

MEDGuard project



Deliverable

D1.4. Feasibility Report, evaluating and analyzing the economic sustainability of the diversification activities.

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Abstract

This document is the Deliverable "Feasibility Report, evaluating and analyzing the economic sustainability of the diversification activities" of the MEDGuard project co-funded by the DG MARE of the European Commission within the call "Guardians of the Sea, MARE/2014/24". This call co-funds preparatory actions to promote the reassignment of fishing vessels and the professional re-orientation of fishermen for activities and services outside fishing. In the MEDGuard project the reassigned fishing vessel "Ciudad de Cartagena" is operated in the coast of Cartagena with the aim to identify the requirements needed to guarantee the sustainability of the reorientation of the medium size fishing fleet. This document gathers the results obtained in the economical viability study for the launch of other activities than fishing to be carried out by fishermen on board of reassigned vessels. Estimations of the incomes and costs have been made for each of the activities taking into account the investments needed for each of the. With these data the profit a loss accounts have been developed in order to study the Financial stages.

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Bibliography

- Call MARE2014/24. Guardian of the Sea. Ref. Ares(2014)3588218 - 29/10/2014
- Grant Application Form “Guardians of the Sea”, MEDGuard project.

List of Abbreviations

CTN	Centro Tecnológico Naval y del Mar
HESPÉRIDES	CIFP Hespérides
IVEAEMPA	Identidades, valores y estrategias alternativas para los empresarios marítimos y pesqueros

1 Introduction.

The MEDGUARD Project is funded by DGMare of the European Commission within the call “Guardians of the Sea, MARE/2014/24”. This call funds preparatory actions to promote the reassignment of fishing vessels and the professional re-orientation of fishermen for activities and services outside fishing which should contribute to the sustainable management and use of marine and maritime resources.

In the MEDGuard project the reassigned fishing vessel “Ciudad de Cartagena” is operated in Cartagena coast to examine and demonstrate the feasibility and economic viability of substitute activities to fishing with the main aim of identifying the requirements needed to guarantee the sustainability of the reorientation of the medium size fishing fleet. The Project has the following specific objectives:

- ✓ To perform a series of tests in Western Mediterranean Cost using the reassigned fishing vessel “Ciudad de Cartagena”.
- ✓ To analyze the technical viability of using the acoustic systems and devices of fishing vessels for collecting lost fishing gears.
- ✓ To analyze the economic conditions and operational costs of vessels to perform maritime activities outside fishing and identify ways for future funding.
- ✓ To identify the relevant training needs of fishermen and vessel owners to perform the substitute activities.
- ✓ To provide useful data and information about costs and ways of funding to the promoters of the diversification activities, fishermen and the authorities with competences in the management of programmes related to the CFP Reform.

To achieve its objectives, the project has 5 work packages which relationships are shown in Figure 1.

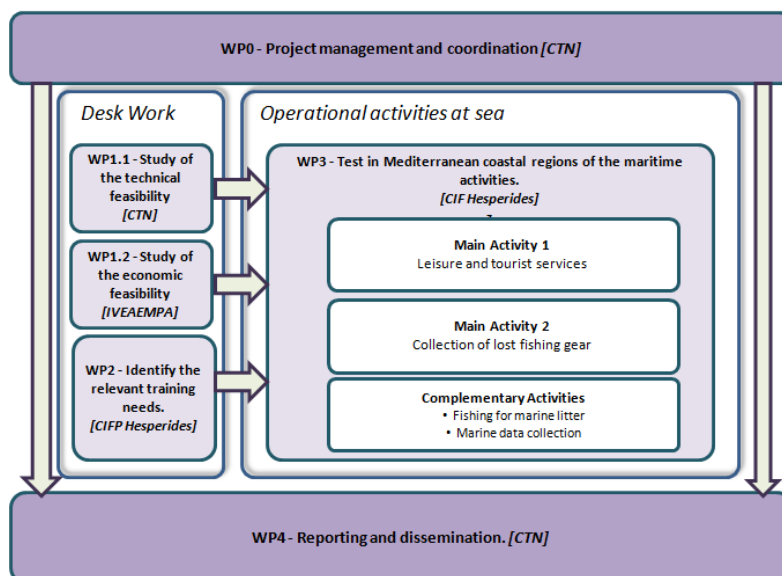


Figure 1. Work Plan Structure.

This document is the deliverable "D1.4. Feasibility study, evaluation and analysis of the economic sustainability of diversification activities". It describes the results of the economic feasibility study of the implementation of activities other than fishing carried out by fishermen

aboard reassigned vessels. Provisions were made for revenue and expenditure for each of the activities and for the investments needed to adapt the vessel to each of the conversion activities; the profit and loss accounts are then prepared to finally study the different financial scenarios. In this way it has been possible to achieve one of the critical objectives of the project: to know the economic feasibility of the proposed activities other than fishing.

The project is developed by three entities (CTN - coordinator, CIFP Hespérides and IVEAEMPA) and has a duration of 12 months starting in August 2015.

More information about the Project in <http://medguard-project.eu/es/> and in medguardproject@ctnaval.com.

2 Document objectives.

The purpose of this document is to analyse the economic feasibility of the reorientation activities to be carried out with fishing vessels reassigned to carry out other activities than fishing. These activities are those identified by the entrepreneurial team and described in the deliverables "D1.1. Technical feasibility study "and" D1.2. Canvas Diagram". These activities are: tourism, sport diving and recreational fishing, marine litter collection, lost fishing gear collection and monitoring of environmental parameters. The analysis of the technical and normative requirements that the vessels and their crew must fulfil that was carried out in "D1.1. Technical feasibility study" has made possible to know the amount of the investments required. The execution of the pilot campaigns whose results are described in the deliverable "D3.1 Results and main conclusions of the carried out campaigns" has provided valuable information about the operational costs of the activities, which together with the general expenses and revenues constitute the crucial parameters for the feasibility analysis. The conclusions of the feasibility study form part of the business plan for each activity described in "D1.3. Global Business Plan for Activities other than Fishing".

3 Methodology.

The economic-financial analysis makes possible the evaluation of the economic potential of activities other than fishing and to present financially viable alternatives to them. The preparation of the analysis is based on the assumptions contained in the different sections of the business plan of the Deliverable "D.1.3. Business plan for Activities other than Fishing" such as market data, business strategies, etc. As a central part of the financial plan, it is necessary to prepare the following financial statements:

- Estimate the forecast of incomes, expenses and investments required during the first 5 years, with monthly forecasts during the first year.
- Derive the Exploitation Expenditure Accounts for the company.
- Calculate the amount that determines the profitability threshold of the activity.
- Set the Balances associated to the expected Exploitation Accounts.
- Estimate the cash flow and the liquid assets.
- Determine the internal rate of return of the expected investment and the periods of recovery of the investment, as well as the financial ratios most appropriated for the financial plan.
- Determine the different scenarios to make the activities economically viable.

The analysis of these data will allow to obtain conclusions about the feasibility of the reorientation activities as well as to identify the sources of financing necessary for their sustainability.

The feasibility study has been prepared for each of the alternative activity described in the business plan D3.1. First, the feasibility is analysed for each of the three activity type separately and then the feasibility of the vessel is calculated as a multiplatform vessel capable of carrying out all the activities.

- 1st Activity type: Leisure and tourism activities
 - 1.a-Scuba diving
 - 1.b-Recreational fishing
- 2nd Activity type: Marine litter collection activity and Lost fishing gear
 - 2.a-Marine litter collection activity.
 - 2.b-Lost fishing gear collection activity
- 3rd Activity type: Monitoring of environmental parameters and support services for research

The study divides the costs into two types: i) operation and ii) investment for the works necessary to reassign the vessel. At the same time, each of these has been broken down into different items for study.

The following table summarizes the different costs considered:

Inversión
Safety and Rescue.
Fitting.
Specific costs.
Launch.
Operación
Personnel costs.
Direct costs.
Indirect costs.

Table 1. Summary of cost types and investments evaluated.

Investment.

For the same activity, the investments needed to adapt the vessel can vary widely depending on several parameters, the most outstanding being:

- Vessel size. The greater the size of the vessel, the greater the cost of the works needed to reassign the vessel to other activities rather than fishing and the operation costs, being its parameter more characteristic the length.
- Passengers. The number of passengers will have a direct influence on the investments for the readjustment of the vessel and the acquisition of the necessary equipment to carry out the activities. The maximum capacity of passengers to be carried will depend on the size of the vessel and its capacity to accommodate them adequately, with the final passenger number determined by the competent authorities. In addition, from a regulatory point of view, the transport of more than 12 passengers will entail a change in the category of the vessel, and will be considered as a passenger vessel, where the applicable legislation is much more restrictive.
- State of the vessel. The previous state of the vessel to the change of activity can be very variable since it depends mainly on the age of the vessel and the maintenance plan to follow during its useful life. Due to the impossibility to evaluate this situation, economic estimates have been made based on the premise that the vessel is in an operational condition, with all its main equipment in good condition.

Investment - Elements of security and rescue.

This item considers the investments necessary for the acquisition of all rescue and firefighting equipment necessary to comply with the regulations in force. It also includes those readjustments necessary to ensure the safety of the crew and passengers on board during the course of the activity.

Investment - Habitability.

This category includes all the necessary readjustments to accommodate the passengers in the appropriate comfort conditions to carry out the activity. For those activities that embark passengers or personnel external to the crew, it will be necessary to readjust some areas of the vessel to adapt them to the required comfort. The areas considered for this readjustment are: bathrooms, kitchen and accommodation area.

Investment - Specific equipment for each activity

This category includes the acquisition of all the specific inventoried material necessary for carrying out each specific activity. Under this heading, the owner of the reassigned fishing vessel is deemed to be the promoter of the conversion activity. This implies that the vessel is considered as a social capital which allows not to include the value of the vessel in the initial investment needs, resembling the study to reality, since the vesselowner already owns the vessel before launching the readjustment activity. The amortization period that has been assigned to the vessel is 5 years, thus after the end of the useful life of the vessel is considered the possibility of the promoter of the activity to acquire another vessel to give continuity to the business. The value of the vessel "Ciudad de Cartagena" that has been considered in this study is 300,000 Euros. When the crew of the vessel and / or a group of fishermen who do not own the vessel are the ones who wish to promote the conversion activity, it will be necessary to consider an equivalent initial investment (300,000 Euros) for the acquisition of the vessel.

Investment – Launch

This category includes the other investments required for the launch of the activities to be carried out by the reassigned vessel such as inspections and project preparation.

The following table summarizes the investments required to adapt the vessel to each activity.

	Act 1	Act 2	Act 3	Act 4
Inversion				
Specific activities				
ALFA flag	✓			
Signaling Buoy	✓			
Basic fishing equipment consisting on the reed set + reel + line + accessories	✓			
Various equipment (lures, lines, tools for assembly, ...)	✓			
Scale of Aluminum or Stainless steel.	✓			
Rod holder 40 mm	✓			
Auxiliary Pneumatic - Mercury 470 HD XS HeavyDuty + Mercury F 25 ML EFI	✓			
Diving cylinders - 15 l	✓			
Waste Tanks - Model Big Box High Series CTR Grids - With Lid		✓	✓	
Accessories (steel cables, hooks, ...) for the lifting of the waste with the own means existing in the vessel		✓	✓	
Device (cup and / or salapre type) for the collection of floating litter found. Useful for waste litter		✓		
Useful for the lost fishing gear collection			✓	
Stainless steel structure for stowage of air bottles				

	Act 1	Act 2	Act 3	Act 4
Habilitation				
Accommodation - Readjustment of the accommodation areas of the vessel to adapt them to the comfort requirements for passengers.	✓			✓
Readjustment of the kitchen area to adapt it to the activity.	✓			✓
Sanitation and readjustment of the vessel's toilets.	✓			✓
Other Costs				
Initial inspections	✓			✓
Project prepared and signed by a qualified technician, in which, in the opinion of the Maritime Administration, it is demonstrated that the vessel complies with what is established in Order FOM / 1144/2003	✓			✓
Safety and Rescue				
Lifebuoy approved by SOLAS	✓			✓
CI buckets	✓			✓
Liferaft - SOLAS TYPE B for the 100% of the crew	✓			✓
Rescue Ferry First Aid Kit	✓			✓
Life jackets 150 N	✓			✓
Type 21B approved marine extinguisher	✓			✓
Type 55B approved marine extinguisher	✓			✓
Pyrotechnic Kit Zone 3 and 4	✓			✓
SOLAS approved lifebuoy light	✓			✓
Diverse nautical equipment for the operation of the vessel (cables, hooks, ...)	✓			✓
Reel for lifebuoy	✓			✓
Compulsory nautical material by regulation (compass, binoculars, charts and nautical books, ...)	✓			✓
Safety rails to avoid falling passengers and delimiting areas with risk	✓			✓
Protections of areas with fall through access barriers	✓			✓
Signage for hazardous areas and / or risk	✓			✓

Act 1 – Sports activities.

Act 3 - Lost fishing gear collection

Act 2 - Waste collection

Act 4 - Monitoring environmental parameters

Table 2. Necessary inversions for each activity.

Operational Costs - Direct Costs.

This category includes all direct costs associated with the operation of the vessel as fuel and purchases derived from the activity, among others.

Operational Costs - Indirect Costs.

These costs are associated with the vessel and do not derive specifically from its activity (i.e. as mooring, annual inspections, insurance, etc).

Operating costs - Personnel costs.

These are the costs related to the hiring of the crew.

The minimum crew to carry out the activity is determined by the General Directorate of the Merchant Marine, considering the type and characteristics of the vessel, its tonnage, its displacement, the power of its propulsion device and the degree of automation of its machinery. For the activities presented here the following crew has been considered: 1 Skipper; 1 Mechanic and 2 Sailors.

4 Feasibility study.

4.1 Leisure and tourism activities.

The activity of leisure and tourism that is proposed consists on making trips in which the tourists can practice Scuba diving and Recreational fishing. These two activities are representative of the full range of possibilities within leisure and tourism, and easily compatible among them so that they can be carried out by the same vessel.

The objective of Scuba Diving is to bring the public to areas of special interest for the practice of Scuba diving and / or snorkeling, for them to enjoy the experience of observing the underwater environment. This activity has two aspects: a leisure and a pedagogical one in order to make the user aware of the current state of marine biodiversity and the importance of its protection. Departures on board of the vessel of a day of duration to carry out up to 4 dives in reefs, sunken wrecks, marine reserves, etc. The service includes the necessary equipment to carry out the activity: breathing equipment, bottles, wetsuits, weights, etc. A pneumatic boat is available to facilitate access to the divers area. Typical food of the area will be offered on board.

The activity of Recreational fishing for recreational purposes is intended to foster the fishing culture, promoting responsible fishing, disseminating selective practices and encouraging tourism development. For legislative reasons, in recreational activities, recreational fishing can only be carried out with non-professional gears. Group departures are offered on board the vessel for a long day for the practice of bottom fishing with cane, where fishermen will make available to the clients their extensive experience. The service also includes the possibility of cooking on board the catches and / or ranch sailor. While the voyage activities are carried out on board in order to foster the valorization and diffusion of the customs, traditions, heritage and marine culture of the fishermen as well as tastings of the products of the local marine environment.

4.1.1 Provision of incomes.

Sales of the activity in the case of Scuba diving have been calculated from the number of Customers per day (12), and the price per person per dive (50 €) with up to (4) daily dives. For the recreational fishing activity, the price is (€ 100) per person for a group of (12) tourists.

In order to maximize the activity of Leisure and Tourism whose price of sale to the public is higher, in the months in which it is possible to offer Scuba diving services, this service is prioritized becoming Recreational fishing a secondary activity.

The feasibility study is carried out under the assumption that the annual turnover corresponds to the sale of 5,712 Scuba Diving tickets and 1,296 recreational fishing with the month-to-month distribution indicated in Table 3.

The forecast of income of the following 5 years is indicated in table 4 in which a 5% increase in the price has been considered.

<u>Basic variables</u>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	Nov	dec
1.a-Scuba diving												
Scuba diving day	0	0	0	8	8	25	25	25	20	8	0	0
Number of daily dives	4	4	4	4	4	4	4	4	4	4	4	4
Number of divers	12	12	12	12	12	12	12	12	12	12	12	12
Diving price	50	50	50	50	50	50	50	50	50	50	50	50
Income	0	0	0	19.200	19.200	60.000	60.000	60.000	48.000	19.200	0	0
1.b-Recreational fishing												
Days of fishing	3	5	15	15	15	5	5	5	5	15	15	5
Number of fishermen	12	12	12	12	12	12	12	12	12	12	12	12
Price per fishing day	100	100	100	100	100	100	100	100	100	100	100	100
Income	3.600	6.000	18.000	18.000	18.000	6.000	6.000	6.000	6.000	18.000	18.000	6.000

Table 3. Income from activity at an occupancy of 100%.

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
1.a-Scuba diving					
Scuba diving day	119	119	119	119	119
Number of daily dives	4	4	4	4	4
Number of divers	144	144	144	144	144
Diving price	50	53	55	58	61
Income	285.600	299.880	314.874	330.618	347.149
1.b-Recreational fishing					
Days of fishing	108	108	108	108	108
Number of fishermen	144	144	144	144	144
Price per fishing day	100	105	110	116	122
Income	129.600	136.080	142.884	150.028	157.530

Table 4. Projection of annual income.

The forecast for total sales growth for YEAR 2021 is 21.55%.

4.1.2 Forecast of expenses.

The item includes the total expenses necessary to be able to offer the services of Tourism and Leisure. However, not all expenses cause costs, just those that are part of the ordinary activity of the company, linked to the productive activity and are necessary for the development of it. Depending on the relation with its cost cause, we can consider two categories of costs: direct and non-direct.

4.1.2.1 Direct costs:

These costs are associated with the service in a clear way, without any kind of sharing. They occur when the company establishes control mechanisms to know exactly the amount of cost that goes to the product, service or section. These expenses are:

4.1.2.1.1 Personnel costs.

The considered embarked personnel is fixed by the legal minimum crew that in this case is formed by four people:

- Skipper
- Mechanic / Engineer
- Sailor 1
- Sailor 2

Personnel costs includes salaries, social security and holidays according to the Special regime for the Sea.

4.1.2.1.2 Fuel.

According to the data obtained during the campaigns (see "D3.1 Results and main conclusions of the carried out campaigns") fuel consumption can be estimated at 80 liters / hour based on a unit cost of 0.63 € per liter. Scuba diving activity is estimated at 6 hours sailing and 3 hours for bottom fishing activity.

This parameter is highly dependent on the factors of variation of the price of hydrocarbons in function of the activity to which the vessel is dedicated, stipulated in Law 38/1992, of December 28, of Special Taxes.

4.1.2.1.3 Subcontracting.

In this category, the costs of specific support personnel to carry out the activity to be contracted under the Sea regime to specialized companies are considered.

4.1.2.1.4 Purchases.

This category includes the acquisition of all the specific material necessary for the realization of the concrete activity such as provisions, teaching material, bottles filled with scuba diving, bait for fishing, etc.

The summary of estimated direct costs is shown in the following tables.

<u>Basic variables</u>	Jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
1.a-Scuba diving												
Skipper	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26
Mechanic-engineer	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81
Sailor 1	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Sailor 2	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Personnel costs	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navigation hours	0	0	0	48	48	150	150	150	120	48	0	0
Fuel costs	0	0	0	-2.410	-2.410	-7.530	-7.530	-7.530	-6.024	-2.410	0	0
Specific personnel for support	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Subcontracting	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Purchase costs	0	0	0	-540	-540	-1.645	-1.645	-1.645	-1.320	-540	0	0
Direct costs	-12.372	-12.372	-12.372	-15.322	-15.322	-21.547	-21.547	-21.547	-19.716	-15.322	-12.372	-12.372
1.b-Recreational fishing												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navigation hours	9	15	45	45	45	15	15	15	15	45	45	15
Fuel costs	-452	-753	-2.259	-2.259	-2.259	-753	-753	-753	-753	-2.259	-2.259	-753
Purchase costs	-230	-370	-1.070	-1.070	-1.070	-370	-370	-370	-370	-1.070	-1.070	-370
Direct costs	-682	-1.123	-3.329	-3.329	-3.329	-1.123	-1.123	-1.123	-1.123	-3.329	-3.329	-1.123

Table 5. Monthly direct costs of the activity.

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
1.a-Scuba diving					
Skipper	-44.367	-45.698	-47.069	-48.481	-49.936
Mechanic-engineer	-35.494	-36.559	-37.655	-38.785	-39.948
Sailor 1	-25.303	-26.062	-26.844	-27.649	-28.479
Sailor 2	-25.303	-26.062	-26.844	-27.649	-28.479
Personnel costs	-130.467	-134.381	-138.412	-142.565	-146.841
Fuel cost	-50	-52	-53	-55	-57
Navigation hours	714	714	714	714	714
Fuel costs	-35.843	-36.918	-38.026	-39.166	-40.341
Specific personnel for support	-18.000	-18.540	-19.096	-19.669	-20.259
Subcontracting	-18.000	-18.540	-19.096	-19.669	-20.259
Purchase costs	-7.875	-8.111	-8.355	-8.605	-8.863
Direct costs	-192.185	-197.950	-203.889	-210.005	-216.305
1.b-Recreational fishing					
Fuel cost	-50	-52	-53	-55	-57
Navigation hours	324	324	324	324	324
Fuel costs	-16.265	-16.753	-17.255	-17.773	-18.306
Purchase costs	-7.800	-8.034	-8.275	-8.523	-8.779
Direct costs	-24.065	-24.787	-25.530	-26.296	-27.085

Table 6. Annual direct costs of the activity

As shown in Table 6, annual direct costs of the activity, in the case of the leisure and tourism activity, if the fuel price is 50.2 € per hour, and it is scheduled a 6-hour Navigation for Scuba diving and 3 hours of navigation for fishing, each of the 227 days provided in 2017, the expense will amount to a total of 52,108 €. This result together with the supplies, which are considered to be consumed by the customers, subcontracting and personnel costs, allows us to estimate total direct costs of € 216,250 for the service.

Taking into account a price increase (CPI) of 5%, we obtain the direct cost forecasts for each service - Scuba diving and Recreational fishing - between the years 2017 to 2021, as shown in Table 6 of the activity.

4.1.2.2 Indirect costs:

4.1.2.2.1 Berths.

This budget category includes the cost of renting the vessel mooring, as well as light and water supplies. The cost of this item may vary depending on the base port of the vessel.

4.1.2.2.2 Maintainance.

It has been considered a monthly cost of 800 € / month. This would include minor repairs and maintenance (painting, cleaning ...).

4.1.2.2.3 Inspections.

This category includes the periodic inspections required by the regulations.

4.1.2.2.4 Telecommunications.

This budget category covers the expenses associated to the telecommunication needs of the company.

4.1.2.2.5 Tax, labor and accounting consultancy.

These expenses are associated to the hiring of a tax advisor. It is estimated at 100 euros per month the first year, and an increase of 5% per year.

4.1.2.2.6 Advertising and marketing costs.

This budget category includes the expenditure derived from advertising or marketing to attract the attention of future Customers. Marketing costs are those incurred in the processes from the design of the service until it reaches the consumer. Thus, the cost resulted of the design and production of corporate image, fairs and exhibitions and vessel exhibitions, have been included as marketing costs.

4.1.2.2.7 Insurance.

This expense includes the contracting of an insurance policy, both for the vessel and for public liability.

FORECAST Indirect costs	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Berths (includes supplies)	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619
Maintainance	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800
Inspections	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61
Telecommunications	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Financial costs												
Advertising costs and marketing	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Tax, labor and accounting consultancy.	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Insurances	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180
Total indirect costs	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776

Table 7. Monthly indirect costs of the activity.

The projection of these indirect costs over the next 5 years is shown in the following table, which has been considered an increase of 5% per year.

FORECAST Indirect costs	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Berths (includes supplies)	-7.428	-7.651	-7.880	-8.117	-8.360
Maintainance	-9.600	-9.888	-10.185	-10.490	-10.805
Inspections	-729	-751	-773	-797	-820
Telecommunications	-600	-618	-637	-656	-675
Financial costs	0	0	0	0	0
Advertising costs and marketing	-200	-206	-212	-219	-225
Tax, labor and accounting consultancy	-600	-618	-637	-656	-675
Insurances	-2.155	-2.220	-2.286	-2.355	-2.425
Total indirect costs	-21.312	-21.951	-22.610	-23.288	-23.987

Table 8. Annual projection of the Indirect costs.

4.1.3 Investments.

The readjustment of the fishing vessels to carry out other activities than fishing needs a series of investments for their readjustment to achieve operational and regulatory requirements.

Within the framework of the project and due to budgetary and time constraints, detailed minimum investments have been made in the deliverable "D3.1 Results and main conclusions of the campaigns" and "D1.1 Technical feasibility study".

In general terms, the investments are amortized over 5 years.

4.1.3.1 Safety and Rescue.

These investments aim to comply with the applicable regulations, in order to guarantee the safety of the personnel on board as well as those of the vessel and the environment. For more information on this point you can consult the deliverable "D1.1. Technical feasibility study".

4.1.3.2 Specific to the activity.

This category includes the acquisition of all the specific inventoried material necessary for carrying out the specific activity. (See detail in D1.1 Technical feasibility report, section 4).

4.1.3.3 Readjustments.

This category estimates all those Readjustments necessary to accommodate the passengers in the appropriate comfort conditions to carry out the activity. For those activities that include passengers or personnel external to the crew, it will be necessary to readjust the area of habitability to adapt it to the required comfort. The areas considered to be readjusted are: bathrooms, kitchen and accommodation area.

4.1.3.4 Launch costs.

The administrative and legal procedures necessary to establish the company are: constitution of the company, records, tax license, activity or works licenses, engineering project, initial inspection, authorizations, These expenses are included in Tables 10 and 11 of profit and loss account. They are amortized over 5 years.

The following table is an estimate of the initial investment cost to be made for the start up of the activity.

Basic variables	YEAR 2017
Inversions	
Lifebuoy	-22
Cl buckets	-19
Life raft	-4.359
Kit	30
Lifevest	-688
Safety elements (guardrails, protections, ...)	-400
Extinguisher	-69
Lifebuoy light	-28
Nautical material	-1.000
Pyrotechnics	-189
Reel	-41
Signage	-50
Safety and Rescue	-6.834
ALFA flag	-8
Diving cilinders	-6.050
Buoy signaling	-15
Recreational fishing equipment	-4.283
Diving cylinders stowage	-1.400
Pneumatics	-5.743
Vessel	-300.000
Means of accessing the vessel	-520
Specific activity	-318.018
Accommodation	-6.300
BYEARs	-1.500
Kitchen	-1.680
Readjustmet works	-9.480

Table 9. Investment required for the launch.

4.1.4 Profit and loss accounts.

It integrates the set of income and expenses concepts of the ordinary operations of the activity. From the analysis of the income statement, it is concluded that the tourism activity generates benefits from the quarter of the month when the use of the productive unit (vessel of Ciudad de Cartagena) is 100% of the capacity of use or saturation. In other words, the sale of 5,712 Scuba Diving tickets and 1,296 fishing tickets would generate a total annual profit of 68,941 Euros in the first year, although due to the seasonality of the tourist activities during the winter months the expenses would exceed the income.

FORECAST Losses and profits	jan	feb	mar	apr	May	jun	jul	aug	sep	oct	nov	dec
COSTS												
Total direct costs	-13.054	-13.495	-15.701	-18.651	-18.651	-22.670	-22.670	-22.670	-20.839	-18.651	-15.701	-13.495
Indirect costs.	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776
Total costs	-14.830	-15.271	-17.477	-20.427	-20.427	-24.446	-24.446	-24.446	-22.615	-20.427	-17.477	-15.271
Total incomes	3.600	6.000	18.000	37.200	37.200	66.000	66.000	66.000	54.000	37.200	18.000	6.000
EBITDA	-11.230	-9.271	523	16.773	16.773	41.554	41.554	41.554	31.385	16.773	523	-9.271
Amortization amount of I. Safety and Rescue	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114
Amortization amount of I. Specifics for each activity	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300	-5.300
Amortization amount of I. Readjustment works	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158
Amortization amount of Launch costs and constitution	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70
Total amortization	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642	-5.642
EBIT (BAII)	-16.872	-14.914	-5.120	11.131	11.131	35.911	35.911	35.911	25.742	11.131	-5.120	-14.914
Costs or income by interests	0	-249	-337	-428	-512	-599	-616	-546	-474	-235	7	121
EBT (BAI)	-16.872	-15.163	-5.457	10.703	10.619	35.313	35.295	35.366	25.268	10.896	-5.112	-14.792
Taxes	5.905	5.307	1.910	-3.746	-3.717	-12.359	-12.353	-12.378	-8.844	-3.814	1.789	5.177
E (BDI)	-10.967	-9.856	-3.547	6.957	6.902	22.953	22.942	22.988	16.424	7.082	-3.323	-9.615

Table 10. Profit and Loss account - monthly.

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-216.249	-222.737	-229.419	-236.301	-243.391
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-237.561	-244.688	-252.029	-259.590	-267.377
Total incomes	415.200	435.960	457.758	480.646	504.678
EBITDA	177.639	191.272	205.729	221.056	237.301
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-63.604	-63.604	-63.604	-63.604	-63.604
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-67.709	-67.709	-67.709	-67.709	-67.709
EBIT (BAII)	109.929	123.563	138.020	153.347	169.591
Costs or income by interests	-3.867	2.554	5.969	10.844	16.130
EBT (BAI)	106.063	126.117	143.989	164.191	185.721
Taxes	-37.122	-44.141	-50.396	-57.467	-65.002
E (BDI)	68.941	81.976	93.593	106.724	120.719

Table 11. Profit and loss accounts – annual.

4.1.5 Balance.

4.1.5.1 Charge to Customers:

The charge will be made when issuing the ticket and always in advance of the start of the activity.

4.1.5.2 Payed to suppliers:

Direct expenses. They will always be paid within one month of delivery.

Indirect or administrative expenses. They will be paid the following month.

4.1.5.3 Taxes.

The amount of annual taxes is always financed by the public tax office, since taxes are paid within six months of being accrued they are accrued on December 31st and are paid in June of the

following year (we have to remember that if there were losses there be on the balance sheet an amount of the Public Tax office with a negative sign).

4.1.5.4 Social capital.

The vessel has been considered as social capital since the owner of the fishing vessel is reassigned the promoter of the restructuring activity. This allows not to include the value of the vessel in the initial investment needs, resembling the study to the reality, since the vesselowner already owns the vessel before starting the activity. The amortization period that has been assigned to the vessel is 5 years, thus after the end of the useful life of the vessel is considered the possibility of the promoter of the activity to acquire another vessel to give continuity to the business.

4.1.5.5 Amortization.

From the accounting point of view, we understand an “amortization” as the accounting representation of the loss of value or depreciation experienced by non-current assets or fixed assets, consisting of property, plant and equipment and intangible or intangible assets.

In the same way, the assets that a company uses continuously in the normal course of its operations (are physically tangible, have a long useful life, its benefits extend to more than one year and are used in the operations it carries out the company continuously).

According to our analysis and for this activity, the fixed assets are identified with the vessel, the elements of safety and rescue, the material destined properly to each service and, in general, all those investments that fulfill the condition of machinery essential for the development are shown in the following table.

	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-63.604	-63.604	-63.604	-63.604	-63.604
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-67.709	-67.709	-67.709	-67.709	-67.709

Table 12. Amortization chart.

4.1.5.6 Subsidies.

For the study carried out, no type of grant associated to the activity was considered. However, if necessary, this amount can currently be subsidized by the European Maritime and Fisheries Fund (FEMP) under the heading of actions to modify the list of alternatives options to scrapping for a fishing vessel.

FORECAST OF BALANCE.	jan	Feb	mar	apr	may	jun	jul	aug	sep	oct	nov	Dec
ACTIVE												
Treasury	4.152	4.152	4.152	4.152	4.152	4.152	4.152	4.152	4.152	4.152	4.152	4.152
Customers (Public 1st line)	3.600	9.600	27.600	61.200	92.400	140.400	169.200	198.000	186.000	157.200	109.200	61.200
Launch costs and constitution	4.145	4.075	4.004	3.934	3.864	3.794	3.723	3.653	3.583	3.513	3.442	3.372
Safety and Rescue	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834
Specific activity	318.018	318.018	318.018	318.018	318.018	318.018	318.018	318.018	318.018	318.018	318.018	318.018
Readjustment	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets	-5.572	-11.144	-16.717	-22.289	-27.861	-33.433	-39.005	-44.578	-50.150	-55.722	-61.294	-66.866
Material												
Financial inversions	0	0	0	0	0	0	0	0	0	2.920	48.501	85.145
TOTAL ACTIVE	340.656	341.014	353.371	381.329	406.886	449.244	472.401	495.559	477.917	446.394	438.332	421.334
PASSIVE												
Suppliers (financial of Direct costs)	13.054	13.495	15.701	18.651	18.651	22.670	22.670	22.670	20.839	18.651	15.701	13.495
Suppliers (financial of Indirect costs)	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776
H.P. Tax Creditor (Corporate Tax)	-5.905	-11.212	-13.122	-9.376	-5.660	6.700	19.053	31.431	40.275	44.089	42.299	37.122
Social capital	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	-10.967	-20.823	-24.370	-17.413	-10.511	12.443	35.384	58.372	74.796	81.879	78.556	68.941
Subsidies	0	0	0	0	0	0	0	0	0	0	0	0
Non-Long-Term Resources	42.699	57.778	73.386	87.691	102.630	105.655	93.518	81.309	40.230	0	0	0
TOTAL PASSIVE	340.656	341.014	353.371	381.329	406.886	449.244	472.401	495.559	477.917	446.394	438.332	421.334
ACTIVE-PASSIVE	0	0	0	0	0	0	0	0	0	0	0	0

Table 13. Balance during the first YEAR of activity.

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
ACTIVE					
Treasury	4.152	4.360	4.578	4.806	5.047
Customers (General public 1st line)	61.200	108.990	114.440	120.161	126.170
Launch costs and constitution	3.372	2.529	1.686	843	0
Safety and Rescue	6.834	6.834	6.834	6.834	6.834
Specific activity	318.018	318.018	318.018	318.018	318.018
Readjustment	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets	-66.866	-133.733	-200.599	-267.465	-334.332
Material					
Financial inversions	85.145	198.971	361.472	537.656	728.020
TOTAL ACTIVE	421.334	515.448	615.908	730.333	859.236
PASSIVE					
Suppliers (financial of Direct costs)	13.495	18.561	19.118	19.692	20.283
Suppliers (financial of Indirect costs)	1.776	1.829	1.884	1.941	1.999
H.P. Tax Creditor (Corporate Tax)	37.122	44.141	50.396	57.467	65.002
Social capital	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	68.941	150.917	244.510	351.234	471.952
Subsidies	0	0	0	0	0
Non-Long-Term Resources	0	0	0	0	0
TOTAL PASSIVE	421.334	515.448	615.908	730.333	859.236
ACTIVE-PASSIVE	0	0	0	0	0

Table 14. Balance projection.

4.1.6 Treasury and cash flow.

4.1.6.1 Financing needs.

Financing needs (or excesses, if negative) for each month are calculated by comparing the total assets to be financed, with the corresponding liabilities.

FORECAST CASH-FLOW	1-1-17	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Benefir and loss after taxes		68.941	81.976	93.593	106.724	120.719
+interests*(1-t)	2.513	-1.660	-3.880	-7.049	-10.484	2.513
+Amortization I. Material	66.866	66.866	66.866	66.866	66.866	66.866
+Amortization of Launch costs	843	843	843	843	843	843
FGO	139.16	148.025	157.422	167.385	177.944	139.163
	3					
-Increase of NOF	-8.807	-35.859	1.199	1.750	1.936	-8.807
-Increase of fixed ACTIVE	0	0	0	0	0	0

FORECAST CASH-FLOW	1-1-17	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
CASH-FLOW FREE (FCL)	130.357	112.166	158.622	169.135	179.880	130.357
-Interests*(1-t)	-2.513	1.660	3.880	7.049	10.484	-2.513
+Foreign resources	-42.699	0	0	0	0	-42.699
Equity Cash-Flow (ECF)	85.145	113.826	162.502	176.183	190.364	85.145
+Proper resources	0	0	0	0	0	0
+Subsidies	0	0	0	0	0	0
Cash Flow net	85.145	113.826	162.502	176.183	190.364	85.145
+Financial inversions	85.145	113.826	162.502	176.183	190.364	85.145

Table 15. Cash Flow - annual.

4.1.7 Ratios

ANALYSIS OF RATIOS

	31-12-17	31-12-18	31-12-19	31-12-20	31-12-21
Ratios of profitability and growth					
Profitability by margin = BAIT / Sales (Income)	26,48%	28,34%	30,15%	31,90%	33,60%
ROI = BAIT / ACTIVEs	26,09%	23,97%	22,41%	21,00%	19,74%
ROE = BDT / RP	18,69%	18,18%	17,19%	16,39%	15,64%
Ratios of operating efficiency					
Ratio of rotation of ACTIVEs = Income / ACTIVE Total	98,54%	84,58%	74,32%	65,81%	58,74%
Ratio of income variation		5,00%	5,00%	5,00%	5,00%
Ratios of financial position					
Ratio of debt = Total debt / PASSIVE total	12,44%	12,52%	11,59%	10,83%	10,16%
Ratio of the debt's quality = Required to CP / Total required	100,00%	100,00%	100,00%	100,00%	100,00%
Ratio of loan repayment capacity = FCL / Required	248,80%	173,82%	222,16%	213,83%	206,09%
Ratios of liquidity					
Ratio of short-term solvency = ACTIVE short / PASSIVE short	124,73%	175,65%	166,69%	157,99%	150,33%
Ratio of Treasury = Treasury / PASSIVE short	170,44%	315,09%	512,69%	685,80%	839,87%

Table 16. Ratios - annual.

4.1.8 Financial stages:

4.1.8.1 Threshold of return.

Break Even is the point at which there is no loss or net gain, or what is the same, the level of sales where costs and sales revenues are equal. The break-even point represents the profitability threshold of the business

Break Even → Revenue = Expenditure; Profit / Loss = 0;

The Break Even point is reached with a sale of 5,313 tickets (4,513 for Scuba diving and 800 for fishing), 79% of the maximum capacity. In this case, a monthly distribution of sales with a reduction of 5% in the number of days worked per year and a service occupation of 79% of the total passenger capacity in the Scuba Diving activity and 62% of the total Total capacity of the passage of fishing activity with a reduction of tourists close to 8% per year. Therefore, the minimum passage to perform the activity without entering losses, for each of the five years analyzed, is shown in the following table:

Basic variables	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
1.a-Scuba diving					
Days of Scuba diving	113	113	113	113	113
Number of divers (% of its capacity)	4.513 (79%)	4.300 (75%)	4.176 (73%)	4.038 (71%)	3.908 (68%)
1.b-Recreational fishing					
Days of fishing	103	103	103	103	103
Number of fishermen	800	780	760	740	720
	62% of capacity	60% of capacity	59% of capacity	57% of capacity	56% of capacity

Table 17. Number of annual passengers at break-even point

The profit and loss table is as follows:

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-211.869	-218.225	-224.772	-231.515	-238.460
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-233.181	-240.176	-247.381	-254.803	-262.447
Total incomes	305.638	307.672	313.984	319.405	325.042
EBITDA	72.457	67.496	66.603	64.602	62.595
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367

Amortization amount of I. Specific activity	-63.604	-63.604	-63.604	-63.604	-63.604
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-67.709	-67.709	-67.709	-67.709	-67.069
EBIT (BAII)	4.747	-213	-1.106	-3.107	-5.115
Costs or income by interests	-4.748	213	1106	3.107	5.115
EBT (BAI)	0	0	0	0	0
Taxes	0	0	0	0	0
E (BDI)	0	0	0	0	0

Table 18. Profit and Loss account in the break-even point

The profitability threshold (minimum revenues) will therefore be as indicated in the table:

	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Threshold of profitability (€)	305.638	307.672	313.984	319.405	325.042

Table 19. Threshold of profitability

4.1.9 Conclusions.

Leisure and tourism activities and in particular recreational scuba diving and fishing are economically viable activities for the reassignment of medium-sized fishing vessels (18-30 meters in length) with these assumptions:

- The maximum number of customers that can be boarded is (12). The price per person per dive is (50 €) with up to (4) daily dives and for the activity of Recreational fishing, the price is (100 €) per person.
- The distribution of days between the two tourist activities is determined by the climatology considering a maximum of 119 days for Scuba diving and 108 days maximum for maximum recreational fishing.
- The profitability threshold corresponds to service levels of 79% of the maximum occupation of the vessel for Scuba diving activities and 62% for recreational fishing, corresponding to an income of 305,638 Euros and the sale of 5,313 tickets (4,513 of Scuba diving and 800 of fishing).
- Regarding financing needs (see "4.1.6 Cash and cash flow"), it is noted that, except for the initial investments in which a financing of around € 40,000 would be required, once the activity is in progress generates a positive cash flow of about € 145,000 per year on average for 100% of the use.

4.2 Marine litter and lost fishing gear collection activity.

This activity is part of the exercise of an activity of public interest, since all the communities in the coastal zone near the Port of Murcia, and especially the tourism and fishing sectors, are interested in keeping the water in the coastal areas clean of litter.

Contributing to a better conservation of the marine environment and the coasts involves removing from the sea all those residues that endanger the safety and health of bathers and water sports enthusiasts, as well as the marine ecosystem.

It is intended to make occasional departures contracted by the Administration for the collection of litter near the coast, in the vicinity of ravines, where after the rains are often large amounts of litter and in the vicinity of urban centers, ports, etc.

In order to be able to calculate the profitability of the project of reorientation of the vessel "Ciudad de Cartagena" for this activity it is necessary to have a comprehensive planning. To this end, an annual plan for each activity has been drawn up in a coordinated manner together with the collection of loss networks taking into account the forecast and needs of each one of them.

4.2.1 Revenue forecast

The feasibility study is carried out under the assumption that month-to-month billing will be indicated in the table below for both activities running at the same time.

It is expected that the activity of lost fishing gear collection is carried out by means of specific warnings by the fishermen in the moment that the loss of a network takes place, for this reason the distribution of days of work is higher for the collection of waste.

Basic variables	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
2. a - Marine litter collection activity.												
Days of campaign	5	15	15	15	15	15	15	15	15	15	15	5
Campaign daily price	977	977	977	977	977	977	977	977	977	977	977	977
Income	4.883	14.649	14.649	14.649	14.649	14.649	14.649	14.649	14.649	14.649	14.649	4.883
2.b - Actividad de Recogida de Lost fishing gear												
Days of campaign	7	5	5	5	5	5	5	5	5	5	5	10
Campaign daily price	977	977	977	977	977	977	977	977	977	977	977	977
Income	6.836	4.883	4.883	4.883	4.883	4.883	4.883	4.883	4.883	4.883	4.883	9.766

Table 20. Income from the activity at maximum exploitation

In the forecast of the following 5 years an increase in the PVP of 5% is considered.

Basic variables	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Waste collection					

Days of campaign	160	160	160	160	160
Campaign daily price	977	1.025	1.077	1.131	1.187
Income	156.256	164.069	172.272	180.886	189.930
Lost fishing gear					
Days of campaign	67	67	67	67	67
Campaign daily price	977	1.025	1.077	1.131	1.187
Income	65.432	68.704	72.139	75.746	79.533

Table 21. Projection of annual income

4.2.2 Cost forecast

The cost item includes the total expenses necessary to be able to offer the services of waste and lost fishing gear collection.

However, not all expenses produce a cost, but only those that are part of the ordinary activity and own the company, are linked to the productive activity and are necessary for the development of it.

We can find two types of costs: direct and non-direct.

4.2.2.1 Direct costs:

These costs are associated with the service in a clear way, without any kind of sharing. They occur when the company establishes control mechanisms to know exactly the amount of cost that goes to the product, service or section. Within these, and for our case study are:

4.2.2.1.1 Personnel costs.

The considered embarked personnel is fixed by the legal minimum crew that mark the administration, in this case is formed by four people:

- Skipper
- Mechanic / engineer
- Sailor 1
- Sailor 2

The cost of personnel consists of salaries, social security and holiday pay, according to the Special Regime of the Sea in the Spanish State.

4.2.2.1.2 Fuel.

According to the data obtained during the campaigns (see D3.1 Results and main conclusions of the campaigns carried out.) Fuel consumption can be estimated at 80 liters / hour based on a unit cost of 0.63 € per liter. For the Scuba diving activity, 6 hours of navigation and 3 hours of fishing are estimated.

This parameter is highly dependent on the factors of reduction on the price of hydrocarbons in function of the activity to which the vessel is dedicated, stipulated in Law 38/1992, of December 28, of Special Taxes.

4.2.2.1.3 Subcontracting.

In this category, the costs of specific support personnel to carry out the activity to be contracted under the Sea regime to specialized companies are considered.

The summary of the estimated direct costs is shown in the following tables.

<u>Basic variables</u>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
2. a -Marine litter collection activity.												
Skipper	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26
Mechanic-engineer	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81
Sailor 1	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Sailor 2	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Personnel costs	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	25	75	75	75	75	75	75	75	75	75	75	25
Fuel costs	-1.255	-3.765	-3.765	-3.765	-3.765	-3.765	-3.765	-3.765	-3.765	-3.765	-3.765	-1.255
Specific personnel for support	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Subcontracting	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
<u>Direct costs</u>	-13.627	-16.137	-16.137	-16.137	-16.137	-16.137	-16.137	-16.137	-16.137	-16.137	-16.137	-13.627
2.b-Lost fishing gear collection activity												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	35	25	25	25	25	25	25	25	25	25	25	50
Fuel costs	-1.757	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-2.510
<u>Direct costs</u>	-1.757	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-1.255	-2.510

Table 22. Monthly direct costs of the activity.

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
2. a-Marine litter collection activity.					
Skipper	-44.367	-45.698	-47.069	-48.481	-49.936
Mechanic-engineer	-35.494	-36.559	-37.655	-38.785	-39.948
Sailor 1	-25.303	-26.062	-26.844	-27.649	-28.479
Sailor 2	-25.303	-26.062	-26.844	-27.649	-28.479
Personnel costs	-130.467	-134.381	-138.412	-142.565	-146.841
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	800	800	800	800	800
Fuel costs	-40.160	-41.365	-42.606	-43.884	-45.200
Specific personnel for support	-18.000	-18.540	-19.096	-19.669	-20.259
Subcontracting	-18.000	-18.540	-19.096	-19.669	-20.259
<u>Direct costs</u>	-188.627	-194.286	-200.114	-206.118	-212.301
2.b-Lost fishing gear collection activity					
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	335	335	335	335	335
Fuel costs	-16.817	-17.322	-17.841	-18.376	-18.928
<u>Direct costs</u>	-16.817	-17.322	-17.841	-18.376	-18.928

Table 23. Annual direct costs of the activity

The estimate of expenditure for subsequent years has been set at an annual increase of 5%.

4.2.2.2 Indirect costs:

4.2.2.2.1 Berths.

This budget line includes the cost of renting the vessel mooring, as well as light and water supplies.

The cost of this item may vary depending on the base port of the vessel.

4.2.2.2.2 Maintainance.

It has been considered a monthly item of 800 € / month. This would include small repairs and maintenance (painting, cleaning, ...).

4.2.2.2.3 Inspections.

This item is intended for periodic inspections required by regulations.

4.2.2.2.4 Telecommunications.

This budget item is intended to cover the expenses associated with the telecommunication needs of the company.

4.2.2.2.5 Tax, labor and accounting consultancy.

These expenses are associated with the contracting of a tax advice for the tax advice of the company. It is estimated at 100 euros per month in the first year, increasing by 5% per year.

4.2.2.2.6 Advertising costs and marketing

This budget line is allocated to cover advertising and marketing costs for the promotion of activities and customer recruitment.

4.2.2.2.7 Insurances

This expense is intended for the contracting of an insurance policy, both of the vessel and of public liability.

FORECAST Indirect costs	jan	Feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Berths (includes supplies)	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619
Maintainance	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800
Inspections	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61
Telecommunications	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Financial costs												
Advertising costs and marketing	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Tax, labor and accounting consultancy	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Insurances	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180
Total indirect costs	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776

Table 24. Monthly indirect costs of the activity.

In the projection of indirect costs over the next 5 years, an annual increase of 5% has been considered.

FORECAST Indirect costs	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Berths (includes supplies)	-7.428	-7.651	-7.880	-8.117	-8.360
Maintainance	-9.600	-9.888	-10.185	-10.490	-10.805
Inspections	-729	-751	-773	-797	-820
Telecommunications	-600	-618	-637	-656	-675
Financial costs	0	0	0	0	0
Advertising costs and marketing	-200	-206	-212	-219	-225
Tax, labor and accounting consultancy	-600	-618	-637	-656	-675
Insurances	-2.155	-2.220	-2.286	-2.355	-2.425
Total indirect costs	-21.312	-21.951	-22.610	-23.288	-23.987

Table 25. Annual projection of the Indirect costs.

4.2.3 Inversions

The readjustment of the fishing vessels for the accomplishment of activities other than fishing needs a series of investments for their readjustment both at the operational level and for compliance with the regulations.

Within the framework of the project and due to budgetary and temporary restrictions, the detailed minimum investments have been made in the deliverable "D3.1 Results and main conclusions of the campaigns" and "D1.1 Technical feasibility study".

For this study, we have considered the necessary investments to guarantee the safety and comfort of the crew, always complying with criteria of optimization of resources.

4.2.3.1 Specific activity.

This category includes the acquisition of all the specific inventoried material necessary for carrying out a specific activity. (See detail in D1.1 Technical feasibility report, section 4).

4.2.3.2 Launch costs.

The administrative and legal procedures necessary to establish the company are: constitution of the company, records, tax license, activity or works licenses, engineering project, initial inspection, authorizations, These expenses are included in Tables 27 and 28 of profit and loss account. They are amortized over 5 years.

The following is an estimate of the initial investment cost to be made for the launch of the activity.

Basic variables	YEAR 2017
------------------------	------------------

Inversiones	
Waste tanks	-54
Useful for the waste collection	-24
Vessel	-300.000
Useful for the lost fishing gear collection	-2.000
Lifting systems	-3.000
Specific activity	-305.078

Table 26. Investment for commissioning.

4.2.4 Profit and loss accounts.

From the analysis of the results account it is concluded that Marine litter collection activity and Lost fishing gear is not economically viable since it generates losses from the beginning. This is because the operating costs are higher than the revenues that could be reached with a level of utilization of the productive unit (Cartagena's vessel) of practically 100% of the capacity of use or saturation (160 days a year for litter collection and 67 for lost fishing gear) at the market price of the activity which is 977 Euros / day.

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
COSTS												
Total direct costs	-15.384	-17.392	-17.392	-17.392	-17.392	-17.392	-17.392	-17.392	-17.392	-17.392	-17.392	-16.137
Indirect costs.	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776
Total costs	-17.160	-19.168	-19.168	-19.168	-19.168	-19.168	-19.168	-19.168	-19.168	-19.168	-19.168	-17.913
Total incomes	11.719	19.532	19.532	19.532	19.532	19.532	19.532	19.532	19.532	19.532	19.532	14.649
EBITDA	-5.441	364	364	364	364	364	364	364	364	364	364	-3.264
Amortization amount of I. Safety and Rescue	0	0	0	0	0	0	0	0	0	0	0	0
Amortization amount of I. Specific activity	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085	-5.085
Amortization amount of readjustment	0	0	0	0	0	0	0	0	0	0	0	0
Amortization amount of Launch costs and constitution	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20
Total amortization	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105	-5.105
EBIT (BAII)	-10.546	-4.741	-4.741	-4.741	-4.741	-4.741	-4.741	-4.741	-4.741	-4.741	-4.741	-8.369
Costs or income by interests	0	-50	-150	-263	-376	-490	-605	-652	-653	-655	-657	-659
EBT (BAI)	-10.546	-4.791	-4.891	-5.004	-5.117	-5.231	-5.346	-5.393	-5.395	-5.396	-5.398	-9.028
Taxes	0	0	0	0	0	0	0	0	0	0	0	0
E (BDI)	-10.546	-4.791	-4.891	-5.004	-5.117	-5.231	-5.346	-5.393	-5.395	-5.396	-5.398	-9.028

Table 27. Profit and Loss account - monthly.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-205.444	-211.607	-217.955	-224.494	-231.229
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-226.756	-233.558	-240.565	-247.782	-255.216
Total incomes	221.688	232.773	244.411	256.632	269.463
EBITDA	-5.068	-786	3.846	8.850	14.248
Amortization amount of I. Safety and Rescue	0	0	0	0	0
Amortization amount of I. Specific activity	-61.016	-61.016	-61.016	-61.016	-61.016
Amortization amount of I. Readjustment	0	0	0	0	0
Amortization amount of Launch costs and constitution	-243	-243	-243	-243	-243
Total amortization	-61.259	-61.259	-61.259	-61.259	-61.259
EBIT (BAII)	-66.326	-62.044	-57.413	-52.409	-47.011
Costs or income by interests	-5.209	-7.923	-8.717	-9.433	-9.868
EBT (BAI)	-71.535	-69.967	-66.130	-61.842	-56.878
Taxes	0	0	0	0	0
E (BDI)	-71.535	-69.967	-66.130	-61.842	-56.878

Table 28. Profit and Loss account – annual.

4.2.5 Balance

4.2.5.1 Client charges:

To the Administration or the competent body. The payment will be made six months after the invoice date.

4.2.5.2 Payment to suppliers:

Direct costs. They will always be paid the following month.

Indirect costs or administrative. They will be paid in the same way the following month.

4.2.5.3 Taxes

The amount of annual taxes is always financed by the public tax office, since taxes are paid within six months of being accrued they are accrued on December 31st and are paid in June of the following year (we have to remember that if there were losses there be on the balance sheet an amount of the Public Tax office with a negative sign).

4.2.5.4 Social capital.

The vessel has been considered as Social capital since the owner of the fishing vessel is reassigned the promoter of the restructuring activity. This allows not to include the value of the vessel in the initial investment needs, resembling the study to the reality, since the vesselowner already owns the vessel before starting the activity. The amortization period that has been assigned to the vessel is 5 years, thus after the end of the useful life of the vessel is considered the possibility of the promoter of the activity to acquire another vessel to give continuity to the business.

4.2.5.5 Amortization.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
EBITDA	-5.068	-786	3.846	8.850	14.248
Amortization amount of I. Safety and Rescue	0	0	0	0	0
Amortization amount of I. Specific activity	-61.016	-61.016	-61.016	-61.016	-61.016
Amortization amount of I. Readjustment	0	0	0	0	0
Amortization amount of Launch costs and constitution	-243	-243	-243	-243	-243
Total amortization	-61.259	-61.259	-61.259	-61.259	-61.259

Table 29. Amortization chart

4.2.5.6 Subsidies.

It will be necessary to consider the financing of the activity through the European Maritime and Fisheries Fund (EMFF) in its section on actions to modify the list of the alternative fishing vessel to scrapping.

FORECAST Profit and Loss	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
ACTIVE												
Treasury	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217	2.217
Customers (General public 1st line)	0	0	0	0	0	0	0	0	0	0	0	0
Customers (Public Admin.- 2 ^a line)	11.719	31.251	50.783	70.315	89.847	109.379	117.192	117.192	117.192	117.192	117.192	112.309
Customers (Research organizations, competent authorities - 3rd line)	0	0	0	0	0	0	0	0	0	0	0	0
Launch costs and constitution	1.195	1.175	1.154	1.134	1.114	1.094	1.073	1.053	1.033	1.013	992	972
Safety and Rescue	0	0	0	0	0	0	0	0	0	0	0	0
Specific activity	305.078	305.078	305.078	305.078	305.078	305.078	305.078	305.078	305.078	305.078	305.078	305.078
Habilitation	0	0	0	0	0	0	0	0	0	0	0	0
Accumulated amortization in fixed assets	-5.085	-10.169	-15.254	-20.339	-25.423	-30.508	-35.592	-40.677	-45.762	-50.846	-55.931	-61.016
Material												
Financial inversions	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ACTIVE	315.124	329.551	343.978	358.406	372.833	387.260	389.968	384.863	379.758	374.653	369.548	359.560
PASSIVE												
Suppliers (financial of Direct costs)	15.384	17.392	17.392	17.392	17.392	17.392	17.392	17.392	17.392	17.392	17.392	16.137
Suppliers (financial of Indirect costs)	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776
H.P. Tax creditor (corporation tax)	0	0	0	0	0	0	0	0	0	0	0	0
Social capital	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	-10.546	-15.337	-20.228	-25.232	-30.349	-35.580	-40.926	-46.319	-51.713	-57.109	-62.507	-71.535
Subsidies	0	0	0	0	0	0	0	0	0	0	0	0
Non-Long-Term Resources	8.510	25.720	45.038	64.469	84.013	103.672	111.725	112.013	112.303	112.594	112.887	113.182
TOTAL PASSIVE	315.124	329.551	343.978	358.406	372.833	387.260	389.968	384.863	379.758	374.653	369.548	359.560
ACTIVE-PASSIVE	0	0	0	0	0	0	0	0	0	0	0	0

Table 30. Profit and Loss account - monthly.

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
ACTIVE					
Treasury	2.217	2.328	2.444	2.566	2.695
Customers (General public 1st line)	0	0	0	0	0
Customers (Public Admin.- 2ª line)	112.309	116.386	122.206	128.316	134.732
Customers (Research organizations, competent authorities - 3rd line)	0	0	0	0	0
Launch costs and constitution	972	729	486	243	0
Safety and Rescue	0	0	0	0	0
Specific activity	305.078	305.078	305.078	305.078	305.078
Habilitation	0	0	0	0	0
Accumulated amortization in fixed assets Material	-61.016	-122.031	-183.047	-244.062	-305.078
Financial inversions	0	0	0	0	0
TOTAL ACTIVE	359.560	302.490	247.167	192.141	137.426
PASSIVE					
Suppliers (financial of Direct costs)	16.137	17.634	18.163	18.708	19.269
Suppliers (financial of Indirect costs)	1.776	1.829	1.884	1.941	1.999
H.P. Acreedora por Taxes (Impto. Sociedades)	0	0	0	0	0
Social capital	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	-71.535	-141.502	-207.632	-269.473	-326.352
Subsidies	0	0	0	0	0
Non-Long-Term Resources	113.182	124.529	134.752	140.965	142.510
TOTAL PASSIVE	359.560	302.490	247.167	192.141	137.426
ACTIVE-PASSIVE	0	0	0	0	0

Table 31. Profit and Loss account – annual.

4.2.6 Treasury and cash flow.

4.2.6.1 Financial needs.

The financial needs (or excesses, if negative) for each month are calculated by comparing the total assets to be financed, with the corresponding liabilities.

FORECAST CASH-FLOW	1-1-17	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Benefit and loss after taxes		-71.535	-69.967	-66.130	-61.842	-56.878

+interests*(1-t)	3.386	5.150	5.666	6.131	6.414
+Amortization I. Material	61.016	61.016	61.016	61.016	61.016
+Amortization de Launch costs	243	243	243	243	243
FGO	-6.891	-3.559	795	5.548	10.794
-Increase ofNOF	-2.217	-94.396	-2.638	-5.352	-5.925
-Increase ofACTIVE Fijo	-306.293	0	0	0	0
CASH-FLOW FREE (FCL)	-308.510	-101.286	-6.197	-4.557	4.869
-Intereses*(1-t)	0	-3.386	-5.150	-5.666	-6.414
+Foreign resources	8.510	104.672	11.347	10.223	1.544
Equity Cash-Flow (ECF)	-300.000	0	0	0	0
+Proper resources	300.000	0	0	0	0
+Subsidies	0	0	0	0	0
Cash Flow net	0	0	0	0	0
+Financial inversions	0	0	0	0	0

Table 32. Cash Flow - annual.

4.2.7 Ratios.

ANALYSIS OF RATIOS

31-12-17 31-12-18 31-12-19 31-12-20 31-12-21

Ratios of profitability and growth

Profitability by margin = BAIT / Sales (Income)	-29,92%	-26,65%	-23,49%	-20,42%	-17,45%
ROI = BAIT / ACTIVEs	-18,45%	-20,51%	-23,23%	-27,28%	-34,21%
ROE = BDT / RP	-31,31%	-44,14%	-71,59%	-202,58%	215,84%

Ratios of operating efficiency

Ratio of rotation of ACTIVEs = Income / ACTIVE Total	61,66%	76,95%	98,89%	133,56%	196,08%
Ratio of income variation	5,00%	5,00%	5,00%	5,00%	5,00%

Ratios of financial position

Ratio of debt = Total debt/ PASSIVE total	36,46%	47,60%	62,63%	84,11%	119,18%
Ratio of the debt's quality = Required to CP / Total required	13,66%	13,52%	12,95%	12,78%	12,99%
Ratio of loan repayment capacity = FCL / Required	-77,26%	-4,30%	-2,94%	-0,05%	2,97%

Ratios of liquidity

Ratio of short-term solvency = ACTIVE short / PASSIVE short	639,34%	609,94%	621,78%	633,86%	646,17%
Ratio de Treasury = Treasury / PASSIVE short	12,38%	11,96%	12,19%	12,43%	12,67%

Table 33. Ratios - annual.

4.2.8 Financial stages

4.2.8.1 Threshold of profitability.

Break Even is the point at which there is no loss or net gain, or what is the same, the level of sales where costs and sales revenues are equal. The break-even point represents the profitability threshold of the business.

Break Even \square Revenue = Expenditure; Profit / Loss = 0;

The break-even point is achieved by increasing the freight price by 32.03% of the proposed value. Therefore the minimum freight to carry out the activity without entering into losses, for each of the five years analyzed, is the one shown in the following table:

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
2.a-Waste collection					
Days of campaign	160	160	160	160	160
Campaign daily price	1.290	1.324	1.336	1.356	1.381
2.b-Recogida de Lost fishing gear					
Days of campaign	67	67	67	67	67
Campaign daily price	1.290	1.324	1.336	1.356	1.381

Table 34. Number of annual passengers at break-even point

La Table de Profit and Loss queda como sigue:

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-205.444	-211.607	-217.955	-224.494	-231.229
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-226.756	-233.558	-240.565	-247.782	-255.216
Total incomes	292.791	300.572	303.324	307.871	313.518
EBITDA	66.036	67.014	62.759	60.089	58.302
Amortization amount of I. Specific activity	-61.016	-61.016	-61.016	-61.016	-61.016
Amortization amount of Launch costs and constitution	-243	-243	-243	-243	-243
Total amortization	-61.259	-61.259	-61.259	-61.259	-61.259

EBIT (BAII)	4.777	5.755	1.501	-1.170	-2.956
Costs or income by interests	-4.777	-5.755	-1.501	1.170	2.956
EBT (BAI)	0	0	0	0	0
Taxes	0	0	0	0	0
E (BDI)	0	0	0	0	0

Table 35. Profit and Loss account in the break-even point

The Threshold of profitability will be:

	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Threshold of profitability (€)	292.791	300.572	303.324	307.871	313.518

Table 36. Threshold of profitability

4.2.8.2 Public financing of the activity.

Será necesario contar con el apoyo de las Subsidies de la EFMF de la Administración Pública. Estas Subsidies deberían cubrir:

- Las pérdidas de explotación de las actividades (perdidas en la cuenta de resultados),
- Financial needs (cash flow)
- Inversiones necesarias (iniciales para la puesta en marcha y de reposición del Vessel)

4.2.9 Conclusions.

Litter and Lost fishing gear collection activities are economically unviable activities for the reassignment of medium-sized fishing vessels (18-30 meters in length) as the operating costs of these vessels are higher than the market price of freight. The conditions necessary for these activities are:

- Threshold of profitability corresponds to a price per campaign of 1,290 Euros per day higher than the price currently being offered in the market.
- Regarding the financial needs (see "Treasury and cash flow."), It is observed that, in order to cope with the losses generated by this activity with a market price of € 977 (lower than Threshold of Necessary 110,000 of external financing to cover daily operating losses, initial investments and assume an average period of Client charge of 6 months.
- Subsidies necessary for the business to be profitable (see "4.2.8.2. Public financing of the activity"), these should be of sufficient volume to assume the losses generated by the activity at the estimated campaign price of € 977 about € 70,000 per year).

4.3 Monitoring activity of marine environmental parameters and research support services.

Service available to the scientific community and administration for the use of the vessel as a support platform in research activities such as data collection campaigns, and / or zone sampling. In this service the vessel will carry on board scientists and their equipment for the monitoring of environmental parameters, the testing of methods and prototypes and the implementation of equipment and / or devices.

The activity is planned to be carried out during the 12 months of the year distributing the outputs evenly throughout the year, as no seasonality is foreseen, however, the type and objective of the campaign to be carried out will mark the best conditions for its realization.

4.3.1 Revenue forecast.

The type of income is for rent (freight) of the vessel for time with the crew and Fuel expenses included in the price.

The feasibility study is carried out under the assumption that month-to-month billing will be as indicated in Table 31.

Basic variables	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Days of campaign	20	20	20	20	20	20	20	0	20	20	20	20
Campaign daily price	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
Income	30.000	30.000	30.000	30.000	30.000	30.000	30.000	0	30.000	30.000	30.000	30.000

Table 37. Income from the activity at maximum exploitation.

The forecast of the following 5 years is indicated in table 7 in which an increase in PVP of 5% has been considered.

Basic variables	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Days of campaign	220	220	220	220	220
Campaign daily price	1.500	1.575	1.654	1.736	1.823
Income	330.000	346.500	363.825	382.016	401.117

Table 38. Projection of annual income.

4.3.2 Cost forecast.

The cost item includes the total of expenses necessary to be able to offer the services of monitoring of environmental parameters.

However, not all expenses generate costs, but only those that are part of the ordinary activity and own the company, are linked to the productive activity and are necessary for the development of it.

There are two types of costs: direct and non-direct.

4.3.2.1 *Direct costs:*

These costs are associated with the service in a clear way, without any kind of sharing. They occur when the company establishes control mechanisms to know exactly the amount of cost that goes to the product, service or section. Within these, and for our case study are:

4.3.2.1.1 Personnel costs.

The considered embarked personnel is fixed by the legal minimum crew that mark the administration, in this case is formed by four people:

- Skipper
- Mechanic-engineer
- Sailor 1
- Sailor 2

The cost of personnel consists of salaries, social security and holiday pay, according to the Special Regime of the Sea in the Spanish State.

4.3.2.1.2 Fuel.

According to the data obtained during the campaigns (see D3.1 Results and main conclusions of the campaigns carried out.) Fuel consumption can be estimated at 80 liters / hour based on a unit cost of 0.63 € per liter. For the Scuba diving activity, 6 hours of navigation and 3 hours of fishing are estimated.

This parameter is highly dependent on the factors of reduction on the price of hydrocarbons in function of the activity to which the vessel is dedicated, stipulated in Law 38/1992, of December 28, of Special Taxes.

4.3.2.1.3 Subcontracting.

In this category, the costs of specific support personnel to carry out the activity to be contracted under the Sea regime to specialized companies are considered.

The summary of the estimated direct costs is shown in the following tables.

<u>Basic variables</u>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Skipper	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26
Mechanic-engineer	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81
Sailor 1	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Sailor 2	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Personnel costs	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	160	160	160	160	160	160	160	0	160	160	160	160
Fuel costs	-8.032	-8.032	-8.032	-8.032	-8.032	-8.032	-8.032	0	-8.032	-8.032	-8.032	-8.032
Specific personnel for support	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Subcontracting	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Purchase costs												
<u>Direct costs</u>	-20.404	-20.404	-20.404	-20.404	-20.404	-20.404	-20.404	-12.372	-20.404	-20.404	-20.404	-20.404

Table 39. Monthly direct costs of the activity.

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Skipper	-44.367	-45.698	-47.069	-48.481	-49.936
Mechanic-engineer	-35.494	-36.559	-37.655	-38.785	-39.948
Sailor 1	-25.303	-26.062	-26.844	-27.649	-28.479
Sailor 2	-25.303	-26.062	-26.844	-27.649	-28.479
Personnel costs	-130.467	-134.381	-138.412	-142.565	-146.841
Fuel cost	-50	-52	-53	-55	-57
Navigation hours	1.760	1.760	1.760	1.760	1.760
Fuel costs	-88.352	-91.003	-93.733	-96.545	-99.441
Specific personnel for support	-18.000	-18.540	-19.096	-19.669	-20.259
Subcontracting	-18.000	-18.540	-19.096	-19.669	-20.259
Purchase costs					
<u>Direct costs</u>	-236.819	-243.923	-251.241	-258.778	-266.542

Table 40. Annual direct costs of the activity

The estimate of expenditure for subsequent years has been set at an annual increase of 5%.

4.3.2.2 Indirect costs:

4.3.2.2.1 Berths.

This budget line includes the cost of renting the vessel mooring, as well as light and water supplies.

The cost of this item may vary depending on the base port of the vessel.

4.3.2.2.2 Maintainance.

It has been considered a monthly item of 800 € / month. This would include small repairs and maintenance (painting, cleaning,...).

4.3.2.2.3 Inspections.

This item is intended for periodic inspections required by regulations.

4.3.2.2.4 Telecommunications.

This budget item is intended to cover the expenses associated with the telecommunication needs of the company.

4.3.2.2.5 Tax, labor and accounting consultancy.

These expenses are associated with the contracting of a tax advice for the tax advice of the company. It is estimated at 100 euros per month in the first year, increasing by 5% per year.

4.3.2.2.6 Advertising costs and marketing

This budget line is allocated to cover advertising and marketing costs for the promotion of activities and customer recruitment.

4.3.2.2.7 Insurances

This expense is intended for the contracting of an insurance policy, both of the vessel and of public liability.

FORECAST Indirect costs	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Berths (includes supplies)	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619
Maintainance	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800
Inspections	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61
Telecommunications	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Financial costs												
Advertising costs and marketing	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Tax, labor and accounting consultancy	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Insurances	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180
Total indirect costs	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776

Table 41. Monthly indirect costs of the activity.

FORECAST Indirect costs	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Berths (includes supplies)	-7.428	-7.651	-7.880	-8.117	-8.360
Maintainance	-9.600	-9.888	-10.185	-10.490	-10.805
Inspections	-729	-751	-773	-797	-820
Telecommunications	-600	-618	-637	-656	-675
Financial costs	0	0	0	0	0
Advertising costs and marketing	-200	-206	-212	-219	-225
Tax, labor and accounting consultancy	-600	-618	-637	-656	-675
Insurances	-2.155	-2.220	-2.286	-2.355	-2.425
Total indirect costs	-21.312	-21.951	-22.610	-23.288	-23.987

Table 42. Annual projection of the Indirect costs.

The projection of these indirect costs over the next 5 years is shown in the table above, which has been considered an increase of 5% per year.

4.3.3 Inversions.

The readjustment of the fishing vessels for the accomplishment of other activities needs the realization of a series of investments for their readjustment both at the operational level and for compliance with the regulations.

Within the framework of the project and due to budgetary and temporary restrictions, the detailed minimum investments have been made in the deliverable "D3.1 Results and main conclusions of the campaigns" and "D1.1 Technical feasibility study".

For this study, we have considered the necessary investments to guarantee the safety and comfort of the crew, always complying with criteria of optimization of resources.

4.3.3.1 Safety and Rescue.

These investments aim to comply with the applicable regulations, in order to guarantee the safety of the personnel on board as well as those of the vessel and the environment. For more information on this point you can consult the deliverable "D1.1. Technical feasibility study".

4.3.3.2 Specific activity.

This category includes the acquisition of all the specific inventoried material necessary for carrying out the specific activity. (See detail in D1.1 Technical feasibility report, section 4)

4.3.3.3 Habilitation.

This category estimates all those Readjustments necessary to accommodate the passengers in the appropriate comfort conditions to carry out the activity. For those activities that embark passengers or personnel not member of the crew, it will be necessary to readjust some areas to adapt them to the required comfort. Habilitation areas considered for a readjustment are: bathrooms, kitchen and accommodation area.

4.3.3.4 Launch costs.

The administrative and legal procedures necessary to establish the company are: constitution of the company, records, tax license, activity or works licenses, engineering project, initial inspection, authorizations ... These expenses are included in Tables 44 and 45 of profit and loss account. They are amortized over 5 years.

The following is an estimate of the initial investment cost to be made for the launch of the activity.

Basic variables	YEAR 2017
Inversiones	
Lifebuoy	-22
CI buckets	-19
Life raft	-4.359
Kit	30
Lifevest	-688
Safety elements (guardrails, protections, ...)	-400
Extinguisher	-69
Lifebuoy light	-28
Nautical material	-1.000
Pyrotechnics	-189
Reel	-41
Signage	-50
Safety and Rescue	-6.834
Vessel	-300.000
Sistema de elevación	-3.000
Specific activity	
Accommodation	-6.300
BYEARs	-1.500
Kitchen	-1.680
Habilitation	-9.480

Table 43. Investment for commissioning.

4.3.4 Profit and loss accounts.

From the analysis of the results account it is concluded that the activity of monitoring environmental parameters is economically viable since it generates benefits when the level of utilization of the production unit (Ciudad de Cartagena vessel) is 100% of the capacity of use or saturation. That is, the vessel operating for 220 days a year with a freight cost of 1,500 Euros would generate almost zero global annual benefits leaving little room for unforeseen events or breakdowns.

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
COSTS												
Total direct costs	-20.404	-20.404	-20.404	-20.404	-20.404	-20.404	-20.404	-12.372	-20.404	-20.404	-20.404	-20.404
Indirect costs.	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776
Total costs	-22.180	-22.180	-22.180	-22.180	-22.180	-22.180	-22.180	-14.148	-22.180	-22.180	-22.180	-22.180
Total incomes	30.000	30.000	0	30.000	30.000	30.000	30.000	30.000	30.000	0	30.000	30.000
EBITDA	7.820	7.820	7.820	7.820	7.820	7.820	7.820	-14.148	7.820	7.820	7.820	7.820
Amortization amount of I. Safety and Rescue	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114
Amortization amount of I. Specific activity	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050	-5.050
Amortization amount of I. Readjustment	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158
Amortization amount of Launch costs and constitution	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70
Total amortization	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392	-5.392
EBIT (BAII)	2.428	2.428	2.428	2.428	2.428	2.428	2.428	-19.540	2.428	2.428	2.428	2.428
Costs or income by interests	0	-157	-112	-67	-22	10	30	49	69	34	54	73
EBT (BAI)	2.428	2.271	2.316	2.361	2.406	2.438	2.457	-19.491	2.497	2.462	2.481	2.501
Taxes	-850	-795	-811	-826	-842	-853	-860	6.822	-874	-862	-868	-875
E (BDI)	1.578	1.476	1.505	1.535	1.564	1.585	1.597	-12.669	1.623	1.600	1.613	1.626

Table 44. Profit and Loss account - monthly.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-236.819	-243.923	-251.241	-258.778	-266.542
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-258.131	-265.875	-273.851	-282.066	-290.528
Total incomes	330.000	346.500	363.825	382.016	401.117
EBITDA	71.869	80.625	89.974	99.950	110.589
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-60.600	-60.600	-60.600	-60.600	-60.600
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-64.706	-64.706	-64.706	-64.706	-64.706
EBIT (BAII)	7.164	15.920	25.268	35.244	45.883
Costs or income by interests	-37	1.115	3.521	6.118	8.968
EBT (BAI)	7.126	17.035	28.789	41.362	54.851
Taxes	-2.494	-5.962	-10.076	-14.477	-19.198
E (BDI)	4.632	11.073	18.713	26.886	35.653

Table 45. Profit and Loss account – annual.

4.3.5 Balance.

4.3.5.1 Client charge:

Collection of a freight to research centers. The charge will be made within a month from the invoice date.

4.3.5.2 Payment to suppliers:

Direct costs. They will always be paid the following month.

Indirect costs o administrativos. The payment will be made within a month after the work.

4.3.5.3 Taxes

The amount of annual taxes is always financed by the public tax office, since taxes are paid within six months of being accrued they are accrued on December 31st and are paid in June of the following year (we have to remember that if there were losses there be on the balance sheet an amount of the Public Tax office with a negative sign).

4.3.5.4 Social capital.

The vessel has been considered as Social capital since the owner of the fishing vessel is reassigned the promoter of the reassignment activity. This allows not to include the value of the vessel in the initial investment needs, resembling the study to the reality, since the vessel owner already owns the vessel before starting the activity. The amortization period that has been assigned to the vessel is 5 years, thus after the end of the useful life of the vessel is considered the possibility of the promoter of the activity to acquire another vessel to give continuity to the business.

4.3.5.5 Amortization.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-60.600	-60.600	-60.600	-60.600	-60.600
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-64.706	-64.706	-64.706	-64.706	-64.706

Table 46. Amortization chart

4.3.5.6 Subsidies.

For this study, any kind of subsidy associated to the activity has been considered.

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
ACTIVE												
Treasury	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300	3.300
Customers (Research organizations, competent authorities - 3rd line)	30.000	30.000	30.000	30.000	30.000	30.000	30.000	0	30.000	30.000	30.000	30.000
Launch costs and constitution	4.145	4.075	4.004	3.934	3.864	3.794	3.723	3.653	3.583	3.513	3.442	3.372
Safety and Rescue	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834
Specific activity	303.000	303.000	303.000	303.000	303.000	303.000	303.000	303.000	303.000	303.000	303.000	303.000
Habilitation	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets Material	-5.322	-10.644	-15.966	-21.288	-26.609	-31.931	-37.253	-42.575	-47.897	-53.219	-58.541	-63.863
Financial inversions	0	0	0	0	4.094	11.924	19.773	27.642	13.563	21.417	29.290	37.183
TOTAL ACTIVE	351.437	346.044	340.652	335.260	333.962	336.399	338.857	311.334	321.863	324.324	326.805	329.306
PASSIVE												
Suppliers (financial of Direct costs)	0	20.404	20.404	20.404	20.404	20.404	20.404	20.404	12.372	20.404	20.404	20.404
Suppliers (financial of Indirect costs)	0	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776
H.P. Acreedora por Taxes (Impto. Sociedades)	0	850	1.645	2.455	3.281	4.123	4.977	5.837	-985	-111	750	1.619
Social capital	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	0	1.578	3.054	4.559	6.094	7.658	9.243	10.840	-1.829	-206	1.394	3.006
Subsidies	0	0	0	0	0	0	0	0	0	0	0	0
Non-Long-Term Resources	26.829	26.829	19.165	11.457	3.705	0	0	0	0	0	0	0
TOTAL PASSIVE	326.829	351.437	346.044	340.652	335.260	333.962	336.399	338.857	311.334	321.863	324.324	326.805
ACTIVE-PASSIVE	0	0	0	0	0	0	0	0	0	0	0	0

Table 47. Profit and Loss account - monthly.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
ACTIVE					
Treasury	3.300	3.465	3.638	3.820	4.011
Customers (Research organizations, competent authorities - 3rd line)	30.000	28.875	30.319	31.835	33.426
Launch costs and constitution	3.372	2.529	1.686	843	0
Safety and Rescue	6.834	6.834	6.834	6.834	6.834
Specific activity	303.000	303.000	303.000	303.000	303.000
Habilitation	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets Material	-63.863	-127.725	-191.588	-255.451	-319.314
Financial inversions	37.183	117.366	203.946	298.925	402.927
TOTAL ACTIVE	329.306	343.823	367.315	399.286	440.365
PASSIVE					
Suppliers (financial of Direct costs)	20.404	20.327	20.937	21.565	22.212
Suppliers (financial of Indirect costs)	1.776	1.829	1.884	1.941	1.999
H.P. Acreedora por Taxes (Impto Sociedades)	2.494	5.962	10.076	14.477	19.198
Social capital	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	4.632	15.705	34.418	61.303	96.956
Subsidies	0	0	0	0	0
Non-Long-Term Resources	0	0	0	0	0
TOTAL PASSIVE	329.306	343.823	367.315	399.286	440.365
ACTIVE-PASSIVE	0	0	0	0	0

Table 48. Profit and Loss account – annual.

4.3.6 Treasury y cash flow.

4.3.6.1 Financial needs.

The financial needs (or excesses, if negative) for each month are calculated by comparing the total assets to be financed, with the corresponding liabilities.

FORECAST CASH-FLOW	1-1-17	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Benefir and loss after taxes		4.632	11.073	18.713	26.886	35.653

+interests*(1-t)	24	-725	-2.289	-3.977	-5.829
+Amortization I.Material	63.863	63.863	63.863	63.863	63.863
+Amortization de Launch costs	843	843	843	843	843
FGO	69.362	75.053	81.130	87.614	94.530
-Increase ofNOF	-3.300	-5.326	4.404	3.162	3.643
-Increase ofACTIVE Fijo	-323.529	0	0	0	0
CASH-FLOW FREE (FCL)	-326.829	64.036	79.458	84.292	91.002
-Intereses*(1-t)	-24	725	2.289	3.977	5.829
+Foreign resources	26.829	-26.829	0	0	0
Equity Cash-Flow (ECF)	-300.000	37.183	80.183	86.580	104.002
+Proper resources	300.000	0	0	0	0
+Subsidies	0	0	0	0	0
Cash Flow net	0	37.183	80.183	86.580	104.002
+Financial inversions	0	37.183	80.183	86.580	104.002

Table 49. Cash Flow - annual.

4.3.7 Ratios.

ANALYSIS OF RATIOS

31-12-17 31-12-18 31-12-19 31-12-20 31-12-21

Ratios of profitability and growth

Profitability by margin = BAIT / Sales (Income)	2,17%	4,59%	6,95%	9,23%	11,44%
ROI = BAIT / ACTIVEs	2,18%	4,63%	6,88%	8,83%	10,42%
ROE = BDT / RP	1,52%	3,51%	5,60%	7,44%	8,98%

Ratios of operating efficiency

Ratio of rotation of ACTIVEs = Income / ACTIVE Total	100,21%	100,78%	99,05%	95,67%	91,09%
Ratio of income variation	5,00%	5,00%	5,00%	5,00%	5,00%

Ratios of financial position

Ratio of debt = Total debt/ PASSIVE total	7,49%	8,18%	8,96%	9,51%	9,86%
Ratio of the debt's quality = Required to CP / Total required	100,00%	100,00%	100,00%	100,00%	100,00%
Ratio of loan repayment capacity = FCL / Required	259,53%	282,58%	256,23%	239,59%	226,16%

Ratios of liquidity

Ratio of short-term solvency = ACTIVE short / PASSIVE short	134,96%	115,01%	103,22%	93,87%	86,24%
Ratio de Treasury = Treasury / PASSIVE short	164,07%	429,72%	631,01%	797,07%	937,46%

Table 50. Ratios - annual.

4.3.8 Financial stages:

4.3.8.1 Threshold of profitability.

Break Even is the point at which there is no loss or net gain, or what is the same, the level of sales where costs and sales revenues are equal. The break-even point represents the profitability threshold of the business.

Break Even -> Revenue = Expenditure; Profit / Loss = 0;

The break-even point is obtained by reducing the freight price by 2.17% of the proposed value. Therefore, the minimum freight to perform the activity without entering into losses, for each of the five years analyzed, is shown in the following table:

<u>Basic variables</u>	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
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3.- Monitoring environmental parameters

Days of campaign	220	220	220	220	220
Campaign daily price	1.468	1.498	1.525	1.554	1.583

Table 51. Number of annual passengers at break-even point

The profit and loss table is the following:

FORECAST Profit and Loss	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Total direct costs	-236.819	-243.923	-251.241	-258.778	-266.542
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-258.131	-265.875	-273.851	-282.066	-290.528
Total incomes	322.871	329.538	335.499	341.770	348.288
EBITDA	64.740	63.663	61.648	59.704	57.760
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Readjustment	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of I. Specific activity	-60.600	-60.600	-60.600	-60.600	-60.600

Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-64.706	-64.706	-64.706	-64.706	-64.706
EBIT (BAI)	35	-1.043	-3.057	-5.002	-6.946
Costs or income by interests	-35	1.043	3.057	5.002	6.946
EBT (BAI)	0	0	0	0	0
Taxes	0	0	0	0	0
E (BDI)	0	0	0	0	0

Table 52. Profit and Loss account in the break-even point

The Threshold of profitability will be:

	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Threshold of profitability (€)	322.871	329.538	335.499	341.770	348.288

Table 53. Threshold of profitability

4.3.9 Conclusions.

The activity of monitoring environmental parameters and supporting the carrying out of scientific campaigns is economically viable for the conversion of medium-sized fishing vessels (18-30 meters in length). The conditions necessary for these conversion activities to be viable are:

- The Threshold of profitability corresponds to a price per campaign of 1,479 Euros per day, very competitive price in the market according to the surveys made to potential customers during the campaigns.
- Regarding the financial needs (see "Treasury and cash flow."), It is noted that, except for the initial investments in which financing around € 27,000 would be required, once the activity is in progress it generates a Positive flow of Treasury of about € 80,000 per year.

4.4 Vessel operating with all activities

In the latter case, the vessel is assumed to operate as a multipurpose vessel with all the activities described in the previous cases carried out at the same time.

For the distribution of days for each of the activities has taken into account the results obtained in the accounts of previous results of each of the activities, giving priority to those that were more profitable as tourism and fishing.

4.4.1 Revenue forecast.

The feasibility study is carried out under the assumption that month-to-month billing will be as shown in the following table with an annual distribution of the vessel's use among the proposed 106-day Scuba Diving, 45 Recreational Reclamation activities, 31 of waste collection and 15 of Lost fishing gear.

Basic variables	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
1.a-Scuba diving												
Days of Scuba diving	0	0	0	4	8	25	25	25	19	0	0	0
Number of daily dives	4	4	4	4	4	4	4	4	4	4	4	4
Number of divers	12	12	12	12	12	12	12	12	12	12	12	12
PVP diving	50	50	50	50	50	50	50	50	50	50	50	50
Income	0	0	0	9.600	19.200	60.000	60.000	60.000	45.600	0	0	0
1.b-Recreational fishing												
Days of fishing	0	0	5	5	5	5	5	5	5	5	5	0
Number of fishermen	12	12	12	12	12	12	12	12	12	12	12	12
PVP fishing day	100	100	100	100	100	100	100	100	100	100	100	100
Income	0	0	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	0
2.a-Marine litter collection activity.												
Days of campaign	0	0	2	8	8	0	0	0	5	8	0	0
Campaign daily price	977	977	977	977	977	977	977	977	977	977	977	977
Income	0	0	1.953	7.813	7.813	0	0	0	4.883	7.813	0	0
2.b-Lost fishing gear collection activity.												
Days of campaign	1	1	1	1	1	0	0	0	1	2	2	5
Campaign daily price	977	977	977	977	977	977	977	977	977	977	977	977
Income	977	977	977	977	977	0	0	0	977	1.953	1.953	4.883
3ª Business line: Monitoring environmental parameters y servicios de apoyo a la investigación												
Days of campaign	0	5	5	5	5	0	0	0	0	5	5	0
Campaign daily price	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Income	0	5.000	5.000	5.000	5.000	0	0	0	0	5.000	5.000	0

Table 54. Income from the activity at maximum exploitation.

The forecast of the following 5 years is indicated in table 46 in which an increase in the PVP of 5% has been considered.

Basic variables	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
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1ª Business line:

1.a Scuba diving

Days of Scuba diving	106	106	106	106	106
Number of daily dives	4	4	4	4	4
Number of divers	144	144	144	144	144
PVP diving	50	53	55	58	61
Income	254.400	267.120	280.476	294.500	309.225

1.b-Recreational fishing

Days of fishing	45	45	45	45	45
Number of fishermen	144	144	144	144	144
PVP fishing day	100	105	110	116	122
Income	54.000	56700	59535	62512	65637

2ª Business line:

2. a Marine litter collection activity.

Days of campaign	31	31	31	31	31
Campaign daily price	977	1.025	1.077	1.131	1.187
Income	30.275	31.788	33.378	35.047	36.799

2.b-Actividad de Recogida de Lost fishing gear.

Days of campaign	15	15	15	15	15
Campaign daily price	977	1.025	1.077	1.131	1.187
Income	14.649	15.381	16.151	16.958	17.806

3ª Business line: Monitoring environmental parameters y servicios de apoyo a la investigación

Days of campaign	30	30	30	30	30
Campaign daily price	1.000	1.050	1.103	1.158	1.216
Income	30.000	31.500	33.075	34.729	36.465

Table 55. Projection of annual income.

4.4.2 Cost forecast.

The cost item includes the total of expenses necessary to be able to offer the set of services described.

However, not all expenses generate costs, but only those that are part of the ordinary activity and own the company, are linked to the productive activity and are necessary for the development of it.

There are two types of costs: direct and non-direct.

4.4.2.1 Direct costs:

These costs are associated with the service in a clear way, without any kind of sharing. They occur when the company establishes control mechanisms to know exactly the amount of cost that goes to the product, service or section. Within these, and for our case study are:

4.4.2.1.1 Personnel costs.

The considered embarked personnel is fixed by the legal minimum crew that mark the administration, in this case is formed by four people:

- Skipper
- Mechanic-engineer
- Sailor 1
- Sailor 2

The cost of personnel consists of salaries, social security and holiday pay, according to the Special Regime of the Sea in the Spanish State.

4.4.2.1.2 Fuel.

According to the data obtained during the campaigns (see D3.1 Results and main conclusions of the campaigns carried out) Fuel consumption can be estimated at 80 liters / hour based on a unit cost of 0.63 € per liter. For the Scuba diving activity, 6 hours of navigation and 3 hours of fishing are estimated.

This parameter is highly dependent on the factors of reduction on the price of hydrocarbons in function of the activity to which the vessel is dedicated, stipulated in Law 38/1992, of December 28, of Special Taxes.

4.4.2.1.3 Subcontracting.

In this category, the costs of specific support personnel to carry out the activity to be contracted under the Sea regime to specialized companies are considered.

4.4.2.1.4 Purchases.

This category includes the acquisition of all the specific inventoried material necessary for carrying out the specific activity, such as food, teaching material, bottles for Scuba diving, bait for fishing, etc.

The summary of the estimated direct costs is shown in the following tables.

<u>Basic variables</u>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
1.a-Scuba diving												
Skipper	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26	-3697,26
Mechanic-engineer	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81	-2957,81
Sailor 1	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Sailor 2	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58	-2108,58
Personnel costs	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872	-10.872
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	0	0	0	24	48	150	150	150	114	0	0	0
Fuel costs	0	0	0	-1.205	-2.410	-7.530	-7.530	-7.530	-5.723	0	0	0
Specific personnel for support	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Subcontracting	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500
Purchase costs	0	0	0	-280	-540	-1.645	-1.645	-1.645	-1.255	0	0	0
Direct costs	-12.372	-12.372	-12.372	-13.857	-15.322	-21.547	-21.547	-21.547	-19.350	-12.372	-12.372	-12.372
1.b-Recreational fishing												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	0	0	15	15	15	15	15	15	15	15	15	0
Fuel costs	0	0	-753	-753	-753	-753	-753	-753	-753	-753	-753	0
Purchase costs	0	0	-370	-370	-370	-370	-370	-370	-370	-370	-370	0
Direct costs	0	0	-1.123	-1.123	-1.123	-1.123	-1.123	-1.123	-1.123	-1.123	-1.123	0
2.a-Marine litter collection activity.												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	0	0	10	40	40	0	0	0	25	40	0	0
Fuel costs	0	0	-502	-2.008	-2.008	0	0	0	-1.255	-2.008	0	0
Direct costs	0	0	-502	-2.008	-2.008	0	0	0	-1.255	-2.008	0	0

<u>Basic variables</u>	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
2.b-Lost fishing gear collection activity												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	5	5	5	5	5	0	0	0	5	10	10	25
Fuel costs	-251	-251	-251	-251	-251	0	0	0	-251	-502	-502	-1.255
<u>Direct costs</u>	-251	-251	-251	-251	-251	0	0	0	-251	-502	-502	-1.255
3ª Business line: Monitoring environmental parameters y servicios de apoyo a la investigación												
Fuel cost	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2	-50,2
Navegation hours	0	40	40	40	40	0	0	0	0	40	40	0
Fuel costs	0	-2.008	-2.008	-2.008	-2.008	0	0	0	0	-2.008	-2.008	0
<u>Direct costs</u>	0	-2.008	-2.008	-2.008	-2.008	0	0	0	0	-2.008	-2.008	0

Table 56. Monthly direct costs of the activity.

Basic variables	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Skipper	-44.367	-45.698	-47.069	-48.481	-49.936
Mechanic-engineer	-35.494	-36.559	-37.655	-38.785	-39.948
Sailor 1	-25.303	-26.062	-26.844	-27.649	-28.479
Sailor 2	-25.303	-26.062	-26.844	-27.649	-28.479
Personnel costs	-130.467	-134.381	-138.412	-142.565	-146.841
Specific personnel for support	-18.000	-18.540	-19.096	-19.669	-20.259
Subcontracting	-18.000	-18.540	-19.096	-19.669	-20.259
1.a-Scuba diving					
Fuel cost	50	52	53	55	57
Navegation hours	636	636	636	636	636
Fuel costs	-31.927	-32.885	-33.872	-34.888	-35.934
Purchase costs	-7.010	-7.220	-7.437	-7.660	-7.890
Direct costs	-187.404	-193.026	-198.817	-204.781	-210.925
1.b-Recreational fishing					
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	135	135	135	135	135
Fuel costs	-6.777	-6.980	-7.190	-7.405	-7.628
Purchase costs	-3.330	-3.430	-3.533	-3.639	-3.748
Direct costs	-10.107	-10.410	-10.723	-11.044	-11.376
2.a-Marine litter collection activity.					
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	155	155	155	155	155
Fuel costs	-7.781	-8.014	-8.255	-8.503	-8.758
Direct costs	-7.781	-8.014	-8.255	-8.503	-8.758
2.b-Lost fishing gear collection activity					
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	75	75	75	75	75
Fuel costs	-3.765	-3.878	-3.994	-4.114	-4.238
Direct costs	-3.765	-3.878	-3.994	-4.114	-4.238
3ª Business line: Monitoring environmental parameters y servicios de apoyo a la investigación					
Fuel cost	-50	-52	-53	-55	-57
Navegation hours	240	240	240	240	240
Fuel costs	-12.048	-12.409	-12.782	-13.165	-13.560
Direct costs	-12.048	-12.409	-12.782	-13.165	-13.560

Table 57. Annual direct costs of the activity

The estimate of expenditure for subsequent years has been set at an annual increase of 5%.

4.4.2.2 Indirect costs:

4.4.2.2.1 Berths.

This budget line includes the cost of renting the vessel mooring, as well as light and water supplies.

The cost of this item may vary depending on the base port of the vessel.

4.4.2.2.2 Maintainance.

It has been considered a monthly item of 800 € / month. This would include small repairs and maintenance (painting, cleaning ...).

4.4.2.2.3 Inspections.

This item is intended for periodic inspections required by regulations.

4.4.2.2.4 Telecommunications.

This budget item is intended to cover the expenses associated with the telecommunication needs of the company.

4.4.2.2.5 Tax, labor and accounting consultancy.

These expenses are associated with the contracting of a tax advice for the tax advice of the company. It is estimated at 100 euros per month in the first year, increasing by 5% per year.

4.4.2.2.6 Advertising costs and marketing

This budget line is allocated to cover advertising and marketing costs for the promotion of activities and customer recruitment.

4.4.2.2.7 Insurances

This expense is intended for the contracting of an insurance policy, both of the vessel and of public liability.

FORECAST Indirect costs	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
Berths (includes supplies)	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619	-619
Maintainance	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800	-800
Inspections	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61	-61
Telecommunications	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Financial costs												
Advertising costs and marketing	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17	-17
Tax, labor and accounting consultancy	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50	-50
Insurances	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180	-180
Total indirect costs	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776

Table 58. Monthly indirect costs of the activity.

The projection of these indirect costs over the next 5 years is shown in the table below, which has been considered an increase of 5% per year.

FORECAST Indirect costs	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Berths (includes supplies)	-7.428	-7.651	-7.880	-8.117	-8.360
Maintainance	-9.600	-9.888	-10.185	-10.490	-10.805
Inspections	-729	-751	-773	-797	-820
Telecommunications	-600	-618	-637	-656	-675
Financial costs	0	0	0	0	0
Advertising costs and marketing	-200	-206	-212	-219	-225
Tax, labor and accounting consultancy	-600	-618	-637	-656	-675
Insurances	-2.155	-2.220	-2.286	-2.355	-2.425
Total indirect costs	-21.312	-21.951	-22.610	-23.288	-23.987

Table 59. Annual projection of the Indirect costs.

4.4.3 Investments.

The readjustment of the fishing vessels for the accomplishment of other activities needs the realization of a series of investments for their readjustment both at the operational level and for compliance with the regulations.

Within the framework of the project and due to budgetary and temporary restrictions, the detailed minimum investments have been made in the deliverable "D3.1 Results and main conclusions of the campaigns" and "D1.1 Technical feasibility study".

For this study, we have considered the necessary investments to guarantee the safety and comfort of the crew, always complying with criteria of optimization of resources.

4.4.3.1 Safety and Rescue.

The readjustment of the fishing vessels for the accomplishment of activities other than fishing needs the realization of a series of investments for their readjustment both at the operational level and for compliance with the regulations.

Within the framework of the project and due to budgetary and temporary restrictions, the detailed minimum investments have been made in the deliverable "D3.1 Results and main conclusions of the campaigns" and "D1.1 Technical feasibility study".

For this study, we have considered the necessary investments to guarantee the safety and comfort of the crew, always complying with criteria of optimization of resources.

4.4.3.2 Safety and Rescue.

These investments aim to comply with the applicable regulations, to ensure the safety of personnel at the edge as well as those of the vessel and the environment. For more information on this point you can consult the deliverable "D1.1. Technical feasibility study ", section 5.

4.4.3.3 Specific activity.

This category includes the acquisition of all the specific inventoried material necessary to carry out the specific activity. (See detail in D1.1 Technical feasibility report, section 4).

4.4.3.4 Habilitation.

This category estimates all those modifications necessary to accommodate the passengers in the appropriate comfort conditions to carry out the activity. For those activities that embark passengers or personnel not member of the crew, it will be necessary to readjust some areas to adapt them to the required comfort. The zones of the Habilitation considered for its modification are: bathrooms, kitchen and accommodation zone.

4.4.3.5 Launch costs.

The administrative and legal procedures necessary to establish the company are: constitution of the company, records, tax license, activity or works licenses, engineering project, initial inspection, authorizations ... They are amortized over 5 years.

The following is an estimate of the starting cost of this activity.

Basic variables	YEAR 2017
Inversiones	
Lifebuoy	-22
CI buckets	-19
Life raft	-4.359
Kit	30
Lifest	-688
Safety elements (guardrails, protections, ...)	-400
Extinguisher	-69
Lifebuoy light	-28
Nautical material	-1.000
Pyrotechnics	-189
Reel	-41
Signage	-50
Safety and Rescue	-6.834
ALFA flag	-8
Diving cilinders	-6.050
Buoy signaling	-15
Waste tanks	-54
Useful for the waste collection	-24
Recreational fishing equipment	-4.283
Diving cylinders stowage	-1.400
Pneumatics	-5.743

Basic variables	YEAR 2017
Vessel	-300.000
Sistema elevación	-250
Useful for the lost fishing gear collection	-2.000
Means of accessing the vessel	-520
Specific activity	-320.346
Accommodation	-6.300
BYEARs	-1.500
Kitchen	-1.680
Habilitation	-9.480

Table 60. Investment for commissioning.

4.4.4 Profit and loss accounts.

The reassignment of the vessel working as a multiplatform vessel is economically viable if priority is given to more profitable activities such as tourism and support to environmental monitoring campaigns. For this study we have considered an annual distribution of the use of 106 days for the activity of Scuba diving, 45 days for the Recreational fishing, 31 days for the collection of waste and 15 for the collection of lost fishing gear.

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
COSTS												
Direct costs 1 ^a Business line	-12.372	-12.372	-13.495	-14.980	-16.445	-22.670	-22.670	-22.670	-20.473	-13.495	-13.495	-12.372
Direct costs 2 ^a Business line	-251	-251	-753	-2.259	-2.259	0	0	0	-1.506	-2.510	-502	-1.255
Direct costs 3 ^a Business line	0	-2.008	-2.008	-2.008	-2.008	0	0	0	0	-2.008	-2.008	0
Total direct costs	-12.623	-14.631	-16.256	-16.837	-15.893	-7.610	-7.610	-7.610	-10.533	-18.013	-16.005	-13.627
Indirect costs.	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776	-1.776
Total costs	-14.399	-16.407	-18.032	-21.023	-22.488	-24.446	-24.446	-24.446	-23.755	-19.789	-17.781	-15.403
Income 1 ^a Business line	0	0	6.000	15.600	25.200	66.000	66.000	66.000	51.600	6.000	6.000	0
Income 2 ^a Business line	977	977	2.930	8.789	8.789	0	0	0	5.860	9.766	1.953	4.883
Income 3 ^a Business line	0	5.000	5.000	5.000	5.000	0	0	0	0	5.000	5.000	0
Total incomes	977	5.977	13.930	29.389	38.989	66.000	66.000	66.000	57.460	20.766	12.953	4.883
EBITDA	-13.423	-10.431	-4.102	8.366	16.502	41.554	41.554	41.554	33.705	977	-4.828	-10.520
Amortization amount of I. Safety and Rescue	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114	-114
Amortization amount of I. Specific activity	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339	-5.339
Amortization amount of I.Habilitation	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158	-158
Amortization amount of Launch costs and constitution	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70	-70
Total amortization	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681	-5.681
EBIT (BAII)	-19.104	-16.112	-9.784	2.685	10.820	35.873	35.873	35.873	28.023	-4.704	-10.509	-16.201
Costs or income by interests	0	-261	-346	-415	-493	-590	-660	-710	-704	-449	-153	84

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
EBT (BAI)	-19.104	-16.373	-10.130	2.270	10.327	35.283	35.212	35.163	27.319	-5.153	-10.663	-16.118
Taxes	6.686	5.730	3.545	-795	-3.614	-12.349	-12.324	-12.307	-9.562	1.804	3.732	5.641
E (BDI)	-12.418	-10.642	-6.584	1.476	6.713	22.934	22.888	22.856	17.758	-3.349	-6.931	-10.476

Table 61. Profit and Loss account - monthly.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
COSTS					
Direct costs 1 ^a Business line	-197.511	-203.436	-209.539	-215.826	-222.300
Direct costs 2 ^a Business line	-11.546	-11.892	-12.249	-12.617	-12.995
Direct costs 3 ^a Business line	-12.048	-12.409	-12.782	-13.165	-13.560
Total direct costs	-221.105	-227.738	-234.570	-241.607	-248.856
Indirect costs.	-21.312	-21.951	-22.610	-23.288	-23.987
Total costs	-242.417	-249.689	-257.180	-264.896	-272.842
Income 1 ^a Business line	308.400	323.820	340.011	357.012	374.862
Income 2 ^a Business line	44.924	47.170	49.528	52.005	54.605
Income 3 ^a Business line	30.000	31.500	33.075	34.729	36.465
Total incomes	383.324	402.490	422.614	443.745	465.932
EBITDA	140.907	152.800	165.434	178.849	193.090
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-64.069	-64.069	-64.069	-64.069	-64.069
Amortization amount of Habilitation	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-68.175	-68.175	-68.175	-68.175	-68.175
EBIT (BAII)	72.732	84.625	97.259	110.675	124.915
Costs or income by interests	-4.697	2.173	4.083	8.110	12.498
EBT (BAI)	68.035	86.799	101.343	118.784	137.413
Taxes	-23.812	-30.380	-35.470	-41.574	-48.095
E (BDI)	44.223	56.419	65.873	77.210	89.319

Table 62. Profit and Loss account – annual.

4.4.5 Balance.

4.4.5.1 Client charge:

In the case of private Customers (first line business). The charge will be made when issuing the invoice and always in advance of the start of the activity.

In the case of the administration or competent body (second business line). They will be charged within six months of invoicing.

In the case of the research centres (third line business). The charge will be made one month after the invoice date.

4.4.5.2 *Payment to suppliers:*

Direct costs. They will always be paid the following month.

Indirect or administrative costs o administrativos. They will be paid one month after the work is carried out.

4.4.5.3 *Taxes*

The amount of annual taxes is always financed by the public tax office, since taxes are paid within six months of being accrued they are accrued on December 31st and are paid in June of the following year (we have to remember that if there were losses there be on the balance sheet an amount of the Public Tax office with a negative sign).

4.4.5.4 *Social capital.*

The vessel has been considered as social capital since the owner of the fishing vessel is reassigned the promoter of the restructuring activity. This allows not to include the value of the vessel in the initial investment needs, resembling the study to the reality, since the vesselowner already owns the vessel before starting the activity. The amortization period that has been assigned to the vessel is 5 years, thus after the end of the useful life of the vessel is considered the possibility of the promoter of the activity to acquire another vessel to give continuity to the business.

4.4.5.5 *Amortization.*

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Amortization amount of I. Safety and Rescue	-1.367	-1.367	-1.367	-1.367	-1.367
Amortization amount of I. Specific activity	-64.069	-64.069	-64.069	-64.069	-64.069
Amortization amount of Habilitation	-1.896	-1.896	-1.896	-1.896	-1.896
Amortization amount of Launch costs and constitution	-843	-843	-843	-843	-843
Total amortization	-68.175	-68.175	-68.175	-68.175	-68.175

4.4.5.6 *Subsidies.*

For the carried out study, no type of subsidy associated to the activity was considered.

FORECAST Losses and Gains	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
ACTIVE												
Treasury	3.833	3.833	3.833	3.833	3.833	3.833	3.833	3.833	3.833	3.833	3.833	3.833
Customers (General public 1st line)	0	0	6.000	21.600	46.800	106.800	157.200	198.000	183.600	123.600	63.600	12.000
Customers (Public Admin.- 2ª line)	977	1.953	4.883	13.672	22.462	22.462	21.485	20.509	23.438	24.415	17.579	22.462
Customers (Research organizations, competent authorities - 3rd line)	0	5.000	5.000	5.000	5.000	0	0	0	0	5.000	5.000	0
Launch costs and constitution	4.145	4.075	4.004	3.934	3.864	3.794	3.723	3.653	3.583	3.513	3.442	3.372
Safety and Rescue	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834	6.834
Specific activity	320.346	320.346	320.346	320.346	320.346	320.346	320.346	320.346	320.346	320.346	320.346	320.346
Habilitation	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets	-5.611	-11.222	-16.833	-22.444	-28.055	-33.666	-39.277	-44.888	-50.499	-56.110	-61.721	-67.332
Material												
Financial inversions	0	0	0	0	0	0	0	0	0	0	33.541	72.443
TOTAL ACTIVE	340.003	340.299	343.547	362.255	390.563	439.882	483.624	517.766	500.615	440.910	401.934	383.438
PASSIVE												
Suppliers (financial of Direct costs)	12.623	14.631	16.256	19.247	20.712	22.670	22.670	22.670	21.979	18.013	16.005	13.627
Suppliers (financial of Indirect costs)	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776
H.P. Acreedora por Taxes (Impto. Sociedades)	-6.686	-12.417	-15.962	-15.168	-11.553	796	13.120	25.427	34.989	33.185	29.453	23.812
Social capital	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	-12.418	-23.060	-29.644	-28.169	-21.456	1.478	24.366	47.222	64.979	61.630	54.699	44.223
Subsidies	0	0	0	0	0	0	0	0	0	0	0	0
Non-Long-Term Resources	44.708	59.368	71.121	84.568	101.085	113.162	121.692	120.672	76.892	26.306	0	0
TOTAL PASSIVE	340.003	340.299	343.547	362.255	390.563	439.882	483.624	517.766	500.615	440.910	401.934	383.438
ACTIVE-PASSIVE	0	0	0	0	0	0	0	0	0	0	0	0

Table 63. Profit and Loss account - monthly.

FORECAST Losses and Gains	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
ACTIVE					
Treasury	3.833	4.025	4.226	4.437	4.659
Customers (General public 1st line)	12.000	80.955	85.003	89.253	93.716
Customers (Public Admin.- 2ª line)	22.462	23.585	24.764	26.002	27.302
Customers (Research organizations, competent authorities - 3rd line)	0	2.625	2.756	2.894	3.039
Launch costs and constitution	3.372	2.529	1.686	843	0
Safety and Rescue	6.834	6.834	6.834	6.834	6.834
Specific activity	320.346	320.346	320.346	320.346	320.346
Habilitation	9.480	9.480	9.480	9.480	9.480
Accumulated amortization in fixed assets	-67.332	-134.664	-201.996	-269.328	-336.660
Material					
Financial inversions	72.443	136.114	270.317	416.611	575.158
TOTAL ACTIVE	383.438	451.829	523.416	607.373	703.874
PASSIVE					
Suppliers (financial of Direct costs)	13.627	18.978	19.548	20.134	20.738
Suppliers (financial of Indirect costs)	1.776	1.829	1.884	1.941	1.999
H.P. Acreedora por Taxes (Impto Sociedades)	23.812	30.380	35.470	41.574	48.095
Social capital	300.000	300.000	300.000	300.000	300.000
Accumulated loss or accumulated deficit	44.223	100.642	166.514	243.724	333.043
Subsidies	0	0	0	0	0
Non-Long-Term Resources	0	0	0	0	0
TOTAL PASSIVE	383.438	451.829	523.416	607.373	703.874
ACTIVE-PASSIVE	0	0	0	0	0

Table 64. Profit and Loss account – annual.

4.4.6 Treasury and cash flow.

4.4.6.1 Financial needs.

The financial needs (or excesses, if negative) for each month are calculated by comparing the total assets to be financed, with the corresponding liabilities

FORECAST CASH-FLOW	1-1-17	YEAR 2017	YEAR 2018	YEAR 2019	YEAR 2020	YEAR 2021
Benefir and loss after taxes		44.223	56.419	65.873	77.210	89.319
+interests*(1-t)		3.053	-1.413	-2.654	-5.271	-8.124
+Amortization I. Material		67.332	67.332	67.332	67.332	67.332
+Amortization de Launch costs		843	843	843	843	843
FGO		115.451	123.181	131.393	140.113	149.370

-Increase ofNOF	-3.833	4.754	-60.923	155	910	1.053
-Increase ofACTIVE Fijo	-340.875	0	0	0	0	0
CASH-FLOW FREE (FCL)	-344.708	120.204	62.258	131.549	141.023	150.423
-Intereses*(1-t)		-3.053	1.413	2.654	5.271	8.124
+Foreign resources	44.708	-44.708	0	0	0	0
Equity Cash-Flow (ECF)	-300.000	72.443	63.671	134.203	146.295	158.547
+Proper resources	300.000	0	0	0	0	0
+Subsidies	0	0	0	0	0	0
Cash Flow net	0	72.443	63.671	134.203	146.295	158.547
+Financial inversions	0	72.443	63.671	134.203	146.295	158.547

Table 65. Cash Flow - annual.

4.4.7 Ratios.

ANALYSIS OF RATIOS	31-12-17	31-12-18	31-12-19	31-12-20	31-12-21
Ratios of profitability and growth					
Profitability by margin = BAIT / Sales (Income)	18,97%	21,03%	23,01%	24,94%	26,81%
ROI = BAIT / ACTIVEs	18,97%	18,73%	18,58%	18,22%	17,75%
ROE = BDT / RP	12,85%	14,08%	14,12%	14,20%	14,11%
Ratios of operating efficiency					
Ratio of rotation of ACTIVEs = Income / ACTIVE Total	99,97%	89,08%	80,74%	73,06%	66,20%
Ratio of income variation		5,00%	5,00%	5,00%	5,00%
Ratios of financial position					
Ratio of debt = Total debt/ PASSIVE total	10,23%	11,33%	10,87%	10,48%	10,06%
Ratio of the debt's quality = Required to CP / Total required	100,00%	100,00%	100,00%	100,00%	100,00%
Ratio of loan repayment capacity = FCL / Required	306,52%	121,63%	231,19%	221,56%	212,37%
Ratios of liquidity					
Ratio of short-term solvency = ACTIVE short / PASSIVE short	97,65%	217,22%	205,18%	192,60%	181,72%
Ratio de Treasury = Treasury / PASSIVE short	194,51%	273,78%	482,49%	661,52%	818,59%

Table 66. Ratios- Annual

4.4.8 Conclusions.

The conversion of medium-sized fishing vessels (18-30 meters in length) working as multiplatform vessels is economically viable if priority is given to more profitable activities such as tourism and support to environmental monitoring campaigns, to the detriment of Other activities that generate losses and that could be carried out in a timely manner.

- An annual distribution of the use of 106 days for Scuba diving activity, 45 days for Recreational fishing, 31 days for waste collection and 15 days for the collection of Lost fishing gear. In this case it is not considered necessary to calculate the threshold of profitability since there are multiple scenarios and there are too many variables to modify in terms of income.
- Regarding the financial needs (see 4.4.6 Treasury and cash flow), it is noted that, except for the initial investments in which a financing of around € 45,000 would be required, once the activity is under way generates a positive flow of Treasury of about € 72,000 per year.

5 Conclusions.

This document is intended to be a support guide for the owners of fishing vessels who wish to readjust their vessel to carry out a new activity. The feasibility study will have to be carried out in each particular case taking into account the characteristics of each vessel such as fuel consumption or the state of maintenance of the vessel before the change of activity, which will be crucial factors to determine investments, costs, etc.

In the case of the reassignment of the vessel Ciudad de Cartagena and after carrying out a forecast of the profit and losses for each of the activities, considering in all of them that the use level is 100% of the use capacity of the vessel, it is concluded from the profit and loss account of each one of them that the activity of leisure and tourism is the one that offers the greatest profitability, followed by the activity of environmental parameters monitoring. On the contrary, litter and lost fishing gear collection activities generate losses, so unless the activity has the necessary subsidies, it would not be recommended.