procurement processes: integrating environmental criteria for all purchases, public contracts or partnerships signed.

The action plan will seek to define goals to be achieved for the different project actions, such as:
- For events and eco-responsible seminar organisation, Actions C11; E1 and E5.
- For travel, optimisation of training locations under Action C2; experimenting with videoconferencing for board meetings under Action F1.

- For digital footprint management, Action F3 will propose the procedures for sustainable management of data for knowledge acquisition actions such as A2 or A3.
- For procurement processes, information on production methods for awareness-raising or communication documents produced under Actions C8 and E2 should be included in quotes.

B.Assessment

The annual meeting will provide result indicators (e.g. for an action under an existing approach within AFB: whether or not the opportunity for teleworking is implemented)
A carbon footprint assessment of the project will be carried out in phase 2 with the help of external assistance to confirm or redirect the decisions made under the action plan,

C. Transferability

All the beneficiaries will provide annual feedback on the implementation of environmentally-friendly practices: what worked, what didn't …
This summary feedback will be posted online on the project website. It may be sent to project partners or suppliers.
To optimize the dissemination of good practices, the project steering committee will be informed of the progress of the approach and information on it will be disseminated under Action E. A datasheet entitled "implementation of an eco-responsible approach within a European project" will be distributed.

Reasons why this action is necessary:

The project beneficiaries decided to commit to the implementation of an eco-responsible approach for project exemplarity.
Moreover, since the AFB is under the supervision of the Ministry of the Environment, it must abide by a ministerial directive related to the inter-ministerial action plan called "exemplary administration" for the environment 2015-2020, which includes the planning and implementation of specific measures in favour of the environmental and energy transition.

4. Constraints and assumptions

Some of the project activities could have negative impacts on the environment (business trips, organization of seminars, travel for training, paper publications) and it will be essential to evaluate and reduce such impacts.

5. Expected results:

- An annual meeting on eco-responsibility.
- A platform dedicated to operational carpooling shared within the project.
- 8 feedback reports from each beneficiary on the implementation of environmentally-friendly practices.
- A datasheet entitled "implementation of an eco-responsible approach within a European project".
- 25 action plan measures implemented, including:
    - environmental criteria included in 95% of procurement processes.
    - 100% of publications using eco-certified paper and plant-based ink for printing.
    - 10% of project meetings carried out via videoconference.
- 1 carbon footprint evaluation

6. Cost estimation: €52,264

AFB: - Coordinating the approach -

Project coordinator (F1) + time devoted by the AFB sustainable development permanent officer (4% - not accounted for here)	€0 (Action F1)
- Implementation of a carpooling tool (phase 1)	€2000
- Publication of "environmentally-friendly practices" datasheets:	€5000
- Development for facilitating good practices (2 000€/phases 2, 3 and 4)	€6000
External assistance for carbon footprint evaluation	€20,000

AFB Total		**€33,000**

Associated beneficiaries

Total:	**80 days**	**€19,264**

Phase 1 costs:
AFB: € 3,478
Agde: €642
GIS-P: €535
Ifremer: €355
IMA: €1,072
PNPC: €364
PNRA: €439
PNRC: €246
PNRGM: €439
RNF: €633
TDV: €644

7. Deliverables:
31/12/2018: action plan for an eco-responsible project.
31/12/2021: project carbon footprint assessment.
30/06/2025: assessment of the approach: list of environmentally-friendly practices and result indicators chart.

8. Milestones:
30/11/2018: action plan approval for an eco responsive project.
30/06/2021: carbon footprint evaluation (BEGES) in 2021
30/06/2024: end-of-programme assessment

ACTION F.5. Develop an "After Life Plan"

2.Beneficiary responsible for implementation:

1-AFB (department for marine environment _team Life)
2-CNRS
3-AGDE
4-TDV
5-GIS-P
6-IFREMER
7-IMA
8-PNPC
9-PNRA
10-PNRC
11-PNRGM
12-RNF

3. Description (what, how, where, when and why):

An After Life plan will be developed and presented in a separate document from the final report. It will be discussed over the duration of the project and drafted in the final year (2025). It will specify how the project actions can be transferred in order to be replicated and continued elsewhere, and by whom (NGOs, environmental associations, government services, etc.) and by what means (financial mechanisms, business model, European structural and investment funds, national or territorial financing and private funds). This plan will include how those responsible for PAF implementation will continue to build on the achievements of the project and how some actions can be sustained once the LIFE project has come to an end.
The plan will be based on the results of a course completed in phase 2 focusing on the study of the long-term sustainability of project actions. Course results will be submitted to project governance bodies (board and steering committee, 2021) who will select the strategic priorities for ensuring the long-term sustainability of the project.

The long-term sustainability of the project will be ensured through:

-long-term monitoring (of protocol use) in MPA management (by managers, the AFB, other coastal stakeholders) as part of the MSFD monitoring programme.

-continued reviewing of DOCOBs according to a common, rationalised methodology (ensuring a focus on the major site challenges).

-ongoing communication

-digital tools remaining active and being managed (websites, databases, other collaborative tools). Capacity-building actions will enable key players to continue their training/networking/experience sharing

-continued action by the AFB in networking actions for EU managers and international conferences

-improving citizen involvement, and especially citizen science. Continuing the deployment of MPAs with ongoing momentum in communicating the message beyond the duration of the LIFE project.

-self-funding of some actions will enable their long-term sustainability.

The plan will give the details required to understand how to continue these actions (means, objectives, bodies in charge).
Ex-post analyses will be planned after 1 year, 3 years and 5 years.

Reasons why this action is necessary:
This action is mandatory. Moreover, during the project, energy will be devoted to the development of the methods, indicators and strategies required for further PAF

implementation. Tool transferability is essential for ensuring continuation of the project and improving marine habitats in Metropolitan France.
The question of long-term sustainability will be the focus of a course. Although this is a recurring issue, it has not been extensively studied.

4. Constraints and assumptions
The ex-post analysis must be planned so that the Personnel costs involved are available to carry it out.

5. Expected results:
- An After Life plan developed and validated together with all stakeholders
- Documents and methodological guides for transferability

6. Cost estimation: €29,796
Each beneficiary will be involved in the plan and spend time on the plan during the IP.
AFB: €5,700
The time spent by the coordinating beneficiary responsible for plan coordination and consolidation of components is accounted for under Action F1 (project coordination).
Cost of a course: €4,200
Translation of the document into English: €500
Publishing and printing: €1,000

For other beneficiaries, the total is €24,096 in phase 4. This represents an average of 10 working days per beneficiary.

Phase 1 costs: €0

7. Deliverable products:
31/12/2021: work plan for the long-term sustainability of the project
31/12/2025: After Life Plan (separate chapter of the final report)

8. Milestones:
31/12/2021: choice of priorities for long-term sustainability of project actions by the steering committee.
31/12/2025: After Life Plan submitted in electronic and paper format.

DELIVERABLE, MILESTONES AND REPORTING SCHEDULE

MAIN DELIVERABLE PRODUCTS OF THE PROJECT

Name of the Deliverable	Code of the associated action	Deadline
Methodological report: sample proposal, themes for analysis, working methods/analysis tools, data reporting format (task 3)	A1	31/12/2018
PNRGM's report on coastal Regional Nature Park governance	A1	31/12/2019
PNRA's report on the roadstead of Brest Natura 200 site	A1	30/09/2019
A final analysis report with recommendations for action C1	A1	31/12/2019
Report on the update of the habitats manual and on the development of the assessment strategy	A2.1	31/12/2020
First tranch of methodologies for the assessment of Atlantic habitats conservation status.	A2.2	31/12/2019
Second tranch of methodologies for the assessment of Atlantic habitats conservation status.	A2.2	31/12/2021
Seagrass conservation status map.	A2.2	31/12/2021
Synthesis of methodologies for the assessment of Mediterranean habitats conservation status.	A2.3	31/09/2021
Posidonia barrier reefs summary book	A2.3	31/12/2021
Report on technological developments for habitat monitoring	A2.4	30/09/2020
Report on socio-economic diagnostics from existing Docobs (Task 1A)	A3	31/12/2018
Report on ecosystem services provided by Natura	A3	31/12/2019
Internet links to the new French DOCOBs and their socio-economic diagnostics habitats (Task 2B)	A3	31/03/2023
Recommendations for action C8 and consultation and coordination process (Task 2A and C)	A3	31/12/2021
Guide for elaboration of socio-economic diagnostics (Task 1 D)	A3	31/03/2023
List of DOCOBs produced (DOCOBs will be available on the project website) for 15 coastal sites	A4	31/12/2021
List of DOCOBs produced (DOCOBs will be available on the project website) for the 10 offshore sites	A4	31/12/2022
A general data management strategy for the IP including allocation of the budget for Action F3 by area in which data is produced	A5	15/12/2018
A Data Management Plan for each area in which data is produced (of which there are six) to document how data will be produced or collected	A5	15/12/2018
PNRGM final report on governance changes in coastal regional nature parks in France	C1	31/12/2023
PNRA final report on governance in the roadstead of Brest	C1	31/12/2024
Final report on the coordination of the action with the network of Natura 2000 site managers in 2025.	C1	31/03/2025
Final report on Action C1	C1	31/03/2025

List of IP Natura 2000 training programmes for Phase 2	C2	31/12/2019
List of IP Natura 2000 training programmes for Phase 3	C2	31/12/2021
List of IP Natura 2000 training programmes for Phase 4	C2	31/12/2023
Internet link to the toolkit (connected to Action C3) with at least 80 new teaching materials	C2	31/03/2025
A report on the inventory of Natura 2000 tools and their content	C3	30/06/2018
Minutes of the 2 monitoring committee meetings	C3	31/12/2019
A functional toolkit, interoperable with the Natura 2000 Resource Centre;	C3	31/12/2020
Recommendations for integrating Natura 2000 into Marine Nature Park management plans, based on the experience of PNMI.	C3	31/12/2022
links to the 10 web seminars online	C3	31/12/2023
Assessment of changes in practices via analysis of habitat/pressure pairs.	C4	30/06/2025
Final report on good practices to develop to reduce the effect of concurrent pressures on habitats	C4	30/06/2025
Assessment of the activity sectors involvement actions for the conservation of habitats	C5	30/06/2025
Report on the implementation of strong protection areas.	C6	31/12/2024
A guide on implementation of ZMELs for habitat protection and lower impact anchorage techniques.	C7.1	30/06/2019
A review of ZMELs implemented with the project's support	C7.1	30/06/2025
A review of anchorages installed (including those on sites managed by the associated beneficiaries)	C7.1	30/06/2025
A guide entitled "business model and technical guidelines for implementing large yacht anchorage zones."	C7.1	31/12/2021
A guide on lower impact navigation mark techniques for local authorities.	C7.1	30/06/2019
A review of navigation mark systems installed (including those on sites managed by the associated beneficiaries)	C7.1	30/06/2025
A methodology guide for combating invasive species, on intertidal habitats with soft or reef substrates (PNRA).	C7.2	31/12/2019
An assessment of the restoration actions implemented.	C7.2	30/06/2025
"Awareness-raising" guidelines and action plans presenting the actions to be carried out and recommendations for each habitat/pressure pairing in each IP phase, on the basis of two-yearly reviews (2018 - 2020 - 2022 - 2024).	C8	31/12/2019
4 two-yearly reviews (2019 - 2021 - 2023 - 2025) of the awareness-raising tools used in the Natura 2000 network and their effectiveness for the public and habitats targeted.	C8	31/12/2019
Review of the awareness-raising tools used during the three first phases	C8	31/12/2021
Guidelines and recommendations in 2024 on awareness-raising tools, stakeholder methods, rhetoric and approaches produced/tested during the LIFE project and analysis of their advantages/disadvantages	C8	31/12/2024
Review and technical recommendations concerning roll-out of the underwater trail	C8	31/12/2024
Inventory of existing funding (AFB)	C9	15/12/2018

Report assessing the costs of implementing Natura 2000 (CNRS/IFREMER)	C9	15/12/2019
A sustainable and coordinated funding plan (AFB)	C9	31/12/2020
Cost-effectiveness analysis for the selected Natura 2000 measures (CNRS/IFREMER)	C9	31/12/2024
Assassment of the funding plan stratégy implemented during the IP (AFB)	C9	31/12/2024
Analysis of innovative funding methods (CNRS/IFREMER)	C9	31/12/2024
DOCOB for the Chingoudy bay site.	C10	31/12/2021
Assessment of joint actions led by managers of cross-border sites.	C10	30/06/2025
Proceedings of the 4 biogeographic seminars.	C11	31/12/2024:
List of management strategy datasheets and experience feedback datasheets	C11	31/03/2025:.
Phase 2 assessment of habitats conservation status evaluation developments.	D1	31/12/2021
Phase 3 assessment of habitats conservation status evaluation developments.	D1	31/12/2023
Analysis of the impact of project action on the consevation status of habitats.	D1	31/03/2025
Phase 4 assessment of habitats conservation status evaluation developments and overall assessment of D.1 action	D1	30/06/2025
Report on completed assessments analysing the impact of project actions on activities and users, including 12 feedback sheets	D2	30/06/2025
First version of the grid of relevant indicators for characterising the governance	D3	31/12/2019
Intermediate report on implementation on sites selected under calls for expression of interest	D3	31/03/2022
Intermediate report incorporating the input from the survey and a participatory workshop with the Natura 2000 sites managers and the first version of the tested indicator grid	D3	31/12/2023
Final report on the action	D3	31/03/2025
User manual and standard for the Green List certification of Natura 2000 sites.	D4	31/12/2019
Assessment of the green list certification	D4	30/06/2025
Final report on assessment of the impact of capacity-building actions, and recommendations on the pursuit of capacity-building actions	D5	31/03/2025
Interim report on assessment of the impact of the toolkit	D5	31/03/2025
Report on the 1st national survey	D6	31/12/2021
Report on the 2nd national survey	D6	31/03/2025
Report of media opinion survey	D6	31/03/2025
Final report on assessment of the impact of capacity-building actions, and recommendations on the pursuit of capacity-building actions	D5	31/03/2025
Interim report on assessment of the impact of the toolkit	D5	31/05/2025
Report on the 1st national survey	D6	31/12/2021
Report on the 2nd national survey	D6	31/03/2025
Report of media opinion survey	D6	31/03/2025
IP Impact Study Report on Marine Ecosystem Services	D7	31/03/2025
Indicator tables included in the first interim report	D8	31/12/2019

Indicator tables included in the final report	D8	31/12/2025
Forum proceedings including feedback and the lists of participants	E1	30/11/2024
List of applications for projects related to habitats of community interest and involving activity sectors	E1	31/03/2025
A communication plan	E2	31/03/2019
1 graphic charter + 1 logo	E2	31/03/2019
One copy of poster, sticker, postcard, brochure, and national IP presentation document.	E2	31/12/2019
1 Project signature spot (teaser)	E2	31/12/2019
2 short films presenting the IP	E2	31/12/2019
Photograph of a stand kit for events	E2	31/12/2019
Photograph of an installed panel	E2	31/12/2019
A Natura 2000 marine habitats wiki and a Natura 2000 marine habitats Wikipedia page	E2	31/12/2020
a short film presenting the IP	E2	30/06/2024
1 Layman's report	E2	31/12/2025
1 after Life communication plan	E2	31/12/2025
Summary report of pilot sites and monitoring protocols	E3.1	31/12/2020
Evaluation document for the action First list of monitoring protocols available	E3.1	30/06/2025
Summary document on supporting implementation of EMMAs	E3.2	01/09/2018
Final report on supporting EMMAs	E3.2	30/06/2025
Project presentation brochure in English Version 1	E4	30/06/2018
Assessment of the networking action	E4	31/03/2025
Report of the kick-off meeting	E5	30/03/2018
Report of the 1st project conference	E5	31/12/2019
Report of the 2nd project conference	E5	31/12/2021
Report of the 3rd project conference	E5	31/12/2023
Report of the final conference	E5	31/12/2025
For all governance meetings (board, steering committee, technical committees): the expected deliverables are the list of participants, the agenda, and a summary of the meeting.	F1	continuous
Interim technical report (Phase 1)	F1	31/03/2020
Report on the progresses made in delivering DOCOBs through calls for proposals.	F1	31/03/2020
Interim technical report (Phase 2)	F1	31/03/2022
Interim technical report (Phase 3)	F1	31/03/2024
Final technical report	F1	31/03/2026
1st management and financial audit report	F2	31/03/2020
2nd management and financial audit report	F2	31/03/2022
3rd management and financial audit report	F2	31/03/2024
Draft end-of-project term management and financial audit report	F2	31/12/2025
Final management and financial audit report	F2	31/03/2026
Report of the work arrangements agreed with the database operators	F3	31/12/2024
Catalogue of all data produced and made available (in databases or simply archived), information systems used for dissemination and access.	F3	30/06/2025
Action plan for an eco-responsible project.	F4	31/12/2018
Project carbon footprint assessment.	F4	31/12/2021

Assessment of the approach: list of environmentally-friendly practices and result indicators chart.	F4	30/06/2025
Work plan for the long-term sustainability of the project	F5	31/12/2021
After Life Plan (separate chapter of the final report)	F5	31/12/2025

MAIN MILESTONES OF THE PROJECT

Name of the Milestone	Code of the associated action	Deadline
Launch of the scientist assistance external consultation	A1	31/03/2018
Recruitment of the AFB human science manager	A1	31/03/2018
Organisation of the 1st PNRA workshop	A1	31/12/2018
Organisation of the scientists' workshop	A1	31/12/2019
Recruitment of the AFB "Natural Heritage" mixed service unit scientific manager.	A2.1	31/01/2018
Publication of the assessment strategy and habitats manual	A2.1	31/12/2020
Validation of the deep-sea observatory material	A2.2	31/12/2021
First tranche of methodology for the assessment of Mediterranean habitats.	A2.3	31/12/2019
Second tranche of methodology for the assessment of other Mediterranean habitats	A2.3	31/12/2021
Validation of the needs analysis and definition of technical specifications	A2.4	30/09/2018
End of data acquisition campaigns	A2.4	30/09/2019
End of processing, validation of technologies for the rest of the project	A2.4	30/09/2020
Recruitment of the human science by the AFB	A3	31/03/2018
Recruitments of an 18-month post-doc in July 2018 by IFREMER (connected to Actions C9 and D2)	A3	31/07/2018
Recruitment of a 22-month post-doc by CNRS (connected to Actions C9 and D2)	A3	31/01/2019
Launch of external assistance by AFB	A3	31/04/2018
Launch of external assistance by CNRS	A3	30/06/2018
Recruitment of project officers for Channel, Atlantic, Mediterranean, GNB, and PNM Cap Corse, and of additional PNRA personnel.	A4	31/01/2018
Recruitment of project officers for the other marine nature parks.	A4	30/06/2018
Validation of the 18 strategic management documents.	A4	31/12/2019
Validation of the 8 DOCOBs for the 15 coastal sites.	A4	31/12/2021
Validation of the 4 DOCOBs for the 10 offshore sites	A4	31/12/2022
Recruitment of data manager within the Project Coordination Team	A5	30/03/2018
Publication of the general strategy and data management plans	A5	15/12/2018
Launch of the scientist assistance external consultation, organised by AFB	C1	31/03/2020
Launch of the call for expression of interest, organised by AFB	C1	30/04/2020
Publication of the final report on Action C1 (tasks 1 and 2)	C1	31/03/2025
Organisation of at least 25 courses	C2	20/12/2019
Organisation of at least 65 courses	C2	20/12/2021

Organisation of at least 105 courses	C2	20/12/2023
Organisation of at least 125 courses	C2	20/12/2025
Formation of the toolkit monitoring committee	C3	31/05/2018
Report 1 “Inventory of Natura 2000 tools”	C3	30/06/2018
Production of specifications for development of the toolkit.	C3	30/08/2018
1st monitoring committee meeting	C3	15/10/2018
Specification of the procedure for validating toolkit content	C3	30/12/2018
2nd monitoring committee meeting	C3	15/10/2019
3rd monitoring committee meeting	C3	15/10/2020
Toolkit online	C3	30/12/2020
1st web seminar online (then one every 3 months)	C3	20/01/2020
4th monitoring committee meeting	C3	15/10/2021
all existing content online and LIFE project deliverables produced	C3	30/12/2021
management plan and Natura 2000 report for the PNMI	C3	05/01/2022
5th monitoring committee meeting	C3	15/10/2022
10th web seminar online	C3	20/07/2023
6th monitoring committee meeting	C3	15/10/2023
7th monitoring committee meeting	C3	15/10/2024
8th monitoring committee meeting	C3	15/10/2025
all LIFE integrated project deliverables online	C3	30/12/2025
Launch of the first call for expression of interest.	C4	30/06/2019
First mapping analysis of concurrent effects.	C4	30/09/2020
Launch of the second call for expression of interest.	C4	30/06/2022
Second mapping analysis of concurrent effects	C4	30/03/2024
Dissemination of the products of action C.5 is finalised	C5	30/06/2025
National framework for installation of strong protection within Natura 2000 sites available.	C6	31/12/2018
Marking out of a highly protected area within the Hyères roadstead site.	C6	31/12/2019
Creation and marking out of a highly protected area within the Agde coast site.	C6	31/12/2020
Validation of the highly protected areas plan for habitats of Community interest within PNM GdL.	C6	31/12/2020
Creation of two highly protected areas within the roadstead of Brest site.	C6	31/12/2021
Creation of a highly protected area within the Ouessant-Molène site in the PNMI.	C6	31/12/2022
Creation and marking out of a highly protected area within the Hyères roadstead site.	C6	31/12/2023
Creation and marking out of a highly protected area within the Corniche Varoise site.	C6	31/12/2023
Publication of a guide on lower impact anchorage and navigation mark techniques.	C7.1	31/03/2019
Launch of the first call for expression of interest and the first invitation to tender.	C7.1	30/06/2019
Launch of the second call for expression of interest and the second invitation to tender.	C7.1	30/06/2021
Launch of the third call for expression of interest and the third invitation to tender	C7.1	30/06/2023
Launch of the first call for expression of interest and first contract.	C7.2	30/06/2019
Launch of the second call for expression of interest and	C7.2	30/06/2021

second contract.		
Launch of the third call for expression of interest and third contract	C7.2	30/06/2023
Recruitment of an outreach manager	C8	31/03/2018
Recruitment of a graphics designer	C8	31/03/2028
Two-yearly awareness-raising action plan	C8	31/03/2018
Calls for expressions of interest and tool distribution service	C8	20/04/2018
Development of awareness-raising tools and on-site distribution	C8	30/04/2018
Launch of calls to tender for the first digital awareness-raising tools	C8	30/06/2018
Production of the first guidelines on awareness-raising tools and their effectiveness	C8	31/07/2018
First review of the awareness-raising tools produced	C8	15/01/2020
Two-yearly awareness-raising action plan	C8	31/03/2021
Calls for expressions of interest and tool distribution service	C8	20/04/2021
Development of awareness-raising tools and on-site distribution	C8	30/04/2021
Launch of calls to tender for the first digital awareness-raising tools	C8	30/06/2021
Production of the first guidelines on awareness-raising tools and their effectiveness	C8	31/07/2021
First review of the awareness-raising tools produced	C8	15/01/2023
Two-yearly awareness-raising action plan	C8	31/03/2023
Calls for expressions of interest and tool distribution service	C8	20/04/2023
Development of awareness-raising tools and on-site distribution	C8	30/04/2023
Launch of calls to tender for the first digital awareness-raising tools	C8	30/06/2023
Production of the first guidelines on awareness-raising tools and their effectiveness	C8	31/07/2023
First review of the awareness-raising tools produced	C8	15/01/2025
Recruitment of the financing manager	C9	31/03/2018
1st inventory of existing funding	C9	15/12/2018
1st regional and national annual meetings	C9	15/11/2018
Report assessing the costs of implementing Natura 2000	C9	15/12/2019
Specifications and invitation to tender for external assistance B.b	C9	15/03/2020
Cost-effectiveness analysis for Natura 2000 measures	C9	31/12/2024
Publication of final analysis of innovative funding methods	C9	31/12/2024
Recruitment of additional project officers.	C10	30/06/2018
End of the preparatory phase for cooperation actions on each zone.	C10	31/12/2019
Validation of the Chigoundy bay DOCOB	C10	31/12/2021
Validation of action plans for continuation of cooperation actions after the project	C10	30/06/2025
Workshop reports	C11	31/12/2020
Proceedings of the 4 biogeographic seminars	C11	31/12/2021
Presentation of the sharing platform.	C11	31/12/2022
List of management strategy datasheets and experience feedback datasheets	C11	31/12/2024

First delivery of methodologies from A.2 action.	D1	31/12/2019
Validation of the evaluation strategy (action A.2.1).	D1	31/12/2020
Second delivery of methodologies from A.2 action.	D1	31/12/2021
Presentation of results to the final conference	D1	30/06/2025
31/03/2018: recruitment of a human science manager by AFB	D2	31/03/2018
30/07/2018: recruitment of a postdoctoral student for 18 months by IFREMER in July 2018 (in connection with actions A3 and C10)	D2	30/07/2019
31/03/2019: recruitment of a postdoctoral student for 22 months by CIRED in January 2019 (in connection with actions A3 and C10)	D2	31/03/2019
31/12/2019: inventory of the initial diagnostic studies required for assessment actions	D2	31/12/2019
Publication of the first version of the grid of tested indicators on the selected sites	D3	31/12/2022
Publication of the final report on the impacts of the IP for improving governance	D3	31/03/2025
Launch of the partnership with IUCN.	D4	30/06/2018
Availability of methodology information for the certification of marine Natura 2000 sites: User manual and standard.	D4	31/12/2019
Green List certification of 6 marine SACs.	D4	31/12/2021
Green List certification of 6 marine SACs.	D4	31/12/2023
Green List certification of 8 marine SACs	D4	31/12/2025
Final report on assessment of the impact of capacity-building actions, and recommendations on the pursuit of capacity-building actions	D5	31/03/2025
Final report on assessment of the impact of the toolkit	D5	31/03/2025
The results of national measure MO28 from the MSFD's programme of measures are made available.	D6	31/12/2018
Publication of the report of the 1st national survey	D6	31/12/2021
Publication of the report on the 2nd national survey	D6	31/03/2025
Publication of the report of media opinion survey	D6	31/03/2025
IP Impact Study Report on Marine Ecosystem Services	D7	31/03/2025
Performance indicators identified and described.	D8	31/12/2018
Project adaptation for next phases, if required to meet project objectives	D8	31/12/2019
Organise the first forum	E1	30/09/2020
Organise the second forum	E1	30/09/2024
Recruitment of the communication manager	E2	31/03/2018
Recruitment of the graphic designer	E2	31/03/2018
Creation of the Twitter account	E2	30/06/2018
Validation of the communication plan by all beneficiaries	E2	31/03/2019
Creation of a teaser spot for the IP and 1 short film presenting the IP	E2	31/12/2019
Creation of the photograph and video database	E2	31/12/2019
Creation of a Natura 2000 marine habitats wiki and a Natura 2000 marine habitats Wikipedia page	E2	31/12/2020
Website put online	E2	31/12/2021
Creation of a short film presenting the IP	E2	30/06/2024
Validation of the “After LIFE communication plan”	E2	31/12/2025
Layman’s report	E2	31/12/2025
Recruitment of the project officer	E3.1	31/03/2018
Selection of the habitats and sites	E3.1	31/12/2018

3 protocols developed and networks of citizens mobilised.	E3.1	31/12/2020
Deep-sea observatory set up	E3.1	31/12/2021
10 pilot sites monitored and protocols tested	E3.1	31/12/2022
Action plan for continuation of the programmes	E3.1	31/12/2025
Meeting day on EMMAs; validation of selection criteria	E3.2	30/06/2018
Selection of the 3 initial sites	E3.2	01/09/2021
Technical and educational tools for viewing marine habitats	E3.2	01/09/2021
Assessment of the first phase of Natura 2000 EMMA implementation	E3.2	31/12/2021
Selection of the next 3 sites	E3.2	01/09/2022
Organisation of inter-LIFE meetings	E4	30/11/2020
Organisation of inter-LIFE meetings	E4	30/11/2024
Dissemination of the report of the kick off meeting	E5	01/06/2018
Dissemination of the report of the 1st project conference	E5	01/09/2019
Dissemination of the report of the 2nd project conference	E5	01/09/2021
Dissemination of the report of the 3rd project conference	E5	01/09/2023
Dissemination of the report of the final project conference	E5	01/09/2025
Recruitment of the project manager	F1	31/12/2017
Recruitment of the LIFE team	F1	31/03/2018
1st quarter 2018: First board meeting – during the project kick-off meeting	F1	31/03/2018
Recruitment of the administrative and financial manager	F2	30/03/2018
Training session for associated beneficiaries during the project launch conference	F2	31/03/2018
1st management and financial audit report delivered	F2	31/03/2020
2nd management and financial audit report delivered	F2	31/03/2022
3rd management and financial audit report delivered	F2	31/03/2024
Draft end-of-project term management and financial audit report delivered	F2	31/12/2025
Final management and financial audit report delivered	F2	31/03/2026
Publication of the general strategy and data management plans (Action A5), start of Action F3	F3	15/12/2018
Availability of the document database	F3	15/12/2020
Progress report on the action, implemented agreements and procedures with operators	F3	15/12/2021
Report on data sets published (catalogues – reports)	F3	31/12/2023
Availability of all project data	F3	31/12/2025
Action plan approval for an eco responsive project.	F4	30/11/2018
Carbon footprint evaluation (BEGES) in 2021	F4	30/06/2021
End-of-programme assessment	F4	30/06/2024
Choice of priorities for long-term sustainability of project actions by the steering committee.	F5	31/12/2021
After Life Plan submitted in electronic and paper format	F5	31/12/2025

ACTIVITY REPORTS FORESEEN

Type of report	Deadline
- 1st management and financial audit report - Interim technical report (Phase 1)	31/03/2020
- 2nd management and financial audit report	31/03/2022

- Interim technical report	
- 3rd management and financial audit report - Interim technical report	31/03/2024
- Draft end-of-project term management and financial audit report	31/12/2025
- Final technical report and financial report	31/03/2026

TIMETABLE

List all actions ordered by number and using their numbers or names. Tick as appropriate

Action	2017	2018				2019				2020				2021				2022				2023				2024				2025			
Number/name	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions, elaboration of management plans and/or action plans :																																	
A.1		✓	✓	✓	✓																												
A.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																
A.3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
A.4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
A.5		✓	✓	✓	✓																												
C. Concrete (conservation/implementation) actions :																																	
C.1						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.6		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.7		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.8		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.9		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.10		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
C.11		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
D. Monitoring of the impact of the project actions																																	
D.1				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
D.2										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
D.3										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

D.4					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
D.5										✓	✓	✓	✓	✓	✓	✓	✓										✓	✓	✓	✓	✓	✓		
D.6										✓	✓	✓	✓	✓	✓	✓	✓										✓	✓	✓	✓	✓	✓		
D.7																											✓	✓	✓	✓	✓	✓		
D.8								✓	✓							✓	✓							✓	✓						✓	✓		
E. Public awareness and dissemination of results :																																		
E.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
E.2			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E.3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
E.4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
E.5			✓				✓	✓						✓	✓								✓	✓						✓	✓			
F. Project management and monitoring of project progress:																																		
F.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
F4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
F5														✓	✓										✓	✓	✓	✓	✓	✓	✓	✓		