Anzol+ valorisation referential

Lisbon, October, 2020

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anzol+

This referential contributes to the promotion of environmentally sustainable, resource-efficient, innovative, competitive, and knowledge-based fisheries, with the aim of stimulating innovation, increasing environmental awareness, and further enhancing investment in the fisheries sector.

Parceiros spea IPL

Mission

Work for the study and conservation of birds and their habitats, promoting a development that ensures the viability of natural heritage for the enjoyment of future generations.

The SPEA – Portuguese Society for the Study of Birds is a Non-Governmental Environmental Organization that works for the conservation of birds and their habitats in Portugal. As a non-profit association, it depends on the support of partners and various entities to carry out its actions. It is part of a worldwide network of environmental organizations, BirdLife International, which operates in 120 countries and aims to preserve biological diversity through the conservation of birds, their habitats, and the promotion of the sustainable use of natural resources.

SPEA was recognized as a public utility in 2012.

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SUMMARY

The current referential is intended to define the conditions that a small-scale fishery must meet in order to present the product to the consumer in a differentiated way. In this case, this assessment refers to fishery products caught by vessels operating hand operated pole-and-lines and set longline, within a partial zone of the Berlengas Biosphere Reserve area (UNESCO), bounded by the Berlengas Natural Reserve limits. The target species are European seabass (*Dicentrarchus labrax*), Gilthead seabream (*Sparus aurata*), White seabream (*Diplodus sargus*), European conger (*Conger conger*), Meagre (*Argyrosomus regius*) and John Dory (*Zeus faber*). The referential is based on the VAL+ matrix of 35 criteria and indicators that allows the evaluation of small-scale fisheries in Portugal. It includes a characterization of vessels, crew and fishing gear, the control measures to be taken on board, preparation on the boat, procedures to be kept in auction, forms of marketing, traceability records and distribution of chain value. The VAL+ matrix includes four great domains, namely the environmental, the fisheries management, the social and the economic domains. Each assessment (on a scale of 0 to 3) is assigned with a confidence degree (of 1, 1.5 or 2). The evaluation of the criteria is added arithmetically for each domain and for the global assessment. A fishery must reach the minimum valuation for each criterion (if applicable), for each domain and for the global assessment, in order to respect compliance with the referential. The overall assessment must be higher than 100.5 points.

1. Introductory note

1.1 Valorisation referential

The current referential is intended to define the conditions that a fishery must comply with the intention of presenting the product to the consumer in a differentiated way. By objectively identifying that fish comes from a sustainable and well-managed source, we are contributing to the exploitation of marine resources in a sustainable and environmentally friendly manner, and to the balance between the preservation of resources and their economic exploitation.

The activity to be valued is hooks and lines fishing, namely hand operated pole-and-lines (generally using a rod) and set longline, aimed at six species, captured in a partial area of the Berlengas Biosphere Reserve (UNESCO), bounded by the Berlengas Natural Reserve limits. This fishery is based on the use of small local fishing vessels operating from the fishing port of Peniche.

Fishing must be conducted under a management system based on good practice and ensuring that the management system and fishing activity operate in accordance with existing local, national, and international legislation.

This referential includes a characterization of vessels crew, and fishing gear, the control measures to have on board, preparation on the vessel, fish conditioning, the procedures to be in 1st sale, the forms of marketing, traceability records and the distribution of value chain. The objective of the referential is to establish the necessary criteria to ensure the sustainability of the fishery, allowing all involved to operate in a harmonized way. To ensure sustainability, the fishery will have to reach the minimum values set in the various fields, Environmental, Management, Social and Economic.

2. FISHERIES GENERAL CHARACTERIZATION

2.1 Location

The fishing area is restricted to a partial area of the Berlengas Biosphere Reserve (UNESCO), coinciding with the limits of the Berlengas Nature Reserve (figure 1). Vessels may, however, operate in other fishing areas but, the fish obtained there will not be evaluated or valued.

Figure_1 Location of the fishing area covered by this referential. The area coincides with the geographical limits of the Berlengas Nature Reserve (blue bounded polygon), being a partial area of the Berlengas Biosphere Reserve (black bounded polygon).
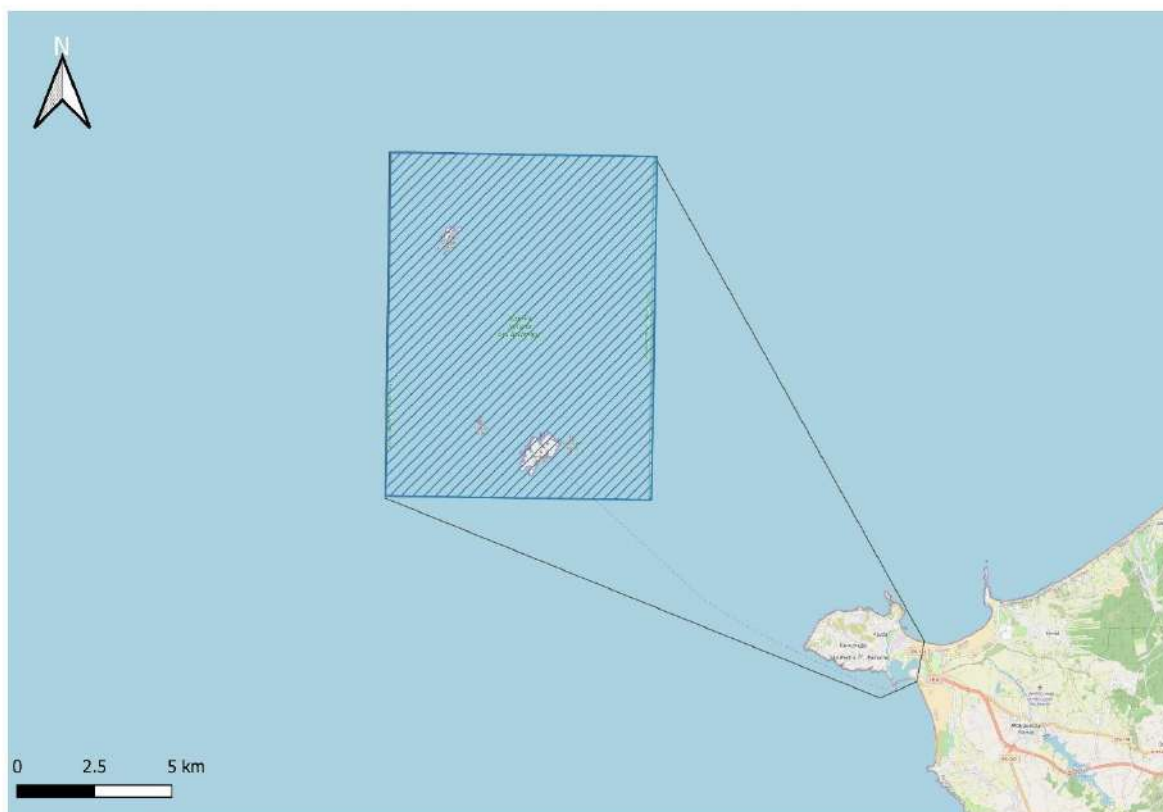
2.2 Fishing gear

The fishing gear considered for this referential is hooks and lines gear, namely the hand operated pole-and-lines (generally using a rod) and set longline. These fishing gears are very selective and guarantee a fish caught with great quality. The longline can operate in the middle of water column or bottom, the bottom for the capture of European conger and the demersal for the other target species of the referential.

2.3 Vessels and crew

To apply this referential only vessels licensed for local fishing and registered in the Captaincy of the Peniche Fishing Port, are admitted. Fishers must respect other legislation to operate within the Berlengas Natural Reserve, namely its Land Use Plan[1].The crew must be aware of this referential, participate in evaluations and/or audits and participate in training meetings to apply the valorisation

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[1]Resolução do Conselho de Ministros n.º 180/2008 – Aprova o Plano de Ordenamento da Reserva Natural das Berlengas

referential. New vessels will only be accepted after the criteria are assessed and if it does not question the sustainability of referential.

2.4 Target species

The species to be considered for evaluation according to this referential, are:
- European Seabass (*Dicentrarchus labrax)*
- Gilthead seabream (*Sparus aurata)*
- White seabream (*Diplodus sargus)*
- European Conger (*Conger conger)*
- Meagre (*Argyrosomus regius)*
- John Dory (*Zeus faber)*

2.5 Fish conditioning

After capture, the fish must be properly conditioned inside a cooler, which are evenly arranged under the fish to maintain the freshness of the fish.

2.6 Control measures to be taken on board

Strictly follow the environmental domain criteria by at least meeting the minimum values.

2.7 Fish preparation aboard

The fish must be labelled individually with an inviolable label on the operculum before entering the auction and after *rigor mortis.*

2.8 Procedure for first sale

Present the product properly labelled, conditioned and with maximum freshness.

2.9 Commercial presentation

The products valued are:
- Purchased from fishermen who respect and apply this referential.
- Identifiable - The fish label must be visible at the time of sale to demonstrate the exclusivity of the product.
- Separated – Valued products must be separated from unvalued products.
- Traceable - All movements and transactions must be recorded and verifiable.

2.10 Traceability

The whole process from capture to sale is traceable through vessel tracking systems and fish label.

2.11 General conditions

Only the product that:
- Comply with the specifications of this referential.
- Maintain an adequate traceability system;
- From authorised fishing vessels.

Fishers will have to make a commitment to respect the mode of capture and marketing described in this referential.

3. Evaluation criteria

This referential considers the domains from the Project VAL+ namely the environmental, fisheries management, the social and the economic domains. These domains cover a total of 35 criteria. Each criterion is evaluated on a scale of 0 to 3. '0' corresponds to the lowest rating and '3' to the highest rating.

Each assessment is also assigned with a confidence degree. Since the sources used to feed the matrix are very diverse and with different degrees of certainty, it is considered pertinent to take this subjectivity into account when filling the matrix. The application of the trust degrees is as follows:

1. A (2 points) – higher degree of confidence. Assigned to criteria that are evaluated based on directed sampling (e.g., on-board monitoring or questionnaires). Criteria evaluated based on recently produced and reviewed studies and/or widely recognized entities in the area are also considered within this classification (e.g.: Portuguese Institute for Sea and Atmosphere - IPMA, International Council of the Sea- ICES, Institute for Nature Conservation and Forests - ICNF, Directorate-General for Natural Resources, Safety and Maritime Services – DGRM).
2. B (1.5 points) – intermediate degree of confidence. Assigned to criteria whose information is obtained with one or more of the methodologies described for grade A but where there is limitation of certainty, usually because the information coming from two different sources is contradictory. Thus, and even if the information is robust, if there was a disparity of opinions, it should be reflected in the matrix. This degree of trust can also be attributed to information that is scarce, limited to one source or based on older/outdated studies, with reduced representativeness or carried out for other countries (scientific articles).
3. C (1 point) – lower degree of confidence. Assigned to items that are answered based on the perception of the observer or other individuals connected to the sector. Where there are no references (bibliographic or communication) that justify a score, grade C should be assigned.

Any attribution of degrees of trust may always be subjective or biased, so the above guidelines should be considered in the process of filling. In the attribution of the score to each fishery, the score should be multiplied by the degree of confidence and, in the end, add all the values to obtain the actual value that will define the evaluation of the fishery as found in the example of Table_1.

Table_1 Example of application and use of scores and degrees of confidence in the result of each matrix

Criteria	Evaluation (0 a 3)	Degree of confidence (1, 1,5 ou 2)	Final assessment
a	0	1	0
b	2	1.5	3
c	1	1.5	1.5
Total			4.5

3.1 Environmental domain – control measures to be taken on board

In the Environmental Domain, criteria are addressed regarding practices and the direct consequences (in the environment or not) resulting from fishing activity.

1. What is the percentage of bycatches?

It is understood by bycatch any species caught without intent, not being the target of the fishery.

Table 2_ Evaluation of the By-catch' indicator

Percentage of accidental catches	0	On average, total catches include more than 30% of non-target species
	1	On average, total catches include between 20 and 30% of non-target species
	2	On average, total catches include between 10 and 20% of non-target species
	3	On average, total catches include less than 10% of non-target species

This criterion considers the percentage of the annual catch in terms of weight in the case of fish species. The minimum suggested value for by-catches is 3, 'On average, total catches include less than 10% of non-target species'. In the case of protected species, classification 3 is achieved only if no birds, mammals, or sea turtles are caught. Due to the high selectivity of fishing gear and the solid knowledge of the fishing area by professionals, knowing the best fishing grounds for the capture of target species, the capture of non-target species is unlikely. However, especially in the case of seabirds, measures are expected to be implemented to prevent bycatch.

2. What is the percentage of discards?

It is understood by discards all catches that due to the small size or low commercial value are returned to the sea, alive or dead.

Table 3_Evaluation of the indicator 'Percentage of discards'

Percentagem de rejeições	0	On average, more than 30% of catches are rejected
	1	On average, between 20 and 30% of catches are rejected
	2	On average, between 10 and 20% of catches are rejected
	3	On average, less than 10% of catches are rejected

This criterion takes into account the percentage of the annual catch in terms of weight. The suggested minimum value for rejections is 3, 'On average, less than 10% of catches are rejected'. This is due to the selectivity of the hook being high, thus reducing the capture of unwanted sizes and the knowledge of fishing areas by professionals, knowing the best fishing grounds for the capture of target species, thus reducing the probability of capture of non-target species.

3. What is the survival rate of the rejected species?

It is understood by survival of the rejected species, the number of catches that survive when returned to the sea.

Table 4_Evaluation of the indicator 'Survival rate of rejected species'

Survival rate of rejected species	0	On average, less than 50% of rejected species survive
	1	On average, between 50 and 70% of rejected species survive
	2	On average, between 70 and 90% of rejected species survive
	3	On average, more than 90% of rejected species survive

The minimum suggested value for the survival rate of rejected species is 3, 'On average, more than 90% of rejected species survive'. Due to the type of gear and the way it is operated, it is expected that most of the rejected species survive. The species to be rejected should be returned to the sea immediately after the howling of the gear to ensure its survival, and the hook removed to avoid as much damage as possible.

4. Does the fleet use mitigation measures (devices on the vessel and/or fishing gear) for bycatch

Mitigation measures are understood as the installation of devices or structures on the vessel and/or fishing gear that minimize bycatch.

Table 5_ Evaluation of the indicator 'Mitigation measures for bycatches'

Mitigation measures for bycatche	0	Less than 50% of the fleet uses mitigation measures
	1	Between 50 and 70% of the fleet uses mitigation measures
	2	Between 70 and 90% of the fleet uses mitigation measures
	3	More than 90% of the fleet uses mitigation measures or does not need

The minimum suggested value for bycacthes mitigation measures is 3, 'More than 90% of the fleet uses mitigation measures or does not need'. The fleet or part of it shall be considered to require no mitigation measures when there are no indications of accidental capture in the last year. Bycatches will be more relevant in the case of operations with anchored longline. It is expected that the vessels operating this gear, implement the necessary measures (e.g., scarybird device) or participate in trials for the evaluation of new measures.

5. What is the percentage of mortality resulting from the interaction of fishing gear with birds, cetaceans, turtles, and elasmobranchs with special conservation status??

Mortality is understood as the circumstances in which birds, cetaceans, turtles and elasmobranchs that interact with fishing gear do not survive.

Table 6_ Evaluation of the indicator 'Percentage of mortality resulting from interaction with fishing gear '

Percentage of mortality resulting from interaction with fishing gear	0	On average, more than 50% of interactions result in mortality
	1	On average, between 50 and 25% of interactions result in mortality
	2	On average, between 25 and 1% of interactions result in mortality
	3	Interactions do not result in mortality

The indicator used to evaluate this criterion was slightly adapted to improve its meaning. The VAL+ indicator was previously defined as 2 - 'On average, between 25 and 5% of interactions result in mortality', 3 'On average, less than 5% of interactions result in mortality'. The suggested minimum value for mortality resulting from interactions with fishing gear is 3, "Interactions do not result in mortality". Captured individuals should be quickly released from fishing gear and, if apparently in good condition, left free. Otherwise, they must be properly accommodated on the vessel, communicated to the competent authorities, and proceed as informed. Due to the interaction with the fishing gear being low and the use of mitigation measures, in the case of the anchored longline, a reduced mortality rate is expected. In addition, fishermen who operate the gears at greatest risk of accidental capture are expected to participate in training in the handling of protected species.

6. How often do other species with special conservation status are captured?

Species with special conservation status are understood to be species that are at risk.

Table 7_ Evaluation of the indicator 'Capture of other species with special conservation status »

Capture of other species with special conservation status	0	Total catches include more than 50% of other species with special conservation status
	1	Total catches include between 25% and 50% of other species with special conservation status
	2	Total catches include between 5% and 25% of other species with special conservation status
	3	Total catches include less than 5% of other species with special conservation status

The minimum value for the frequency of capture of other species with special conservation status is 3; 'Total catches include less than 5% of other species with special conservation status'. A small percentage of catches of these species are expected due to the high selectivity of fishing gear and the knowledge of fishing areas by professionals, who know the best fisheries for the capture of target species.

7. Does the fleet use measures to minimise loss and ensure the collection, where possible, of fishing gear to avoid ghost fishing?

It is understood by ghost fishing, unused fishing gear, abandoned or lost at sea.

Table 8_ Evaluation of the indicator 'Measures to minimise loss and ensure the collection of ghost fishing gear'

Measures to minimise loss and ensure the collection of ghost fishing gear	0	Less than 50% of the fleet uses measures to minimise loss and ensure the collection, where possible, of fishing gear
	1	Between 50 and 70% of the fleet uses measures to minimise loss and ensure the collection, where possible, of fishing gear
	2	Between 70 and 90% of the fleet uses measures to minimise loss and ensure the collection, where possible, of fishing gear
	3	More than 90% of the fleet uses measures to minimise loss and ensure the collection, where possible, of fishing gear or does not require

The minimum suggested value for measures to minimise loss and ensure the collection of ghost fishing gear is 3, 'More than 90% of the fleet uses measures to minimise loss and ensure the collection, where possible, of fishing gear or does not need it'. Given that fishermen's awareness is high on the issue of

pollution and ghost fishing, the 90% share will be easily achieved. The fishermen involved are expected to collect all damaged gear and replace them before they can be lost at sea due to their poor condition. In addition, all the gears or remains will be collected on board and taken ashore.

8. Is there a practice of recycling, reuse or reprocessing of materials used in fishing?

It is understood by recycling, reuse or reprocessing of materials used in fishing for the use of materials such as cables, oils, nets, buoys, hooks...

Table 9_ Evaluation of the indicator 'Recycling, re-use or reprocessing of materials used in fisheries'

Recycling, re-use or reprocessing of materials used in fishing	0	Less than 50% of the fleet recycles, reuses, or reprocesses
	1	Between 50 and 70% of the fleet recycles, reuses, or reprocesses
	2	Between 70 and 90% of the fleet recycles, reuses, or reprocesses
	3	More than 90% of the fleet recycles, reuses, or reprocesses.

The minimum suggested value for recycling, re-use or reprocessing of materials used in fishing is 3, 'More than 90% of the fleet recycles, reuses or reprocesses'. A high percentage of the fleet is expected to comply with this good practice because professionals' awareness is high and it´s also a way of saving in economic terms.

9. Does the fleet minimize total energy consumption (engine, fuel type, sails)?

It is understood by minimizing energy consumption the use of practices to reduce energy consumption, for example, engine, fuel type, solar panels...

Table 10_ Evaluation of the indicator 'Recycling, re-use or reprocessing of materials used in fisheries'

Minimizing total energy consumption	0	Less than 50% of the fleet applies minimization measures
	1	Between 50 and 70% of the fleet applies minimisation measures
	2	Between 70 and 90% of the fleet applies minimisation measures
	3	More than 90% of the fleet applies minimization or non-accurate measures.

The minimum suggested value for minimising energy consumption is 3, 'More than 90% of the fleet applies minimisation or non-precise measures'. Professionals are expected to choose to implement energy minimisation measures, ensuring a reduction in operating costs. Some measures reduce the dependence on frequent trips to the auction to unload caught fish. It is also expected that the vessels will be quite efficient in terms of energy expenditures.

10. Does gear fishing have significant impacts on sensitive seabed?

It is understood by impacts on the seabed caused by art, arts that have contact with the seabed in some way.

Table 11_ Evaluation of the indicator 'Fishing gear with relevant impacts on sensitive seabed »

Art with relevant impacts on sensitive seabed	0	Fishing gear has an impact on the seabed considered high
	1	Fishing gear has an impact on the seabed considered average
	2	Fishing gear has an impact on the seabed considered low
	3	Fishing gear has an impact on the seabed considered negligible

The suggested minimum value for the impact of the gears on the seabed is 3; "Fishing gear has an impact on the seabed considered negligible". Professionals should pay particular attention to the capture of corals and other damage to the bottom, such as the loss of fishing apparatus. If relevant, it will be necessary to take measures to avoid such impacts.

11. Does it include measures to prevent the dispersion of toxic substances (including fuel, gear oils) into the environment?

These measures are understood to prevent spills of toxic substances (fuels and oils) into the sea or the set of quick and immediate solutions to be adopted when such substances spill, so as not to disperse to the environment.

Table 12_ Evaluation of the indicator 'Measures to prevent the spread of toxic substances into the environment'

Measures to prevent the spread of toxic substances into the environment	0	Less than 50% of the fleet applies minimization measures
	1	Between 50 and 70% of the fleet applies minimisation measures
	2	Between 70 and 90% of the fleet applies minimisation measures
	3	More than 90% of the fleet applies measures or not necessary

The minimum value for measures to prevent the dispersion of toxic substances is 3, 'More than 90% of the fleet applies measures or does not need'. The crew must be sensitised and be very careful when handling these substances.

12. Do you often throw non-organic waste into the sea?

It is understood by non-organic waste, plastics, among others. The aim of this indicator is to evaluate the dumping of non-organic waste to the sea by fishermen.

Table 13_ Evaluation of the indicator 'Non-organic waste to the sea'

Resíduos não orgânicos para o mar	0	More than 75% of professionals often pour non-organic waste into the sea
	1	Between 75 and 25% of professionals often pour non-organic waste into the sea
	2	Between 25 and 10% of professionals often pour non-organic waste into the sea
	3	Less than 10% of professionals often pour non-organic waste into the sea

The indicator used to evaluate this criterion was slightly adapted to improve its meaning. The VAL+ indicator was previously defined as 1 - 'Between 75 and 50% of professionals often pour non-organic waste into the sea', 2 - 'Between 50 and 25% of professionals often pour non-organic waste into the sea', 3 - 'Less than 25% of professionals often throw non-organic waste into the sea. The minimum value for the destination of non-organic waste is 3, "Less than 10% of professionals often pour non-organic waste into the sea". Professionals are expected to be aware of the pollution problem, and separation is necessary for biodiversity conservation.

The minimum rating for this domain is 36 out of 36.

3.2 Fisheries Management Domain

In the <u>Field of Fisheries Management</u>, all criteria related to the administration (local, regional, or national) and which do not depend directly on fishermen and their ability and openness to change behaviours are included.

13. There are biological data available on the target stock

Referring only to the target species of the referential.

Table 14_ Indicator 'biological data on the target stock»

Biological data on target stock	0	Stock is defined as within ICES category 5
	1	Stock is defined as within ICES category 4
	2	Stock is defined as within ICES category 3
	3	Stock is defined as within ICES category 2 or 1

This criterion is based on the categories of the ICES for stock assessment:
- Category 1: – stocks with quantitative assessments. Includes the stocks with full analytical assessments and forecasts as well as stocks with quantitative assessments based on production models.
- Category 2: – stocks with analytical assessments and forecasts that are only treated qualitatively. Includes stocks with quantitative assessments and forecasts which for a variety of reasons are considered indicative of trends in fishing mortality, recruitment, and biomass
- Category 3: stocks for which survey-based assessments indicate trends. Includes stocks for which survey or other indices [such as the Income per Unit Effort (IPUE), the Capture per Unite Effort (CPUE) and the average capture length] are available that provide reliable indications of trends in stock metrics, such as total mortality, recruitment, and biomass.
- Category 4: stocks for which only reliable catch data are available. Includes stocks for which a time-series of catch can be used to approximate MSY.
- Category 5: data-poor stocks. This category includes stocks for which only landing data is available. In these cases, the ICES recommends a reduction of catches unless there is auxiliary information clearly indicating that the level of stock exploitation is adequate.

The minimum value for the biological data on the target stock is 1, «The stock is defined as within category 4 of the ICES». This referential is expected to encourage competent authorities and other entities to make efforts to obtain the information necessary to assess the stock status of the target species.

14 What's the status of the stock?

It is understood by stock status, whether the target species' population is growing, stable, declining or collapsing.

Table 15_ Stock status indicator

Stock status	0	Stock is considered 'collapsing'
	1	Stock is considered 'declining'
	2	Stock is considered 'stable'
	3	Stock is considered 'growing'

The minimum suggested value is 2, 'Stock is considered stable'. The state of the stock must be stable or growing in the course of conscious exploitation and does not harm the stock concerned.

15. What is the regularity of stock monitoring?

It is understood by monitoring the stock the amount of times the stock is subject of studies.

Table 16_ Evaluation of the indicator 'Stock monitoring »

Stock monitoring	0	Stock is not monitored
	1	Stock is the target of sporadic studies (theses, articles, etc.) but not monitored
	2	Stock is monitored every 2 to 5 years (i.e., 2 in 2, 3 in 3, 4 in 4 or 5 in 5 years)
	3	Stock is monitored annually

The minimum value established for stock monitoring is 2, 'Stock is monitored every 2 to 5 years (i.e., 2 in 2, 3 in 3, 4 in 4 or 5 in 5 years)', target fish populations should be evaluated and monitored At least every 5 years.

16. Are existing species in the fishing area with special conservation status and sensitive habitats identified and protected?

This indicator understands the need for knowledge of the area of fisheries, habitats, and species, which leads to better management of fisheries, to respect biodiversity and a more conscious exploitation.

Table 17_ Evaluation of the indicator 'Existing species in the fishing area with special conservation status and sensitive habitats are identified and protected'

Existing species in the fishing area with special conservation status and sensitive habitats are identified and protected	0	Sensitive species and habitats are not identified
	1	Sensitive species and habitats are identified but not protected
	2	Sensitive species and habitats are identified and in the process of protecting
	3	Sensitive species and habitats are identified and protected or are non-existent

The minimum value for the knowledge and protection of species with special status and sensitive habitats is 3; 'Sensitive species and habitats are identified and protected'. Habitats must be legally protected with measures appropriate to their protection and conservation, for example: the use of gear so proven harmful to species and habitats within the RNA area, shown in Figure 1, should be prohibited.

17. Are there any records of non-compliance (excluding the first sale)?
Non-compliance means any action that goes against existing laws or regulations regulating fisheries such as fishing in unpermitted areas, the use of unregulated or illegal gear, or the use of more than the number of gears above the established.

Table 18_ Evaluation of the indicator «non-compliance »

Non-compliance	0	More than 50% of the fleet has a record of non-compliance
	1	Between 50 and 25% of the fleet has a record of non-compliance
	2	Between 25 and 5% of the fleet has a record of non-compliance
	3	Less than 5% of the fleet has a record of non-compliance

The minimum value for this indicator is 2, 'Between 25 and 5% of the fleet has a record of non-compliance'. For a process of valorisation, transparency and compliance with existing rules and laws are essential.

18. There are appropriate management measures for fisheries and capacity.to adapt to changes

Management measures are applied to fisheries in order to make it more compatible with the ecosystem, not negatively affecting its equilibrium. These measures shall be able to respond to any change that occurs.

Table 19_ Evaluation of the indicator 'Appropriate management measures for fisheries and responsiveness to changes'

Management measures appropriate to the fishery and responsiveness to changes	0	Management measures are regarded as 'not appropriate'
	1	Management measures are regarded as 'inadequate'
	2	Management measures are considered 'appropriate'
	3	Management measures are considered 'very appropriate'

The minimum value for this indicator is 2, 'Management measures shall be regarded as appropriate'. Management measures must be at least appropriate, demonstrating that fishing is balanced and sustainable and their exploitation is supported and controlled.

19. The spatial and/or temporal distribution of fishing effort is known.

This indicator is understood as the need to characterize fishing fleets. Knowing its spatial and temporal distribution is necessary for any valuation process.

Table 20_ Evaluation of the indicator 'Spatial and/or temporal distribution of fishing effort'

Spatial and/or temporal distribution of fishing effort	0	Space or temporal distributions are not known
	1	Temporal distribution is known but not spatial distribution
	2	Spatial distribution is known but not temporal
	3	Spatial and temporal distribution are known

The minimum value for this indicator is evaluation 3, "Spatial distribution is known as well as temporal distribution". Without knowledge of the spatial and/or temporal distribution of fishing effort, there is no possible management measures for conscious and balanced fisheries, thus being essential the need for this knowledge for the recovery process.

20. Fishermen report to the authorities illegal fishing practices witnessed during the fishing operation.

Illegal practices are any fishing practice that does not comply with existing legislation.

Table 21_ Evaluation of the indicator 'Illegal fishing practices witnessed are reported'

Práticas ilegais de pesca testemunhadas são reportadas	0	Less than 25% of professionals report to authorities' illegal practices
	1	Between 25 and 50% of professionals report to the authority's illegal practices
	2	Between 50 and 75% of professionals report to the authority's illegal practices
	3	More than 75% of professionals report to authorities' illegal practices

The minimum value for this indicator is 2, 'Between 50 and 75% of professionals report to the authorities illegal practices'. Professionals must protect the environment that serves as a livelihood for their profession and reduce the impact these illegal practices have on biodiversity, habitats and fishing itself.

The minimum rating for this domain is 17/24

3.3 Social Domain

The Social Domain includes all the criteria that allow a social characterization of the local fishing community.

21. Management involves all stakeholders in decision-making

It is understood by stakeholders, fishermen, scientists, traders, and NGOs and decision –making relevant for fisheries management.

Table 22_ Evaluation of the indicator 'Interest groups involved in decision-making »

Interest groups involved in decision-making	0	None of the interest groups are involved (top-down management)
	1	Only fishermen are involved in the management
	2	Fishermen and one or two other interest groups are involved
	3	All interest groups are involved in management (bottom-up management)

The minimum value for this indicator is 2, 'Fishermen and one or two other interest groups are involved'. Fishermen are one of the groups with the greatest interest in fisheries management and should be involved together with at least one or two other interest groups. Their involvement will allow the inclusion of various perspectives, namely scientists engagement for biodiversity conservation.

22. Fishermen feel their interests defended by the associations that represents them.

This indicator is understood as the need for the union of fishermen being this junction represented by the associations that must defend their interests.

Table 23_ Evaluation of the indicator 'Interests advocated by associations representing fishermen'

Interests advocated by associations representing fishermen	0	Less than 50% of professionals feel their interests defended
	1	Between 50 and 75% of professionals feel their interests defended
	2	Between 75 and 90% of professionals feel their interests defended
	3	More than 90% of professionals feel their interests defended

The minimum value for these criteria is 1, 'Between 50 and 75% of professionals feel their interests defended'. It is important that more than half of fishermen believe that their profession, and their interests, are defended by a competent and capable body.

23. What level of social support (health, education, food, retirement, cultural, unemployment support, etc.) that fishermen have within the community?

Understand the level of social support that fishermen have within the community, support in health, education, food, retirement, cultural, unemployment support, etc...

Table 24_ Evaluation of the indicator 'Level of social support for fishermen by the community'

Level of social support for fishermen by the community	0	The social support provided is mandatory and ensured by the State
	1	In addition to state social support, there is support provided by fishermen's associations
	2	In addition to state support, there is support provided by fishermen's associations and specific support provided by the Municipality
	3	In addition to state support, there is a robust network of private or public entities that provide support for various

The minimum value for this indicator is 2, "In addition to state support, there is support provided by fishermen's associations and specific support provided by the Municipality" and this support is necessary for professionals to feel valued and to be able to keep the career.

24. In the evaluation of alternative management and conservation measures, their cost/benefit ratio and social impacts are considered.

Table 25_ Evaluation of the indicator 'In the evaluation of alternative management and conservation measures, their cost-benefit ratio and social impacts are considered'

In the evaluation of alternative management and conservation measures, their cost-benefit ratio and social impacts are considered	0	In the evaluation of alternative measures, cost-benefit ratio and social impacts are never considered
	1	In the evaluation of alternative measures, the cost-benefit ratio and social impacts are sporadically considered
	2	In the evaluation of alternative measures, cost-benefit ratio and social impacts are often considered
	3	In the evaluation of alternative measures, the cost-benefit ratio and social impacts are always considered

The minimum value for this indicator is 2, 'In the evaluation of alternative measures, cost-benefit ratio and social impacts are often considered'. It is necessary to take into account the cost-benefit ratio and

social impacts on the management and conservation measures to be applied in order to make them viable and to ensure a balance at the social, economic and environmental level, with no party being harmed.

25. What percentage of fish is consumed locally?

Amount of fish consumed locally, at city or district level, or if the fish is consumed outside or even exported.

Table 26_ Evaluation of the indicator 'Percentage of fish consumed locally'

Percentage of fish consumed locally	0	Less than 25% of fish is consumed locally
	1	Between 25 and 50% of fish is consumed locally
	2	Between 50 and 75% of fish is consumed locally
	3	More than 75% of fish is consumed locally

No minimum evaluation.

26. Fishermen recognize the intrinsic value of their catch and feel responsible for its role in the conservation of biodiversity and ecosystems

This indicator is understood as the role that professionals have in the impact of biodiversity conservation and associated ecosystems, recognizing the intrinsic value of captured animals.

Table 27_ Evaluation of the indicator 'Fishermen recognise the intrinsic value of the animals they catch and feel responsibility for their role in the conservation of biodiversity and associated ecosystems'

Fishermen recognize the intrinsic value of the animals they capture and feel responsibility for their role in the conservation of biodiversity and associated ecosystems	0	Less than 25% of professionals recognize the intrinsic value of the animals they capture and feel responsibility for their role in the conservation of biodiversity and associated ecosystems
	1	Between 25 and 50% of professionals recognize the intrinsic value of the animals they capture and feel responsibility for their role in the conservation of biodiversity and associated ecosystems
	2	Between 50 and 75% of professionals recognize the intrinsic value of the animals they capture and feel responsibility for their role in the conservation of biodiversity and associated ecosystems
	3	More than 75% of professionals recognize the intrinsic value of the animals they capture and feel responsibility for their role in the conservation of biodiversity and associated ecosystems

Although there is no minimum value for this indicator, professionals need to be aware of its impact and its role for biodiversity conservation.

27. Average age of fishermen

Table 28_ Evaluation of the indicator 'Average age of fishermen'

Average age of fishermen	0	The average age of professionals is over 60 years
	1	The average age of professionals is between 50 and 60 years
	2	The average age of professionals is between 40 and 50 years
	3	The average age of professionals is less than 40 years

No minimum evaluation

28. Level of schooling

Table 29_ Evaluation of the indicator level of schooling »

Level if schooling	0	On average, the professionals did not complete any degree of education or completed the first cycle (primary education/4th year/class)
	1	On average, the professionals completed the second cycle (6th year)
	2	On average, the professionals completed the third cycle (9th year)
	3	On average, professionals completed secondary education (12th grade) or higher education

No minimum evaluation.

29. How many generations has been the family working in fishing?

Table 30_ Evaluation of the indicator 'Generations of the family working in fishing »

Generations of the family working in fishing	0	On average, the fisherman interviewed is the first in his family to work in fishing.
	1	On average, the fisherman and his family have been working in fishing for a generation (himself + father).
	2	On average, the fisherman and his family have been working in fishing for two generations (own + father + grandfather).
	3	On average, the fisherman and his family have been working in fishing for three or more generations (own + father + grandfather + great-grandfather + etc).

No minimum evaluation.

30. Place of birth vs. workplace

Table 31_ Evaluation of the indicator 'Place of birth vs. Workplace'

Place of birth vs. Workplace	0	On average, less than 25% of professionals were born and work in the same council
	1	On average, between 25 and 50% of professionals were born and work in the same council
	2	On average, between 50 and 75% of professionals were born and work in the same council
	3	On average, more than 75% of professionals were born and work in the same council

No minimum evaluation.

The minimum rating for this domain is 7/30

3.4 Economic Domain

The Economic domain concerns all the criteria that have to do with the economy of the fishery itself, the impact it has and the economic power of fishermen.

31. What's the percentage of the illegal sale outside fish auction?

It is understood by illegal sale outside fish auction, fish sold on the parallel market, illegally.

Table 32_ Evaluation of the indicator 'Percentage of illegal sale outside fish auction'

Percentage of illegal sale outside fish auction	0	It is considered that there is more than 50% of the escape
	1	It is considered that there is between 50 and 30% of the escape
	2	It is considered that there is between 30 and 10% of the escape
	3	It is considered that there is less than 10% of the escape

The minimum value for this indicator is 3, "It is considered that there is less than 10% of the escape". An obligation for recovery is transparency and traceability, and illegal sale outside fish auction should be reduced as much as possible.

32. The average income withdrawn from fishing is equal to or greater than the minimum wage

It is understood by average income, the income taken solely from fishing, already with the associated expenses and costs.

Table 33_ Assessment of the indicator 'Average income withdrawn from fishing is equal to or greater than minimum wage'

Average income withdrawn from fishing is equal to or greater than the minimum wage	0	On average, the income withdrawn from fishing is lower than the minimum wage
	1	On average, the income withdrawn from fishing is between a minimum wage and 1.5x the current minimum wage
	2	On average, the income withdrawn from fishing is between 1.5x and 2x the current minimum wage
	3	On average, the income withdrawn from fishing is more than twice the minimum wage

The minimum value for this indicator is 2; 'On average, the income withdrawn from fishing is between 1,5x and 2x the current minimum wage' to establish that monetary recovery for the fisherman is fair.

33. Sell price in 1st sale vs best possible price

It is understood by auction price and best possible price, the average auction price per kilogram and the highest price the fish gets.

Table 34_ Evaluation of the indicator 'Compare auction prices vs. best possible price'

Sell price in 1st sale vs. best possible price	0	On average, professionals receive less than 20% of the final sale price
	1	On average, professionals receive between 20 and 35% of the final sales price
	2	On average, professionals receive between 35 and 50% of the final sales price
	3	On average, professionals receive more than 50% of the final sale price

The minimum value for this indicator is 2, 'On average, professionals receive between 35 and 50% of the final selling price' to share the value more fairly along the value of chain

34. Household constitution

It is understood by household the number of people with whom the fisherman lives and dependents.

Table 35_ Evaluation of the household indicator

Household	0	Most have a household that is made up of one person (himself)
	1	Most have a household that consists of two people
	2	Most have a household that consists of three people
	3	The majority have a household that consists of four or more people

No minimum evaluation.

35. Is fishermen's livelihood guaranteed only by fishing?

Subsistence ensured by fishing is when the only source of income is fishing activity, having no other source of income.

Table 36_ Evaluation of the indicator 'Subsistence only insured by fishing'

Subsistence is only insured by fishing	0	On average, less than 25% of professionals have fishing as their only activity.
	1	On average, between 25 and 50% of professionals have as their only activity fishing
	2	On average, between 50 and 75% of professionals have as their only activity fishing
	3	On average, more than 75% of professionals have as their only activity fishing

No minimum evaluation.

The minimum rating for this domain is 7/15

3.5 Overall assessment

Overall assessment for this valuation should be at least 67/105. Adjusted by the intermediate confidence degree (67*1.5), the final overall assessment should be greater than **100.5** points. If the fishery reaches this value, and respects the minimum values established for each criterion and for each domain, it is suitable for this valorization. When the fishery has values below the proposed minimum assessments, measures should be taken to improve the necessary criteria.

Table_37 Distribution of proposed minimum scores

Domains	Score
Environmental	54
Fisheries management	25.5
Social	10.5
Economic	10.5
	TOTAL = 100.5