Assessment against the principles and criteria of the MSC for sustainable fishing, Southern Brittany's purse seine Sardine fishery

Sophie Des Clers, Didier D. Gascuel, Xavière Lagadec, Marie Lesueur, Olivier Le Pape

FINAL REPORT
ASSESSMENT AGAINST THE PRINCIPLES & CRITERIA OF THE MSC FOR SUSTAINABLE FISHING

SOUTHERN BRITTANY'S PURSE SEINE SARDINE FISHERY

ASSOCIATION DES BOLINCHEURS DE BRETAGNE

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Reference documents and MSC standard:
MSC Accreditation Manual Version 5, August 2005
MSC Principles and Criteria for Sustainable fishing, Nov 2002
Fisheries Certification Methodology (FCM) Version 6, Sept 2006
Fisheries assessment methodology (FAM) Version 1, July 2008 and Version 2, July 2009
MSC Chain of Custody Certification Methodology (CoC CM) Version 6, Nov 2005
MSC TAB Directives (All)

Done in Puteaux, 1st July 2010

SUMMARY

This report presents the result of the South-Brittany Purse-seine sardine Fishery assessment against Marine Steawardship Council Principles and Criteria. The client of this assessment is the “Association des Bolincheurs de Bretagne”.

The fishery covered by the assessment is managed by the French Committees for fisheries and marine farms (CRPMEM) supervised by the Producers Organization. The target species, Common sardine (*Sardina pilchardus*) is fished in the 12 nautil mile area in the ICESarea VIIe and VIIIa in the south of the 48°30' parallel (northern boundary) an d north of the border between the Brittany and Pays de Loire regions (southern boundary).
The vessels of the “Association des bolincheurs de Bretagne”, holder of a purse seine license are covered by the assessment.

BUREAU VERITAS CERTIFICATION, as the assessor was in charge of the assessment process.
This main fishery assessment took place in Brittany, with site visits and meetings in May/June 2010, and was undertaken by an assessment team comprising Xavière LAGADEC (team manager), Sophie DES CLERS (Expert on P3), Marie LESUEUR (Expert advisor), Didier GASCUEL (Expert on P1) and Olivier LE PAPE (Expert on P2).

Following the redaction of the Client draft report and its review by the client (July -October 2009), two peers reviewers (Gilles CAUVIN and Richard SABATIE) commented the report (November 2009).
The comments and recommendations of the peer reviewers were reviewed by the assessment team and the draft report modified accordingly, and issued on December 2009 for the public consultation.

Under each Principles the assessment team assessed the status, results, management and information of the target species (P1); of the retained, bycatch and ETP species, the habitat and ecosystem impact (P2) ; and of the fishery management (P3).
The three Principles have been scored above 80 (P1=80, P2=81, P3=82) and seven Performance Indicators get a score under 80.
The performance indicators scored under 80 were the 1.2.1 (75), 1.2.2 (75), 2.1.2 (75), 2.2.3 (65), 2.4.3 (70), 3.2.1 (60) and 3.2.2 (65). The assessment team set therefore 4 conditions for continuing the certification, that the client is required to address within a period no longer than the term of the certification and determined by the certification body.
The client the « Association des Bolincheurs de Bretagne », in collaboration with Regional Fishing Committee of Brittany notably, responded to the condition, by developing an action plan to meet the conditions in the specified time frame.

Accordingly to this, the assessment team recommends that the South-Brittany Purse seine Sardine Fishery be certified against the MSC Principles and Criteria for sustainable fisheries.

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1 Introduction

1.1 Purpose

A full assessment of south Brittany purse seine sardine fishery, against the MSC principles and criteria for sustainable fishing, was initiated by the Association des bolincheurs de Bretagne in January 2009 and is being conducted by the BUREAU VERITAS CERTIFICATION certification body.
This full assessment is conducted after a pre-assessment done in end of 2008.
The purpose of this report is to present the fishery assessment results.

1.2 Fishery certification unit

The MSC describes the certification unit as the fishery or fish stock (the biologically distinct population unit), combined with the fishing method/gear, the client practice (the vessels pursuing the fish of that stock) that is the subject of certification.

The beneficiary or client of this assessment is the Association des bolincheurs de Bretagne. All the vessels which are members of the Association des bolincheurs de Bretagne are covered by this assessment.

The purse seine sardine fishery certification unit assessed is defined as follows:

Target species: Common sardine - *Sardina pilchardus pilchardus*

Stock: North Atlantic sardine, from the southern Bay of Biscay to the North Sea and the English Channel, excluding the Mediterranean Sea

Fishing area: From 0 to 12 nautic mile ICESarea VIIe and VIIIa in the south of the 48°30' parallel (northern boundary) and north of the border between the Brittany and Pays de Loire regions (southern boundary)

Fishing method: Purse Seine (ring net) fishing, by the vessels members of the Association des bolincheurs de Bretagne, and holder of a purse seine license (List in Appendix 7).

Fisheries management authority: Fishing activities are managed by the CRPEM (Regional Committee on Brittany's fisheries and marine farms) and are supervised by the producer organizations, OPOB and PMA.

2 Assessment context

2.1 Assessment team

The assessment team consists of Xavière LAGADEC, the assessment team leader, and the experts Sophie DES CLERS, Marie LESUEUR, Didier GASCUEL and Olivier LE PAPE, and.

Sophie DES CLERS is an independent consultant based in London, and a quantitative ecologist and specialist in public policy issues concerning marine fisheries. Since 1981, she has been a coordinator and supervisor of multidisciplinary studies involving partners from industry, government, research organizations and NGOs. She is also an honorary research fellow in the Department of Geography of University College, London where she teaches and supervises Master's and PhD students.

Didier GASCUEL is a fisheries ecology professor at the Agrocampus Ouest fishing center. He has international experience in the assessment of fish stocks, in particular in tuna fisheries and demersal resources in West Africa, and has recognised expertise in bio-economic modelling of European fisheries. He has extensive experience in PhD supervision and was the coordinator for the Agrocampus Rennes of several European programmes, including the FAIR programme for the development of the BECHAMEL bio-economic model. In 2006, he obtained a Marie Curie international grant and was invited to work for a year at the Fisheries Center in Vancouver, where he developed the EcoTroph ecosystem model. He is currently head of the Fisheries and Aquatic Sciences Center (Pôle Halieutique Agrocampus Rennes), and is a member of STECF (Scientific Technical and Economic Committee for Fisheries).

Olivier LE PAPE is a teacher in marine and coastal ecology at the Fisheries and Aquatic Sciences Center of Agrocampus Rennes where he is in charge of training, after working for 12 years as a researcher in fish ecology. He conducts research into the habitats essential for the renewal of fisheries resources. In this context, particular attention is paid to coastal and estuary nurseries, or zones where there is a concentration of many species of young fish that, as adults, are prevalent throughout the continental shelf. Various approaches are adopted within this framework to identify these essential fish habitats, better understand their operation and monitor their quality. He has expertise in statistical analysis, modelling, physical-biological coupling, and quantitative mapping by combining habitat models and geographic information systems. Oliver Le Pape is, or has been, responsible for several national and European research projects on these topics.

Marie LESUEUR is an agronomist who has specialised in fisheries since 2002, and is a research engineer in the research and transfer section of the Agrocampus Rennes fisheries and aquatic sciences center. She participates in the development of the center's activities in various ways: coordination and implementation of the section's projects, project research, links with the other members of the center, relations with stakeholders in the fisheries sector (professional, administrative, scientific, etc.). She has expertise in data mining (in particular through surveys), in setting up computer tools (online atlas), in setting up, managing and monitoring projects, and in organising and coordinating meetings and working groups on topics related to the use of marine living resources, etc.

Xavière LAGADEC is an Agronomist who has specialised in fisheries since 2003, and is a project manager in Bureau Veritas. She is in charge of all the certification files for the seafood and aquaculture sector (different schemes). She is responsible for MSC certification and assessment (fisheries and guarantee chain). She has conducted several pre-assessments of fisheries under MSC criteria and participated in October 2008 in MSC training for certifying agencies, including fisheries assessment methods and the RBF risk analysis assessment method.

2.2 Other assessments

No assessments have been carried out previously on this Southern Brittany's purse seine sardine fishery.

The MSC recognises the need for consistency of approach and outcome when separate units of certification are fishing on the same stock, particularly when those units of certification are being certified by separate Certification Bodies.
Technical Advisory Board (TAB) Directive D-015(v2) of July 2008 covers the issue of harmonised fishery assessments. The intent of this directive is that Certification Bodies "assessing fisheries that have areas of overlap are required to ensure consistency of outcomes so as not to undermine the integrity of MSC fishery assessments."

The stock exploited by the South Brittany purse seine fishery is separated in two stock units distributed from Gibraltar to the North of Spain (Southern Atlantic sardine) and from the South of the Bay of Biscay to the North Sea and The Channel (northern Atlantic sardine).
There is a potential need, therefore, for harmonisation with any other MSC assessments of fisheries operating on this population. Concurrent with this assessment there were two other MSC assessments taking place on sardine in the north east Atlantic sector:

- The Cornwall Sardine Fishery, in United Kingdom (Cornwall sardine, UK) (Area ICES VIIe and VIIf)
- The purse seine sardine fishery in Portugal (ICES area VIII c and IXa).

According to the current ICES stock assessment delimitation, the Atlanto-Iberian stock is shared between Spain and Portugal. We have therefore not sought to harmonize our assessment with that for the Portugal Sardine.
However, targeting very probably the same biological stock, and in spite of the uncertainties regarding the degree of connection between both areas, it has been decided to conduct an harmonization of the assessments of Cornwall sardine and South-Brittany purse seine sardine fisheries.

The Cornish Sardine fishery is wholly prosecuted within the 6 mile limit off the coast of Cornwall and therefore falls under the domestic fishery management arrangements of England and Wales
This means that its management is completely separate from that of the South Brittany fishery, which is managed by Brittany's Regional Fisheries and Fish Farming Committee (Comité Régional des Pêches et des Elevages Marins de Bretagne).

Harmonization is therefore only required with respect to Principle 1, to ensure that the methods and outcomes for assessing target stock status are reasonably compatible and no significant inconsistencies exist.
The method and results of harmonization are described in the point 5.3

2.3 Assessment methodology

5.2.1 Reference standard

The MSC standard defines the principles and criteria for sustainable fisheries. It is presented in appendix 4, from which the definitions of the 3 following principles are extracted:

Principle 1
A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted; the fishery must be conducted in a manner that demonstrably leads to their recovery

Principle 2
Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Principle 3
The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

2.3.1 Methodology

The assessment methodology is based on the procedures and methods outlined in the MSC. It consists of the following general documents supplemented by specific guidelines.

General certifying procedure for the attention of the certifying agencies:
- Fisheries Certification Methodology (FCM) Version 6, Sept 2006

Fisheries assessment and scoring methodology for the attention of the certifying agencies:
- Fisheries assessment methodology (FAM) version 1, July 2008 and version 2, July 2009 (only for the points assessed by the RBF risk analysis method)
- Risk-based framework (RBF) and guidance to certification bodies, version 1, February 2009 (risk analysis assessment)

2.4 Assessment process

2.4.2 Fishery assessment steps

Further to the Pre-assessment of the south Brittany purse seine sardine fishery led by BUREAU VERITAS CERTIFICATION in October / November, 2008, the Association des bolincheurs de Bretagne, in view of the results, decided to enter a full assessment of its fishery against the Principles and Criteria of the MSC.

The public announcement of this full assessment was done on the MSC website on February 10th, 2009.

Then the following assessment steps were regularly notified to stakeholders and published on MSC web site.

Date	Content	Means
11th February 2009	Announcement of the fishery full assessment	MSC web site
26th March 2009	Proposed and confirmation of the assessment team members	
26th March 2009	Announcement of the use of the standard scoring tree	
23rd April 2009	Announcement of the use of RBF/risk analysis	
March-May 2009	Stakeholders asked to participate in the assessment	MSC web site, e-mail and phone
23rd April 2009	Confirmation of stakeholder consultation and onsite visits	
26 and 27 May 2009 and May-June 2009	Assessment visits and interviews	Interviews, e-mail and phone
June / July 2009	Synthesis, scoring meeting, redaction by assessment team	Meeting / assessment team
31th July 2009	Draft report issue for client review	Interviews, e-mail and phone
1st & 10th October 2009	Nomination an d approbation of reviewers	MSC web site
12th & 15th November 2009	Peer review of draft report	Interviews, e-mail and phone
1st December 2009 – 6th January 2010	Issue of the Public comment draft report for public consultation	MSC web site
January-March 2010	Review of the public comment draft report and response to stakeholders comments	Interviews, e-mail and phone
April 2010	Issue of Public comment draft report reviewed	MSC web site

2.4.3 Stakeholder consultation

Having been identified during the pre-assessment or having expressed an interest after the assessment announcement, stakeholders were questioned through written and verbal correspondence and assessment inspections. The information and evidence thus gathered provided the assessment team with the data needed to assess the fishery and establish a score in accordance with the MSC criteria.

The inspections and interviews were carried out in accordance with the following agenda at Concarneau, Quimper, Lorient and Le Guilvinec:

Date	Stakeholder	Representatives
May 26, 2009	Association des bolincheurs de Bretagne	Didier LE GLOANEC, Jean-Jacques BERROU, Patrice PEYTIOT
	Local committee for Concarneau fisheries	Didier GOUYEC, President
	Regional fisheries committee	Gérald HUSSENOT
	Maritime affairs	Francis KLETZEL
	Iroise marine natural reserve	Philippe LE NILIOT
	Local committee for Douarnenez fisheries	Bruno CLAQUIN
	Federation of local committees for Finistère fisheries	Thierry GUIGUE
May 27, 2009	OPOB	Pascal BOCCOU, André GUEGUEN, Christian SCUILLER
	Local committee for Guilvinec fisheries	Robert BOUGUEON, René Pierre CHEVER
	Normapêche	Isabelle LETELLIER
	PROMA / PMA	Yves FOEZON, Nolwenn GACE RIMAUD, Julien LAMOTTE
	National fisheries committee/Anchovy and sardine committee	Ludovic LE ROUX

In addition, telephone interviews with assessment team leader and experts, and written exchanges took place as follows:

Date	Stakeholder	Representatives
9 to 18 June 2009	Local committee for Audierne fisheries Association des Ligneurs de la pointe de Bretagne	Gilles BERNARD
	CCI Quimper Cornouaille	Philippe LE CARRE
	IFREMER	Jacques MASSE, Erwan DUHAMEL
	HALIOS –Brittany fishermen	Erwan CROLARD
	FURIC MAREE	Xavier et Gérard COLIN
	WWF France	Charles BRAINE
	Chancerelle cannery	Frédéric BERGUES
	CRPMEM, Brittany	Jacques DOUDET

The publication of the draft assessment report was made on December 1st, 2009, for a one month public consultation period until January 6th, 2010.

After the consultation period, the remarks of the stakeholders were included into the report and a response given. The stakeholders' comments as well as answers given are displayed in appendix 4.
To take into account these comments, and in view of the evolution of the context of the fishery since the period of assessment, the report was completed and the scoring the evolution of the scoring is resented point 5.4.1.

The second consultation period took place from the 8th of June until the 28th of June 2010. The comments received by the MSC during this consultation and the response of the assessment team are presented in appendix 5.

3 Assessed fishery context

3.1 Presentation of the target species

5.2.1 Species

The classification of the sardine species corresponds to the vertebrate's branch, the osteichthyes class (bony fish), the actinopterygii sub-class, the thymallinae order, the clupeidae class and the clupeidae family. This family includes pelagic seawater fish and freshwater fish such as shad, herring and sardines. Seawater species of sardines include 3 types: *Sardina, Sardinops and Sardinella*. In the Sardina type, there is only one species, the Sardina pilchardus (Coiffec, 2006; Laurent, 2005).

On the basis of different morphological characteristics, two subspecies are commonly accepted: *Sardina pilchardus pilchardus and Sardina pilchardus sardina*. The preferential habitat of the *Sardina pilchardus pilchardus* is normally from the Portuguese coast to the British Isles while the *Sardina pilchardus sardina* prefers the Mediterranean Sea and the African Atlantic coasts (Laurent, 2005).

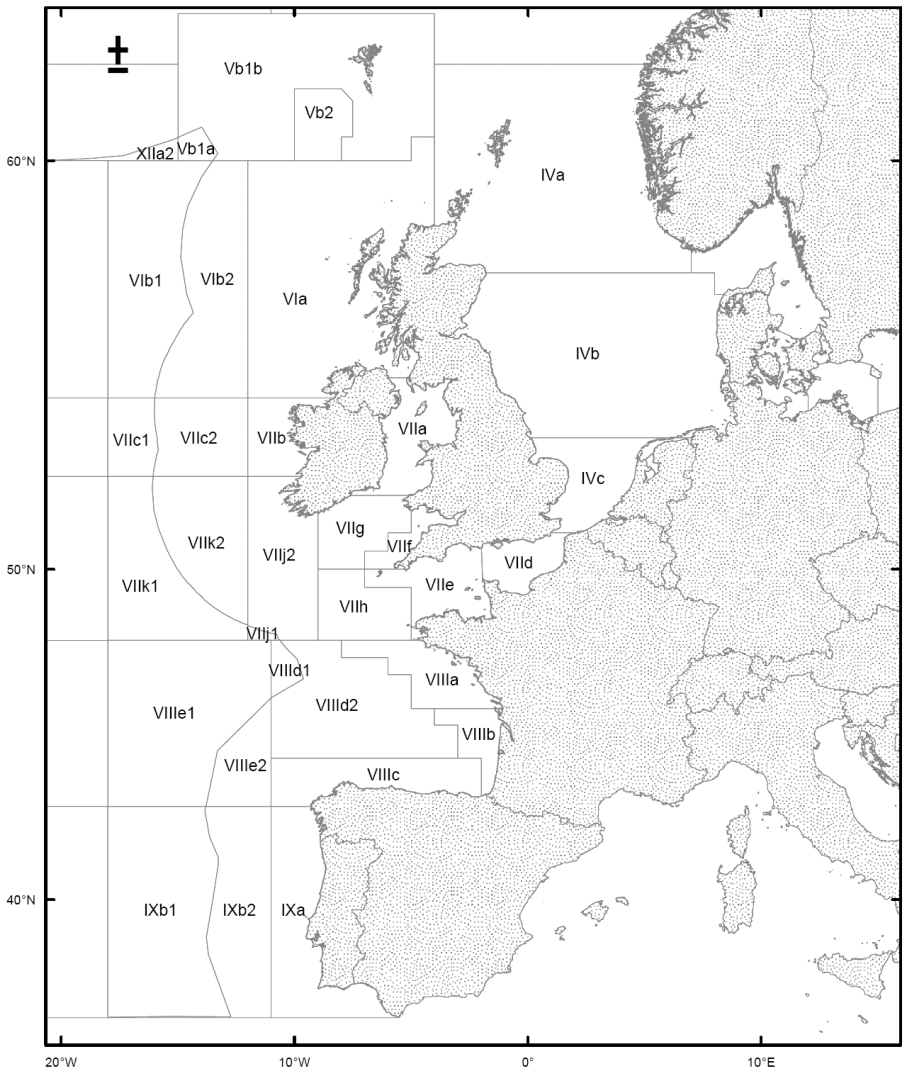

Figure 1. ICES zones

Within the Atlantic *Sardina pilchardus pilchardus* subspecies, there are two subpopulations considered as two separate stock units (Forest, 2001) (Figure 1 &2):

- the Iberian or southern Atlantic sardine which is found from Gibraltar to the north of Spain (ICES zones IXa and VIIIc)
- the North Atlantic sardines, which are found from the southern Bay of Biscay to the North Sea and in the English Channel.

It must be noted that only the stock of the first unit is assessed by the ICES.
The second unit, which is the subject of PELGAS campaigns and biomass assessments, is, however, monitored by ICES working groups without being subject to stock assessment or formal management measures.

The Southern Brittany's purse seine sardine fishery assessed here thus fishes the northern part of the Atlantic species stock.

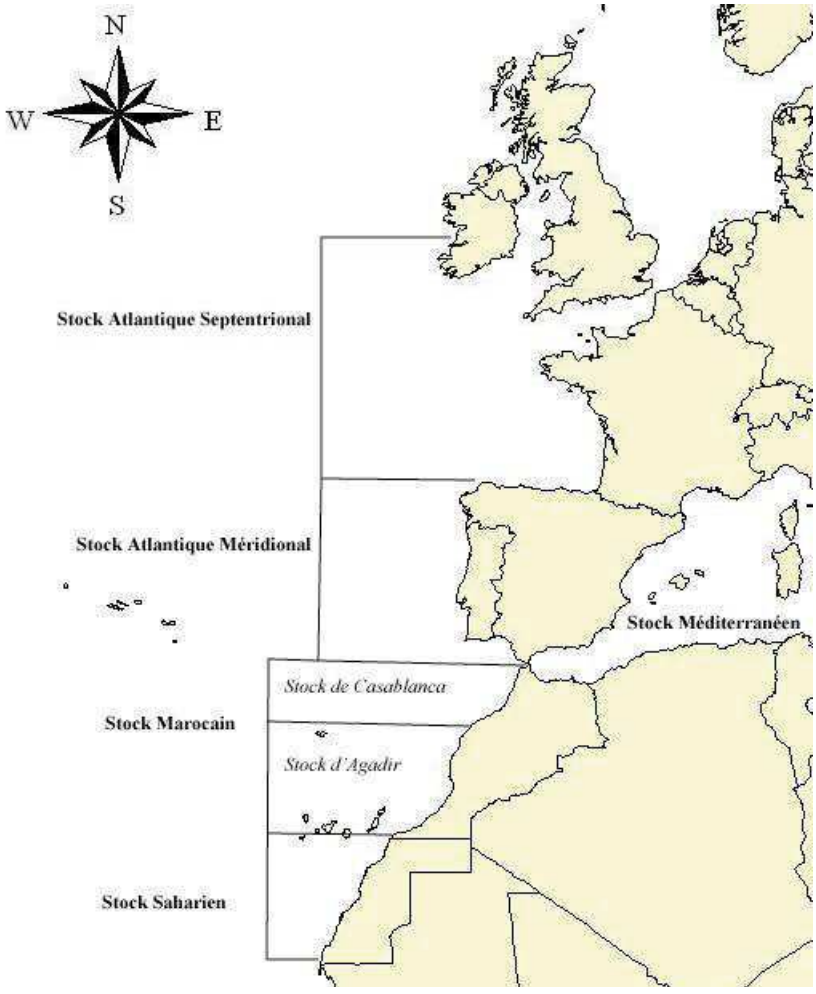

Figure 2. Boundaries of the sardine stocks based on meristic and morphometric data (Laurent, 2005)

Legend:

Stock Atlantique Septentrional	*North Atlantic stock*
Stock Atlantique Méridional	*South Atlantic stock*
Stock Marocain	*Morocco Stock*
Stock Saharien	*Sahara Stock*
Stock Méditerranéen	*Mediterranean Stock*
Stock d'Agadir	*Agadir Stock*
Stock de Casablanca	*Casablanca Stock*

In its work of 2005, about the genetic structure of European populations of sardines, and in light of genetic data, Laurent proposed a shift in the boundary between the two Atlantic stocks, moving the distribution of the North Atlantic stock further south of the Iberian Peninsula (Figure 3).

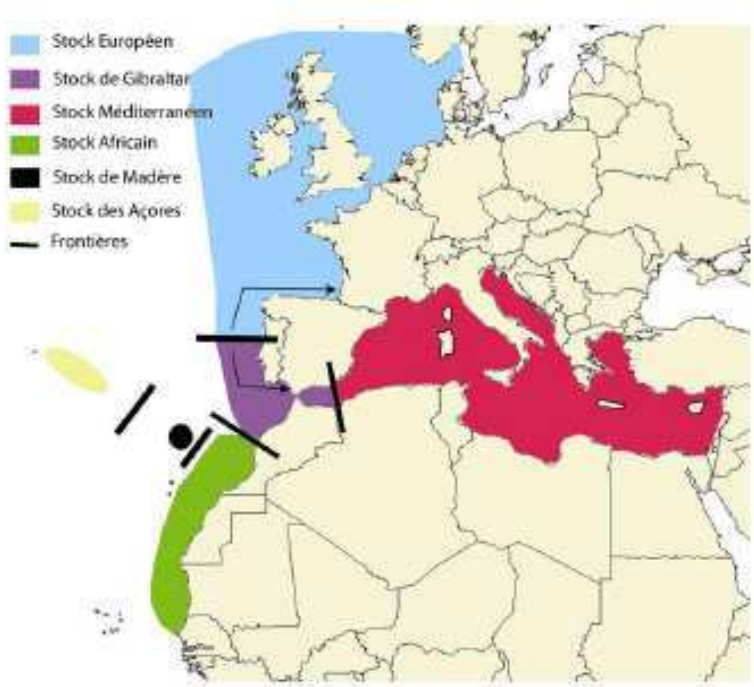

Figure 3. Delimitation proposition for sardine stock, from genetical data (Laurent, 2005).

3.1.4 Biology

The Atlantic sardine is a small pelagic, neritic species with a diet consisting of phytoplankton and zooplankton, mainly copepods. The Bay of Biscay sardine measures 13 to 25 cm and has a lifespan of up to 10 years.

Sexual maturity is reached at a size of between 10 and 20 cm and the species spawns throughout the year, with two peaks in spring and in autumn/winter. Individuals from spawning in spring and autumn are mature in spring and autumn respectively of the next year. A female can lay up to 60,000 pelagic eggs that float at a depth of between 10 and 70 m, hatch 2 to 4 days after being laid and give birth to larvae 4 mm long which produce juvenile sardine after 12 days. The juveniles then return near the coast and stay there until the start of winter (Laurent, 2005).

The sardines caught by purse seiners are mostly 10 and 20 cm in size, with the smaller size being well suited to the cannery market, and the larger size to the fresh fish market. The 10/20 category, targeted by purse seiners, corresponds to adults with a size greater than 17 cm (Table 1).

The PELGAS campaign realized every year in spring allows observing in this period small and young sardine near the coast and the biggest and older offshore (Masse, Duhamel, 2009).

Categories	Number of individuals per kg
10	Less than 15
20	16 to 24
30	25 to 35
40	36 to 67

Table 1. EC size, whole or gutted fish

3.1.5 Behaviour

The Atlantic sardine is a gregarious species whose distribution depends on water temperature, light intensity and quantity of food. At night, it is fairly dispersed between the surface and a depth of 35 m, and during the day it forms dense shoals at a depth of between 30 and 35 m (Laurent 2005).

In the same way, the areas of laying are influenced by the seasonal variations which impose migrations on sardines (Furnestin, 1943).

The superficial temperature of the sea and the winds also influence the availability of the sardine, the bad yields being associated in the cold years and conversely (Villalobos Ortiz, on 2008).
Indeed, Villalobos reminds the link between cold periods and the main sardine crises in 1880/90 and 1900/10, whereas the maximum peak of capture was obtained in period of reheating between both crises.

Shoals may include individuals of different age and sex but of equivalent size, and highly abundant shoals tend to be monospecific. If, however, sardines are less abundant, shoals tend to include several species of small pelagic fish, in particular anchovies and/or horse mackerel (Laurent, 2005).

3.1.6 Ecosystem

The area of activity of the south-Britanny purse seine sardine fishery is situated on the North of ICES areaVIIa “North Bay of Biscay” in the South of the ICES area VII “West Channel”.
The sardine (*Sardina pilchardus)* stock exploited by the fishery is the “South northern Atlantic stock”, distributed from the Bay of Biscay to the North Sea and Channel area.

The Bay of Biscay is an oceanic bay opened on the West and in the North towards the Atlantic Ocean. It is bounded in the East by the French Atlantic Coast and in the South by the Spanish north coast. It is extended from south to north between the 43°20'N latitudes and 48°N, on a 500 km length.

Main pelagic fish, essential component of the marine ecosystem of the Bay of Biscay, captured in this sector are the sardine (*Sardina pilchardus*), the anchovy (*Engraulis encrasicolus*), the common mackerel (*Scomber scombrus*), the blue whiting (*Micromesistius poutassou*) and the chinchard (*Trachurus trachurus*) (Villalobos, on 2008).

Although few studies specify it, the main predators whose sardine constitutes a part of the diet are the big pelagic (tuna), of which albacore tuna, the hake, the haddock, the whiting, the sea bass…

The top predators of this pelagic ecosystem are surveyed during PELGAS campaigns. The most frequent birds and mammals’ species are: black-backed gull (*Larus sucus*), the Gannet (*Morus bassana*), herring gull (*Larus argentatus*), northern fulmar (Fulmarus glacialis) and the guillemot (Uria aalge) as well as common dolphin (Delphinus delphis), bottlenose dolphin (Tursiops truncatus), the pilot whale (Globicephala melas) (Massé, Duhamel, 2009).
The impact of the fishing activities or the competition for preys such as the sardine or the anchovy can make some of these species vulnerable.

The impact of the south Brittany sardine fishery on the ecosystem is assessed through the principle 2.

3.2 Fishery history

From the eighteenth century onwards, Brittany took the ascendancy in landing more than half of French production of sardines. New ports sprang up, while others grew larger. In 1717, the whole economy of Douarnenez, which was considered as the high quality sardine capital, was based on sardines. In 1759, Belle-Ile's only trade was in sardines.

At the end of the eighteenth century, more than 15,000 people in Brittany earned their livelihood from sardines: fishing, processing (presses) and selling.
At the end of the nineteenth century, the activity of the Brittany coast was based on the sardine industry.
A serious crisis (sardines deserting the Brittany coast) took place between 1902 and 1909. Nevertheless, in 1910, 3,700 vessels and 20,000 fishermen still fished sardines between Camaret and Le Croisic, providing work to some 30,000 people in the canneries. In 1935, Douarnenez was still the emblematic sardine port, landing around 6,000 out of the 15,600 tonnes of fish landed in Brittany, a production significantly greater than the production of all the other regions taken together (Ifremer).

While improvements to ships were encouraged, innovations in nets were systematically opposed. The use of seines at the end of the nineteenth century was considered by some to be responsible for shortages of sardines, in particular during the period 1902-1909. This period also gave rise to the smuggling of sardines caught in Spain. The large Belot seine, which was highly contested and difficult to manoeuvre, was abandoned. In 1882, the Guezennec seine hit the headlines. Quarrels lasted fifty years before the seine was finally authorized in 1932. The net, used along the coasts of Spain, and out into the Bay of Biscay, was of a new rotating type called the purse seine.

When the pelagic trawler appeared, the number of purse seiners significantly decreased. But, since 1995, their number has increased each year and the tonnage they land has been steadily increasing, reaching 14,000 tonnes in 2005, or 96% of the French landings in the Atlantic, compared with 50% in 1996. In the Bay of Biscay, fishing for sardines using the pelagic trawler has once again become marginal.

3.3 Scientific stock assessment

5.2.1 Fisheries data collection

Ifremer fisheries data collection is organized on the basis of various actions as described in Figure 4, under government responsibility (DPMA, Maritime Affairs) or Ifremer responsibility.

The data collected by the government (DPMA, Maritime Affairs) and sent to Ifremer, or directly by Ifremer are organized as administrative data, sales declaration data and scientific trials data.

In Europe, under the Common Fisheries Policy (CFP), vessels 10 meters long or more are required to declare their catch and their fishing effort (fishing time, number or size of fishing boats, fishing sector, etc.) in a log book (EC Regulation 2847/93 on CFP monitoring procedures). It is the case for all the vessels of the fishery under assessment; they are all superiors to 10 m. Although vessels under 10 meters long are not subject to this community requirement, nationally, they are required to fill in fishing forms, stating the same information. All these documents are centralized by the Maritime Affairs department and entered by FranceAgriMer (formerly OFIMER). Data are stored in the DPMA fisheries and fish farming information system (SIPA) and then sent to Ifremer.

Sales, recorded by the inter-auctions network (RIC) managed by FranceAgriMer, are sent to Ifremer. These data include the auction sales figures of each vessel (volume and value of landings by species).

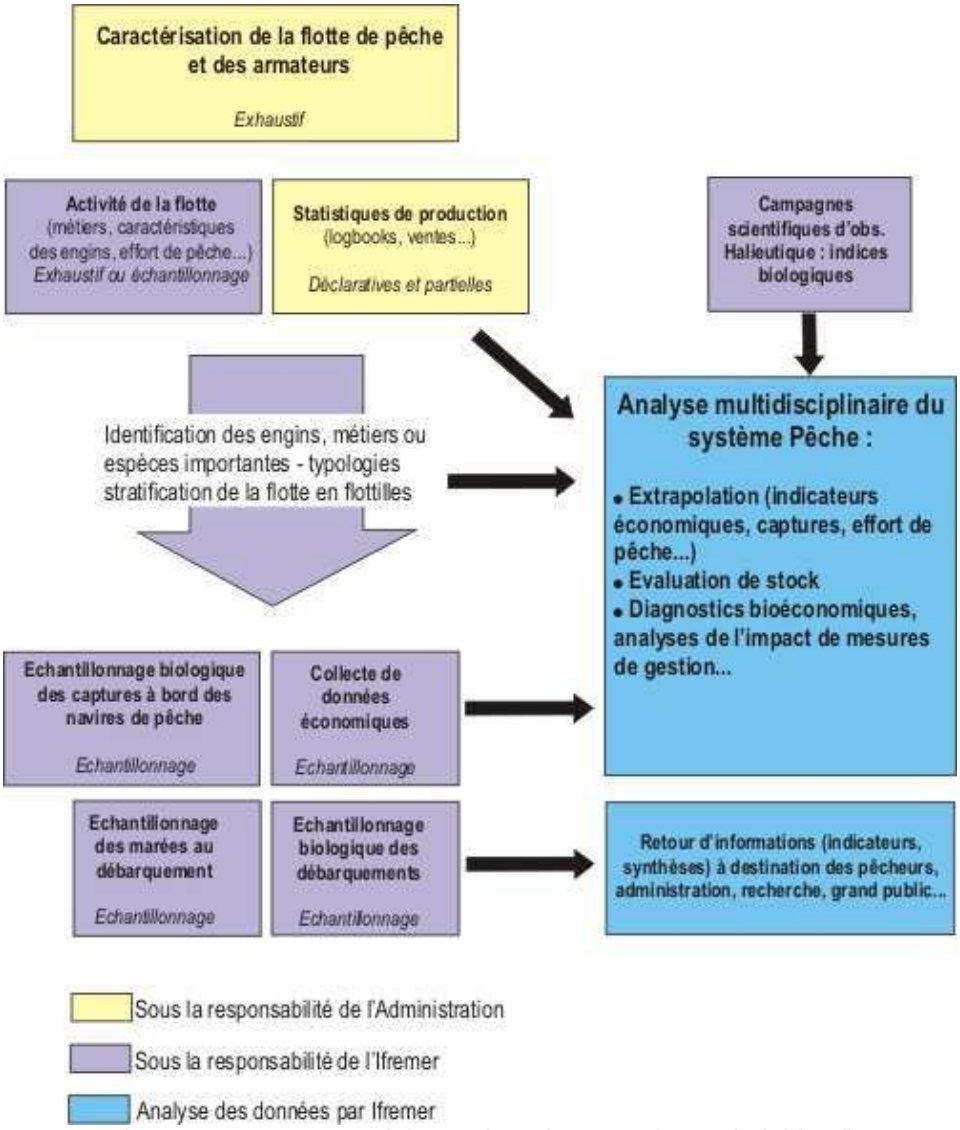

Figure 4. Data mining actions (source: Ifremer/E leblond)

Legend translation :

Caractérisation de la flotte de pêche et des armateurs	Fleet and boat owner characteristics
Activité de la flotte (métiers, caractéristiques des engins, effort de pêche…)	Fleet activity (trades, technical characteristics of machinery, fishing effort…)
Exhaustif ou échantillonnage	Comprehensive or sampling
Statistiques de production (logbooks, ventes…)	Pro duction statistics (logbooks, sales…)
Déclaratives et partielles	Declaration data and partial data
Campagnes scientifiques d'obs. Halieutique : Indices biologiques	Observation scientific campaigns. Halieutic research: biological data
Identification des engins, métiers ou espèces importantes – typologies stratification de la flotte en flottilles	Machinery identification, trades or important species – typologies, fleet stratification into smaller units
Analyse multidisplinaire du système Pêche :	Fisheries system multidisciplinary analysis
Extrapolation (indicateurs économiques, captures, effort de pêche…)	Extrapolation (economic indicators, catches, fishing effort…)
Diagnostics bioéconomiques, analyses de l'impact de mesures de gestion…	Bio-economic diagnostics, management measures impact analysis
Echantillonnage biologique des captures à bord des navires de pêche	Biological sampling of catches aboard the vessels
Echantillonnage biologique des débarquements	Landings biological sampling
Retour d'information (indicateurs, synthèses) à destination des pêcheurs, administration, recherche, grand public	Feedback (indicators, synthesis) to fishermen, authorities, research and general public
Sous la responsabilité de l'Administration	Under government responsibility
Sous la responsabilité de l'Ifremer	Under Ifremer responsibility
Analyse des données par Ifremer	Data analysis by Ifremer

3.3.7 Sardine assessment

The sardine is not subject to quotas or TACs, and only technical measures such as a minimum catch size (11 cm) are applied. In addition to these measures, local management rules are enforced by the Brittany Regional fisheries committee.

The Atlantic stock as a whole is not subject to ICES assessment, but the abundance in the Bay of Biscay is monitored annually by an assessment campaign carried out before the start of the fishing season, by Ifremer.
These Ifremer PELGAS survey campaigns involve acoustic tracking through integration, supplemented by the hauls made each spring for 9 years (usually in spring) in the Bay of Biscay aboard the French research vessel Thalassa. These campaigns are carried out as part of Ifremer's fisheries ecology programme on the variability of resources. The objective of these PELGAS surveys is to study the abundance and distribution of pelagic fish in the Bay of Biscay. The target species are anchovy and sardine, considered in a multi-specific context. The results are used by the ICES working group, responsible for assessing the stocks of sardine, anchovy and mackerel.

During the campaign, observations were made in a standardized radial network, from the Spanish coast to the tip of Brittany (Figure 5):

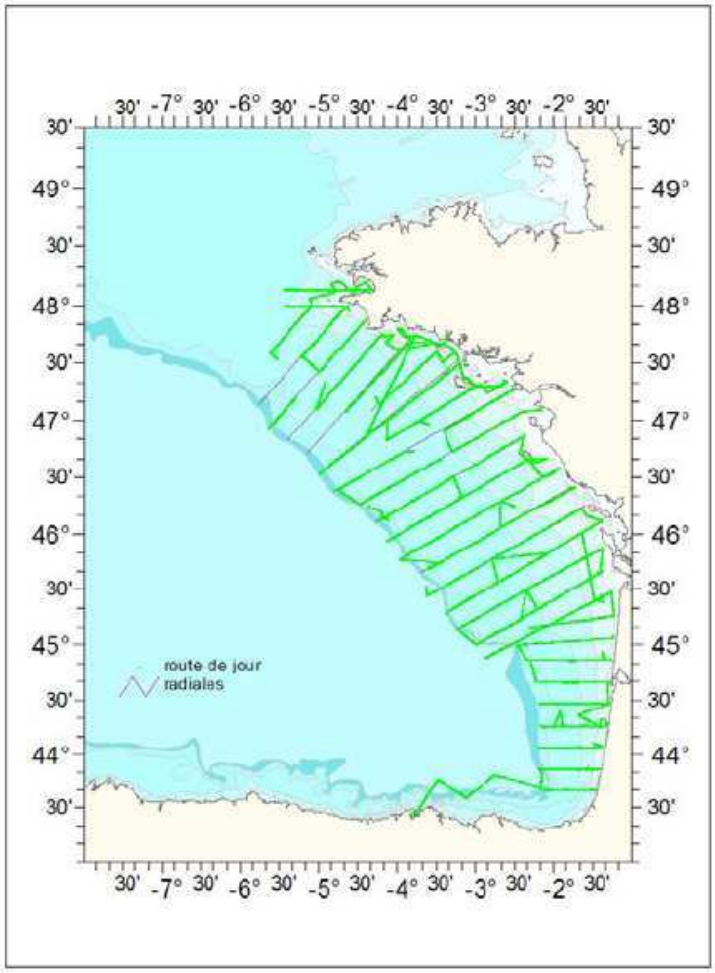

Figure 5. Map of Pelgas 09 campaign radials

The following are carried out

- Continuous observations by day, through acoustic prospecting associated with trawling, to identify the detected species and gather a number of biological parameters;
- Night observations, by fishing for plankton and by taking CTD vertical profiles to obtain measurements of physical parameters (temperature, salinity, etc.);
- Other tests are performed during these campaigns, and in particular the surveying of egg distribution through the CUFES (Continuous Underwater Fish Eggs Survey) pumping system and the identification of the top predators (birds and marine mammals).

These in situ measurements are combined with satellite imagery and hydrodynamic models developed by Ifremer as part of its coastal operational oceanography research. All these data provide a better understanding of the dynamics of the pelagic environment and its resources.

The biomass of the population of sardines fished is estimated during PELGAS campaigns by analysis of echo sounder radials and associated trawling (Table 2). This biomass does not seem to show any signs of weaknesses requiring the strengthening of management efforts. However, to provide better knowledge of the exchanges between sub-stocks (Brittany, Bay of Biscay, Portugal, Spain, Morocco, Mauritania), and fishing impacts, the ICES working group on "sardines, anchovies and mackerel" recommends the maintaining of the PELGAS campaigns (also used in the assessment carried out on anchovies).

It can be noticed that, the biomass estimate of sardine observed during PELGAS 2009's campaign (results obtained at the end of the assessment process) is 479 684 tons in ICES area VIIIa,b (cv 0,098) wich is one of the highest level of the PELGAS series.

It must be noticed that the number of age 1 this year is still important, and implicates a good recruitment of the 2008 year class. The high abundance of age 2 confirms the good recruitment of the 2007 year class that we observed last year.

Biomass (tonnes)	2000	2001	2002	2003[1]	2004	2005	2006	2007	2008
VIIIa	240 250	337 378	331 368	97 499	249 062	191 495	123 101	56 125	75 773
VIIIb	136 192	46 137	232 512	13 735	247 309	243 792	111 027	70 112	384 954
Total	376 442	383 515	563 880	111 234	496 371	435 287	234 128	126 237	460 727
CV	0.083	0.117	0.088	0.241	0.121	0.135	0.117	0.159	0.139

Table 2. Biomasses estimated by the PELGAS campaigns per year and ICES area (source: ICES 08)

(1 : Due to abnormal temperature conditions during the campaign, the 2003 data should be taken with caution)

As the PELGAS campaigns are done at the south of the 48°N, all the sardine stock area repartition isn't covered. In their 2009 report destinated to ICES working group, Ifremer scientist tell that it must be enhance that these surveys don't cover the total area of potential presence of sardine. It is possible that some years, this species could be present up to the north, in the Celtic sea, SW of Cornouailles or Western Channel where some fishery occurs, apparently more and more.
The estimate is representative of the sardine present in the survey area at the time of the survey and can be therefore considered as an estimate of the Bay of Biscay (VIIIab) sardine population (Masse, Duhamel 2009)
The way of this partial estimation, identified during the discussions with IFREMER is that the estimation of biomass from PELGAS campaigns is a low estimation of the total biomass of the stock.

In 2009, the area covered during the campaign moved a little more in the North, covering the fishing activity area of the purse seiners in its quasi-totality.
However in order to increase the representativeness of the campaigns and the cover of the stock distribution area, it is planned for 2010 and 2011, to initiate joint campaigns with the CEFAS (Center for Environment, Fisheries and Fish farming Science).

The Anchovy and Sardine workgroup of the CIEM recommends and considers in its June 2009 report, the possibility of extend in the future, sardine stock assessment in ICES area VIIIa, b and some parts of the ICES areaVII.
Furthermore it recommends widening the surveillance area to Celtic sea and English channel. Today the ICES recommendations concern sardine only on ICES area VIIIc and IXa

3.4 Fishery activity

5.2.1 Fleet

At the time of the assessment, the purse seine fleet operating this fishery consists of 20 active vessels (out of the 23 licenses granted in 2009) with an overall length of less than 17 m (with the exception of two older vessels less than 21 m long), registered in the maritime districts of Douarnenez (1) Le Guilvinec (10) and Concarneau (9) (figure 6).

Each purse seiner, is provided with refrigerating tanks, and embarks on average 6 people, for tides ranging from a few hours to a day. Vessels start fishing at the end of the afternoon or in the evening and land the next morning.

Figure 6. Cornish fishing ports (the St. Guenole port quoted below is located in Penmarch)

3.4.8 Fishing area and period

Sardine fishery is a particularly seasonal activity. Although distributed virtually throughout the year, 85 to 92% of catches are landed from May to October.
The fishing area extends up to several miles offshore, principally in the 12-mile coastal strip in the ICES areas VIIIa (sectors 25E5 in the bay of Douarnenez and 24E5 off St Guenole) and VIIe (24 and 23 E6 off Concarneau) (Figures 1 and 7).

Figure 7. Map of the Southern Brittany's purse seiners' fishing area (source ec.europa.eu)

3.4.9 Sardine catches

The variation in French sardine catches (ICES areas VIIIa, VIIIb and VIIe), more than 90% of which are done by Southern Brittany's purse seiners, the remaining 10% being done by pelagic trawlers operating further offshore, has shown a steady increase in catches for several years.

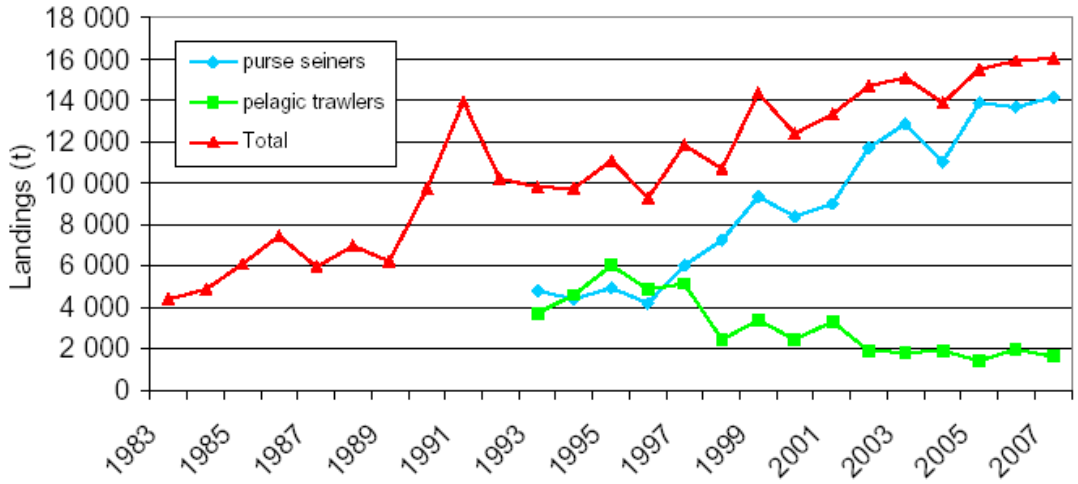

Figure 8. Variation in French sardine catches in area VIIIa and b until 2007 (ICES source)

Note (source ICES): A substantial part of the French catches originates in divisions VIIh and VIIe, but these catches have been assigned to division VIIIa due to their very concentrated location at the boundary between VIIIa, VIIh and VIIe.

It can be seen that, taking the whole Bay of Biscay, the share caught by purse seiners has shown a marked increase for several years (figure 8). In 2008, 10% were caught by pelagic trawlers operating further offshore. The data collected by the OP, corresponding to the captures of sardine made in ICES area VIIIa and VIIe also reflect this increase

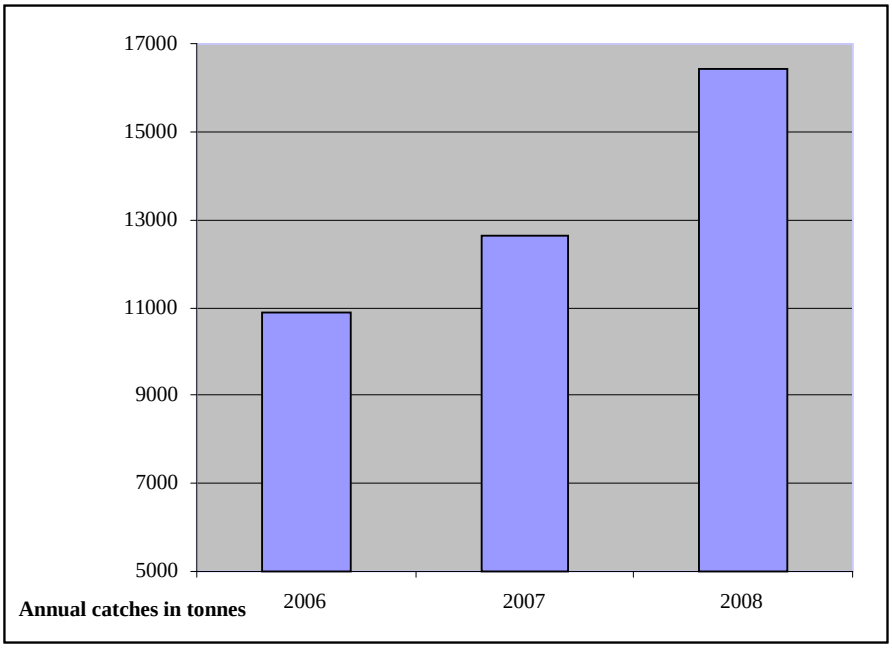

Figure 9. *Variation in sardine catches by Southern Brittany's purse seiners in ICES area VIIIa and VIIe(OPOB, PMA data)*

Given the fishing areas and the home ports of purse seiners, landings are mostly made for the St. Guenole (50%) and Douarnenez (30%) auctions and, to a lesser extent, the Concarneau auction (15%). The 5% remaining catches are landed in Loctudy, Le Guilvinec or Audierne auctions.

On completion of the analysis carried out during this assessment, it appeared that the catch data used by ICES are consistent with the other data collected (auction sales data from the statistical system, Figure 9, production provided by the producer organizations).
The data of the OP of south Brittany, that not take into account the captures in south Biscay, are noticeably lower than the data collected by the CIEM. However, these variations do not question the analysis of the global evolution of captures

On the basis of the assessed fishery, the Southern Brittany's purse seiners' annual sardine catch data (figure 9) have also increased over the past 3 years, from 11,000 tonnes in 2006 to over 16,000 tonnes in 2008, for a stable number of more or less 20 active vessels.

3.4.10 Other species caught

Although sardines represent almost 90% of annual catches (over 95% of catches between May and October) done by purse seiners, other species are also caught.

The main species caught, their proportion in purse seiner catches and the periods of abundance are shown in table 3.

Catches of species other than sardines are mostly done from January to April, when sardines are less abundant.

Species caught	% distribution	Main catching period
Sardine (*Sardina pilchardus)*	86,51	May to October
Horse mackerel (*Trachurus trachurus)*	8,71	Throughout the year
Mulet (*Mugil cephalus*)	2,37	January to May
Mackerel (*Scomber scombrus)*	0,79	May to October
Black bream (*Spondyliosoma cantharus)*	0,61	January to March
Yellow mackerel (*Caranx rhonchus)*	0,46	November to March
Bass (*Dicentrarchus labrax*)	0,33	January to March
Sea bream (*Sparus aurata)*	0,15	January to March

Table 3. Species caught by Southern Brittany's purse seiners(source OPOB, PMA, average of the last 3 years)

For less than 1% of catches, the catching of sars, sprat and sandeel can also be noted.

Before than the Bay of Biscay anchovy (*Engraulis encrasicolus*) fishing was closed in 2005, purse seiners also retained this species from mid-September to late October for an annual average production of 1,000 tonnes. They had rights to 10% of the annual quota reserved for catches in the Bay of Biscay and achieved less than half of this.

Every year since 2005, the Bay of Bicay anchovy fishing closure, bring out a 1 to 2 month stop periods for the majority of the purse seiners.
These stops are individual decisions of each vessel, and are helped by financial compensations on behalf of the state.

Because of the stops periods (in 2009, the deadline of stop for purse seiner was on November 30th, 2009), and the overlapping of the sardine and anchovy fishing seasons, it seems that the anchovy fishing closure did not have as consequence a direct and total transfer of the fishing effort to the sardine fishing effort.
The evolution of the captures of sardine since 2005, however answers to a very favourable evolution of the market.

And finally, purse seiners have not been allowed to catch red sea bream since 2008.

3.4.11 Iroise Marine Reserve and Natura 2000 areas

The Iroise Marine Reserve was created in September 28th, 2007, by the decree n°2007-1406.

The state, the regions, and other local organizations that join to the management of the marine natural reserve, must be vigilant to the coherence of their actions and of the means which they dedicate to it,

in the respect for the following orientations of management:

1-Deepening and distribution of the knowledge of the marine ecosystems
2-Keep in a good state of preservation the protected, rare or threatened species' populations, and their habitat
3-Reduction of the pollutions of ground origin as well as the risk of diffuse or accidental maritime and harbour pollutions
4-management of material extraction activities
5- Sustainable exploitation of marine resources
6-Support of the professional coastal fishing
7- Sustainable exploitation of seaweeds
8-Support for the maritime activities on islands to maintain a population of permanent inhabitants
9-Conservation and valuation of the landscaped, architectural, maritime and archaeological heritage, in particular submarine, and the local knowledge
10- Reasonable development of tourism, nautical activities and by the leisure activities, compatible with the protection of the marine ecosystems

Points 5 and 6 put in narrow link the management of the marine Reserve and the sardine fishery in south Brittany, among which a good part of captures is done.

The limits of the reserve recovering the North of the purse-seiners fishing area is presented on figure 10.

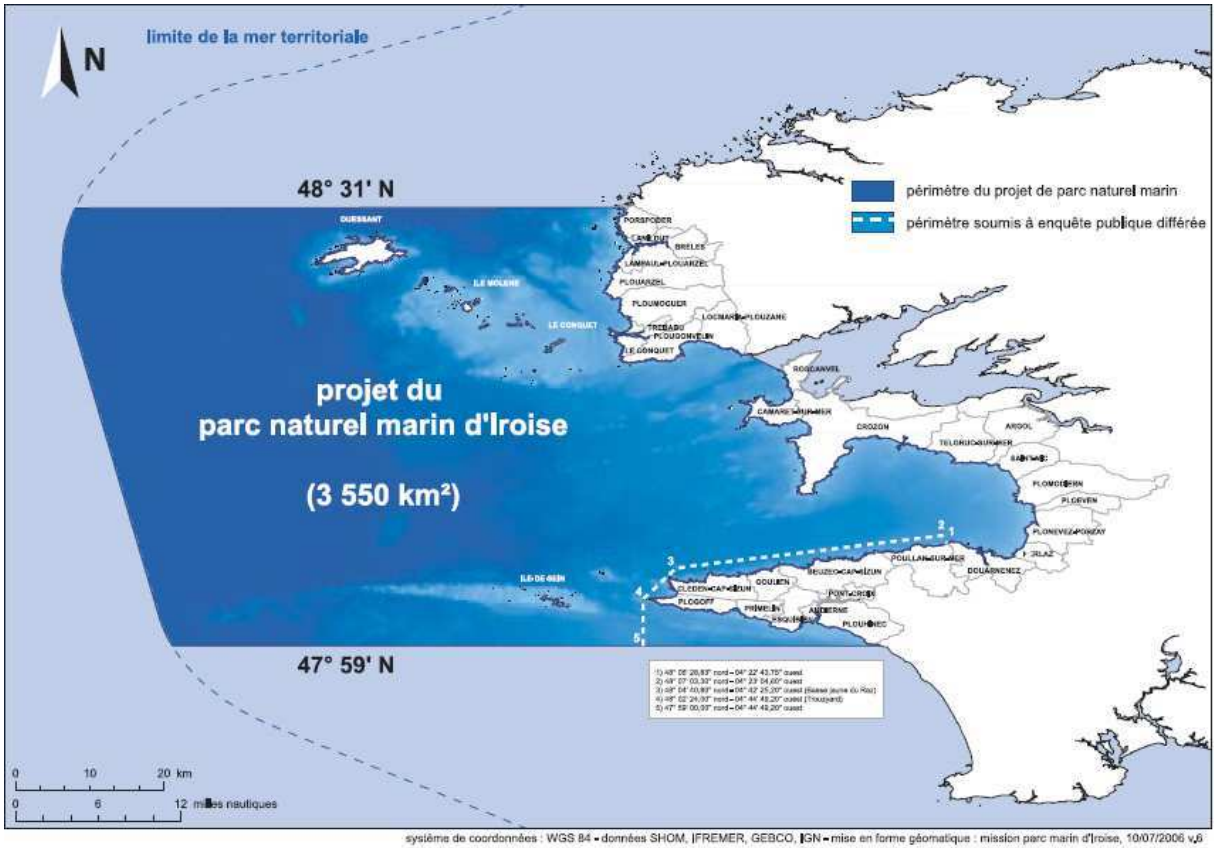

Figure 10. Limits of Iroise Marine Reserve

The network of Natura2000 protected area offshore, according to the directive Birds or Habitat environments, covers or will cover a wide part of the purse-seiners fishing area, in the South of the Iroise Marine Reserve, off the Finistere's coast.

As the rules and objectives of these areas were not all being defined, the consequences on the purse-seiners activity are not still quite known, but the current studies are followed by professional organizations.

The outcomes of impact studies on bird or habitat realized within the framework of Natura2000 areas, will allow the data collection and the improvement of the knowledge on the impact of the fishery.

Within the framework of the Marine reserve, the law of April 14th, 2006 on the marine natural reserves, foresees in particular that when an activity may distort in a considerable way the marine environment of a marine natural reserve, the authorization to which it is subjected can be delivered only by the Agency of the protected marine areas or, on delegation, from the management council.

Then, the purse-seiners activity in the reserve is studied and integrated into the action plan of the Reserve. For that purpose, a recent study of the IFREMER displayed a current inventory of the purse-seine fishery in the perimeter of the reserve.

4 Fishery management system

4.1 Statutory context

The management of purse seine sardine fishery, done exclusively in 12 mile territorial waters, is considered a coastal fishing and is governed by national authorities supervised by the Common Fisheries Policy (CFP) at European level.

As regards Community rules, article 2 of EC regulation No. 2141/70 of 20 October 1970 first laid down the principle of sharing, as regards fisheries in all maritime waters within the sovereignty or jurisdiction of Member States. This principle of equal access to community waters is still in force today, but with the notable exception of the national 12-mile zone reserved for each member state, unless otherwise stipulated (Bolopion J., Forest A., Sourd L-J, 2000).

Although it has not always been meaningful in biological terms (many resources are divided between the coast and offshore), the 12-mile limit is a temporary waiver allowing Member States to reserve its access to its nationals (with certain exceptions related to the recognition of historical rights). In addition, Member States can take measures for conservation and resource management for strictly local stocks, provided such steps comply with CFP principles and apply only to the fishermen of the State concerned.

Nationally, the professional organization of maritime fisheries and marine farming is governed by law 91-411 of 2 May 1991 and decree No. 92-335 of 30 March 1992. The organization is based on the National level (National board of fisheries and marine farming - CNPMEM), Regional level (CRPMEM) and Local level (CLPMEM).

The levels involved in managing Southern Brittany's purse seine sardine fishery are the National committee, the Brittany Regional committee and the Local committees of Douarnenez, Audierne, Le Guilvinec and Concarneau, and North Finistere..

4.2 Management authority

The fisheries and marine farming committees at various levels, constitute the management authority for the assessed fishery and implement the management system and policy.

The roles of the fisheries committees include the representation of professionals, participation in the organization of balanced resource management (limiting access to fishery resources, technical measures, order and precaution measures, etc.) and improving production conditions (Article 2 of law 91-411 of 2 May 1991).

Not used a lot, CRPMEM may also appoint sworn guardians responsible for ensuring compliance with the measures taken.

In addition to drawing up fisheries regulations, the Fisheries Committees ensure the harmonious coexistence between professions in fishing areas. They also represent the interests of commercial fishermen with regard to public authorities and in interregional fishing conferences.

The National maritime fisheries committee (CNPMEM) which liaises between the profession, and the French and European administrations in particular, issues management advice, through its Anchovy-Sardine committee which meets 3 to 4 times a year and ensures national coordination of anchovy

fishery authorities, and by extension of sardine fishery authorities, which form the subject of a joint scientific campaign.
Recently, in June 2009, the committer has taken into account the decision of the European commission, which extended the closure of anchovy fishing for the 5th consecutive year.
These decisions are established on the basis of ICES advice for anchovy which is a species subject to European quotas, and on consultation of scientific, technical and economical fishing committee (CSTEP).

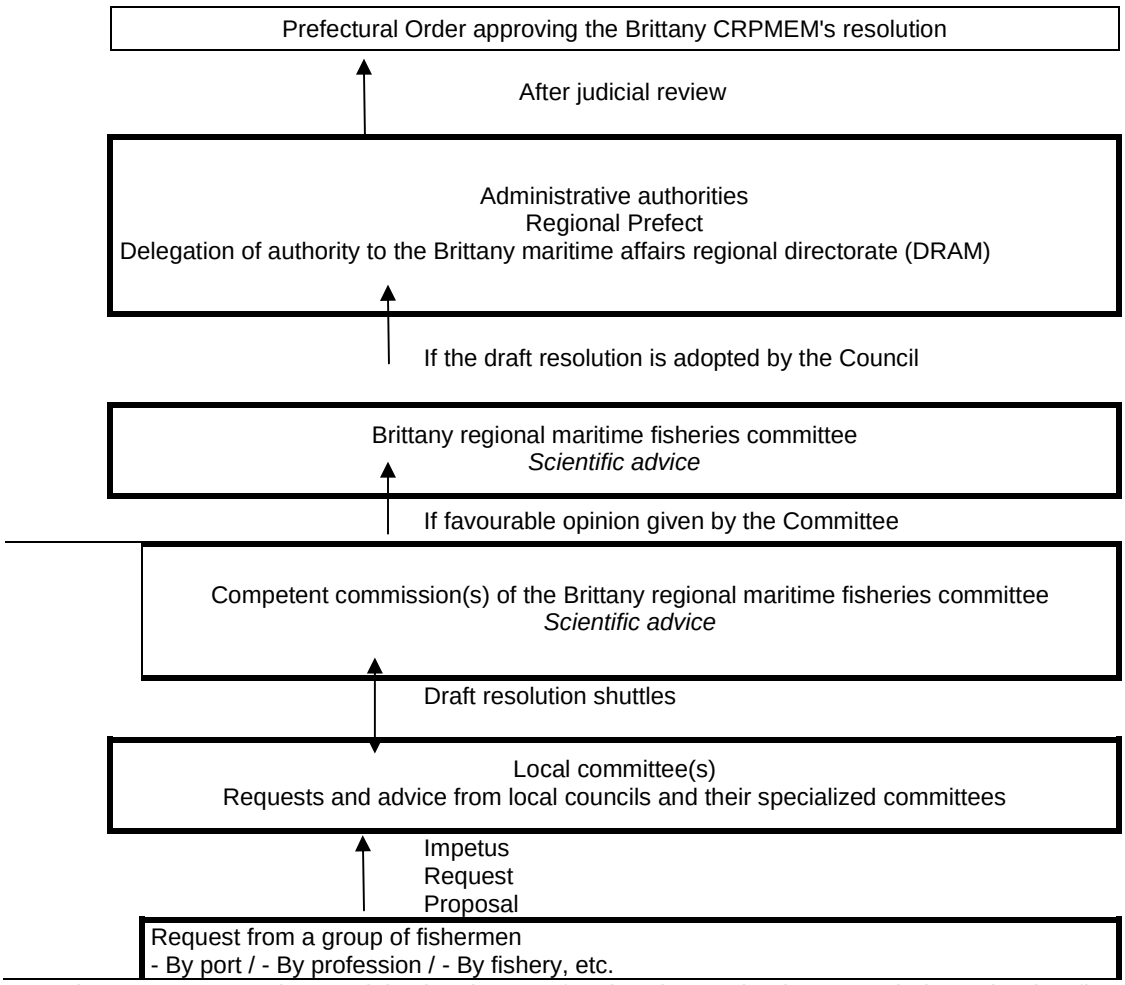

Figure 11. Brittany Fisheries' interprofessional organization. Resolution adoption flowchart (Source: CRPMEM)

Implemented by the Brittany Regional Committee for fisheries and marine farming (CRPMEM), the fishery management system is based on the resolutions and decisions made at the initiative of professionals, containing the technical steps taken to manage the fishing effort and conserve the resources in the coastal strip.

The link between the 3 management levels is established according to the process described in Figure 11. At the request of a group of fishermen, the local fisheries committee concerned drew up a draft resolution to be submitted to the competent committee, namely the coastal fisheries commission of the Regional Committee.
If it gives a favourable opinion, the regional committee council adopts the draft resolution, and gives delegation to the regional maritime affairs directorate (DRAM) for judicial review and drafting of a decree approving the deliberation.

The IFREMER scientists responsible for monitoring anchovy and sardine stocks in the Bay of Biscay

may attend the CNPMEM Anchovy-Sardine committee meeting and the CRPMEM coastal fisheries committee meeting, but their opinion is only advisory in the decision process.
In the absence of any formal sardine stock assessment by the ICES' working groups, the assessed fishery management procedures are thus currently only based on IFREMER's biomass estimations, and even then not systematically.

4.3 Fishery specific rules

4.3.1 Licences system

Firstly, vessels fulfilling the following conditions are authorized to do purse seine fishing:

- Holding of a license issued by the Brittany CRPMEM for the owner/vessel pair. The special license for purse seine fishing in the maritime waters of the Brittany region; the license is for the area between the 48°30'N parallel forming the n orthern boundary to the line dividing the Brittany/Pays de Loire regions forming the southern boundary.
- With an overall length of 17 m or less (two vessels appointed by decree and with a length of between 17 and 21 m, with historical rights, can obtain a license by waiver).

The size of the fleet of purse seiners carrying on the assessed fishery can thus be determined by a quota of licenses, issued each year by a resolution taken by the Brittany regional fisheries committee. The local committees are responsible for collecting applications from their respective district and sending them to the regional fisheries committee. The quota of licenses represents the maximum number of licenses that the Regional Committee can issue annually to requesting vessels.

When the licensing system was created in 2000, a quota/contingent of 11 licenses was provided for Bayonne vessels, because of reciprocal access to anchovy in their waters. The quota of licenses then varied as follows:

Year	2000	2001	2003 to 2008	2009	2010
Brittany vessels	34	27	25	29	25
Bayonne vessels	11	14	8	4	2
Total	45	41	33	33	27

Table 4. Distribution of the quota of licenses and yearly variation

Each year, a number of licenses are granted to owner/vessel pairs. In 2007 and 2008, out of the total quota of 33, 25 licenses were thus granted, while only 23 were granted for 2009, 9 of which for the maritime district of Concarneau, 1 for Douarnenez, 10 for Le Guilvinec, 1 for Auray and 2 for Bayonne.

It must be noticed that in September 2009, a review of the 2009 licences quota has been done, in order to take into account the vessels really active, and just these. In 2010, the number of licences was fixed on 27 whith 24 attributed.

4.3.2 Fishery management rules

In addition to its general functions, the Brittany CRPMEM determine by resolution for each campaign, complementary rules, as for example:

- specific characteristics of vessels allowed to carry on this activity
- specific characteristics of fishing gear
- landing quotas by species (including sea bream, sea bass and yellow mackerel) (19th January

2009 decision: maximal sea-bass quota of 4 tons/vessel/week; maximal sea-bass and sea-bream quota of 30 tons/vessel/year, no directed fishing activity on sea-bass and sea-bream, no sea-bass or sea-bream transfer for a vessel to another).

- an overall quota of licenses, a quota by species and a quota by local fisheries committee
- areas closed to fishing (source perimeter)
- fishing opening and closing dates and a fishing time schedule (fishing stopped from Friday evening to Sunday afternoon)
- global fishing quotas for each license (19th January 2009 decision: permitted daily quota of 10 tonnes of sardines/vessel/day).
- ban on catching (19th January 2009 decision : capture of red sea-bream *Pagellus bogaraveo* not permitted)

There are thus three main reasons for the management steps taken with respect to purse seine sardine fishery:

- the general regulations on the resources used can affect fishery, subject to measures taken at national or European level. The discontinuing of anchovy fishing in Europe thus affects purse seiners, as does the limiting of catch sizes (bass, sea bream).
- the sharing of some resources with other professions, and the conflicts inherent in their use require restrictions measures to be taken with regard to species.
- Regulating the supply side and scaling catches to the market

In addition to fisheries committee's management decisions, producer organizations impose resource management rules on their members.

The decisions of the Western Brittany fisheries organization (OPOB) and the English Channel and Atlantic fishermen (PMA), the 2 fisheries organizations which include all Southern Brittany's purse seiners, have thus imposed resource management rules on purse seiners:

- sardine catch tonnage limited to 10 tonnes/day
- ban on catching pink bream
- ban on catches of certain sizes
- limiting of financial compensation for unsold catch
- limiting of catches of quota governed species such as mackerel

The last evolution in fishery management decisions is presented Appendix 3.

4.4 Inspection

Besides the controls and the penalty which can be taken within Producers' Organization, the DAM is responsible for the control of fishing and for the attribution of penalties in front of breaches.

At the central level two ministries are particularly involved: the Ministry of Food, Agriculture and Fisheries with the Department of Marine Fisheries and Aquaculture (DPMA) which provides management and economic and statutory monitoring of fishing, and the Department of Ecology, Energy, Sustainable Development and Land Use Planning, whose decentralized sections of the Maritime Affairs department (DAM) (regional directorates - DRAM and departmental - DDAM) are, among other things, responsible for administering and management of fishing vessels, and monitoring maritime activities and professional sailors on board (in particular as regards their social system, their training and their work aboard).

The DRAM (supported by the Departmental Directorates, DDAM) oversees the implementation of purse seine fishing sustainable management by coordinating fisheries monitoring activities.
The enforcement of regulations is therefore outside the jurisdiction of the committees, which have no police powers, but rather within that of the Maritime Affairs administration. However, the Committees may appoint and pay sworn guards responsible for ensuring compliance with the steps taken.
It should be noted that commercial fishermen practicing other occupations suggest the lack of effective control and wonder on the consequences of this fishery.

In 2009, purse seine fishing has been monitored by the specific control services, in particular through the mobilization of the southern Finistère maritime affairs shore unit of (ULAM), based in Douarnenez (the other one is based in Brest). Catch declarations and sales notes have been checked and vessels have been physically inspected.

The means of intervention of the ULAM are speedboats “Petrel (17 m)”. Over the first 3 months of the year, 11 of the 19 purse seiners have been controlled, and 4 offences made out, concerning log book defects, overfishing of weekly quota for sea-bass, and a capture of pink sea bream.

5 Assessment results, fishery scoring

5.1 Assessment tree

Figure 12 shows the structure of the assessment tree used to assess the fishery against the MSC criteria.

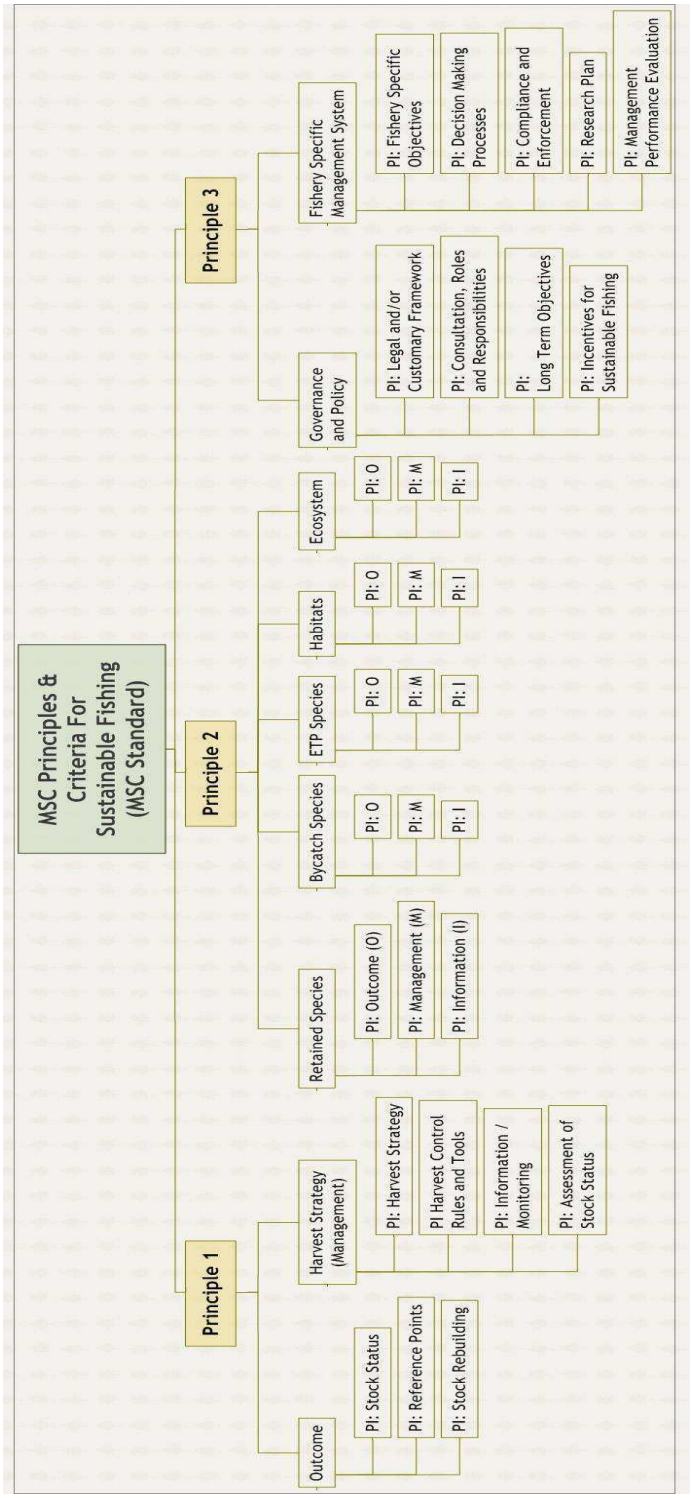

Figure 12. Assessment tree structure with Performance Indicators and scoring tags

5.1.3 Scoring system

Scoring is a qualitative process which requires discussion between team members and an agreement within the team on the final score

The assessment tree includes 3 levels of scoring - the Principle, the component and the performance indicator (PI).
Each component and PI is given a score and weighted according to the coefficients shown (table 5).
Each PI is given a score by assigning it a scoring score (SG) of 60 to 100. The score 60, 80 or 100 is then assigned when the fishery meets the conditions of scores SG60, SG80 or SG100.

Any aspect or question subject to scoring coming within a PI, or any PI itself, which does not reach the SG60 level, denotes a failure to meet the MSC baseline, thereby disqualifying the fishery from certification.
In addition, any PI whose score is between 60 and 80 is likely to be subject to certification requirements.
And finally, to ensure the fishery certification, each Principle must obtain a score of 80 or more.

5.1.4 Definitions

Principle 1
Outcome'-related PIs consider the impact of the fishery on the target species, and particularly whether the species/stock is at sustainable levels.
'Harvest Strategy (Management)'-related PIs look at whether a management strategy is in place to ensure that harvest of the target species is maintained within sustainable levels

Principle 2
Principle 2 considerations have been categorised into five Components; which are considered to cover the range of potential ecosystem elements that may be impacted by a fishery:

Retained species: Species that are retained by the fishery under assessment (usually because they are commercially valuable or because they are required to be retained by management rules).

Bycatch species: Organisms that have been taken incidentally and are not retained (usually because they have no commercial value).

ETP species: Endangered, threatened or protected species are those that are recognised by national legislation and/or binding international agreements (e.g. CITES) to which the jurisdictions controlling the fishery under assessment are party.

Habitats: The habitats within which the fishery operates.

Ecosystem: Broader ecosystem elements such as trophic structure and function, community composition, and biodiversity.

Principle 3
"Governance and Policy" captures the broad, high-level context of the fishery management system within which the fishery under assessment is found. Performance elements within this Component include the legal and/or customary framework that overarches the fishery, and possibly other fisheries under the same management framework; the consultation processes and policies, as well as the articulation of the roles and responsibilities of people and organizations within the overarching management system and other overarching policies supporting fisheries management.

'Fishery Specific Management System' focuses the certification body on the management system directly applied to the fishery undergoing assessment. Performance indicators under this Component consider the fishery-specific management objectives (i.e. fishery management objectives for the fishery under assessment, specifically); the decision-making processes in the relevant fishery; the fishery's compliance and enforcement system and implementation; and research planning and monitoring and evaluation of the performance of the fishery's management system

5.2 Use of the RBF (Risk Based Framework) risk analysis method

5.2.1 Principle

The MSC Risk-Based Framework (RBF) is a set of assessment methods contained in the Fisheries Assessment Methodology (FAM). It is used in certain instances while carrying out an MSC fishery assessment when sufficient data are not available to score a given Performance Indicator using the standard set of Scoring Guideposts.

Further information can be found on MSC website:

http://www.msc.org/about-us/standards/methodologies/fam/msc-risk-based-framework

During 2008, several MSC pilot studies focused on artisanal fisheries for which little data is available (SSDD), as part of the GASS/DD project, to test an approach based on the risk assessment for assessment of fisheries with limited data.

The risk assessment based approach (RBF) for performance indicator assessment was thus applied for some points of this assessment, given the lack of data for certain performance indicators.
The RBF method was incorporated into version 2 of the MSC assessment methodology of 31 July 2009.

This method is only applicable to the performance indicators for principles 1 and 2, and for the performance indicators 1.1.1, 2.1.1, 2.2.1, 2.4.1 and 2.5.1
To determine which performance indicators can be assessed through RBF, the decision tree below is used:

1 - The current status of the components of what is not caught: stock biomass, habitat structure and function...can it be estimated?
**No → use of RBF for the PI considered*
**Yes → 2*

2 - Do the estimated sustainable biological limits (reference points, Blim, Hablim, etc.) make it possible to identify any serious or irreversible damage?
**No → use of RBF for the PI considered*
**Yes → 3*

3- Is the PI in question 1.1.1?
**No → 4*
**Yes → Use the FAM standard assessment methodology for the PI considered*

4- Can the impact of the assessed fishery on the aspects of principle 2 be assessed?
**No → use of RBF for the PI considered*
**Yes → Use the FAM standard assessment methodology for the PI considered*

For the purse seine sardine fishing assessment, and considering the performance indicator 1.1.1, it seems that the available biomass was estimated by the PELGAS campaigns together with the age and size distribution of populations. But, biological limits are not described by the boundary points of biological references such as B_{lim} or $F_{lim.}$
The biological reference point is a value, which is normally F (instantaneous rate of fishing mortality:

Instantaneous relative rate of change in the number of survivors among those which die for all fishing causes) or B (Biomass: Weight of an individual or group of individuals) for fishery management purposes, taking into consideration the best possible catch and/or ensuring the conservation of fishery resources.

The use of the decision tree above has made it possible to decide on the use of the RBF method for scoring this first performance indicator (No response in point 2 of the decision tree above).

And, for the performance indicator 2.2.1 on bycatch species (constituting rejects), and on the basis of the aspects identified during the pre-assessment, it appeared that the species caught but not kept were in the minority. Without specific knowledge of the quantities caught and the distribution of species, however, the RBF method was used for the assessment.
("No" response in point 1 of the decision tree)

5.2.2 RBF methodology

For the scoring, according to the RBF methodology, of the performance indicators selected (1.1.1 and 2.2.1), the SICA and PSA scoring tools are used as described below.

** SICA: Scale Intensity Consequence Analysis*

The SICA is a qualitative analysis which aims to identify which activities lead to a significant impact on any species, habitat or ecosystem. The precaution approach is applied for measuring these impacts.
The SICA is carried out by consulting stakeholders on the basis of qualitative data, according to the following seven steps:

- determine the worst combination of a fishing activity and a sub-component
- determine the most vulnerable aspect for this combination
- assess the spatial scale on which the identified activity is carried out
- assess the time scale on which the identified activity is carried out
- note the intensity of activity
- determine the score resulting from the combination of the scales and intensity of the activity
- convert the SICA score into an MSC score or use the PSA method

For the performance indicators 1.1.1 and 2.2.1, the table below has been completed, based on the charts below:

Performance indicator	Risk-causing activities	Spatial scale of activity	Temporal scale of activity	Intensity of activity	Relevant subcomponents	Consequent SICA score	MSC Score
1.1.1 Target species	Fishing activities: • Direct catching • Unobserved mortality (e.g. gear loss) • Catching as bycatch in other fisheries • Other activity				Population size		
					Reproductive capacity		
					Age/size/sex structure		
					Geographic range		
2.2.1 Bycatch species (rejects)	• fishing • Gear loss • Catching of bait • Other activity				Population size		
					Reproductive capacity		
					Age/size/sex structure		
					Geographic range		

Table 5. SICA score table

Spatial scale score

<1%:	1-15%:	16-30%:	31-45%:	46-60%:	>60%:
1	2	3	4	5	6

Time scale score

Decadal (1 day every 10 years or so)	Every several years (1 day every several years)	Annual (1-100 days per year)	Quarterly (100-200 days per year)	Weekly (200-300 days per year)	Daily (300-365 days per year)
1	2	3	4	5	6

Intensity score

Level	Score	Description
Negligible	1	remote likelihood of detection of activity at any spatial or temporal scale
Minor	2	activity occurs rarely or in few restricted locations and evidence of activity even at these scales is rare
Moderate	3	moderate detection of activity at broader spatial scale, or obvious but local detection
Major	4	detectable evidence of activity occurs reasonably often at broad spatial scale
Severe	5	easily detectable localized evidence of activity or widespread and frequent evidence of activity
Catastrophic	6	local to regional evidence of activity or continual and widespread evidence

Determination of the SICA score

Subcomponent	Consequence Category (MSC Score)		
	1 (100)	2 (80)	3 (60)
Population size	Insignificant change to population size/growth rate (r). Unlikely to be detectable against background variability for this population.	Possible detectable change in size/growth rate (r) but minimal impact on population size and none on dynamics.	Full exploitation rate but long-term recruitment dynamics not adversely damaged
Reproductive capacity	No detectable change in reproductive capacity. Unlikely to be detectable against background variability for this population.	Possible detectable change in reproductive capacity but minimal impact on population dynamics.	Detectable change in reproductive capacity, impact on population dynamics at maximum sustainable level, long-term recruitment dynamics not adversely damaged.
Age/size/sex structure	No detectable change in age/size/sex structure. Unlikely to be detectable against background variability for this population.	Possible detectable change in age/size/sex structure but minimal impact on population dynamics.	Detectable change in age/size/sex structure. Impact on population dynamics at maximum sustainable level, long-term recruitment dynamics not adversely damaged.
Geographic range	No detectable change in geographic range. Unlikely to be detectable against background variability for this population.	Possible detectable change in geographic range but minimal impact on population range and none on dynamics.	Clear change in geographic range due to fishing activities

Table 6. SICA score charts

- *PSA Productivity-susceptibility analysis*

As shown in the following tables, the PSA method is based on productivity (average of 7 attributes) and sensitivity (product of 4 attributes), and determines the risk caused by fishing activity on the target species.

PSA Attribute table

	Attribute
Productivity	Average age at maturity
	Average size at maturity
	Average maximum age
	Average maximum size
	Fecundity
	Reproductive strategy
	Trophic level
Susceptibility	Availability considers overlap of fishing effort with a species distribution
	Encounterability considers the likelihood that a species will encounter fishing gear that is deployed within the geographic range of that species (based on two attributes: adult habitat and bathymetry)
	Selectivity considers the potential of the gear to capture or retain species
	Post capture mortality considers the condition and subsequent survival of a species that is captured and released (or discarded)

PSA Productivity attributes and scores

	Low productivity (high risk, score=3)	Medium productivity (medium risk, score=2)	High productivity (Low risk, score=1)
Average age at maturity	>15 years	5-15 years	<5 years
Average maximum age	>25 years	10-25 years	<10 years
Fecundity	<100 eggs per year	100-20,000 eggs per year	>20,000 eggs per year
Average maximum size	>300 cm	100-300 cm	<100 cm
Average size at maturity	>200 cm	40-200 cm	<40 cm
Reproductive strategy	Live bearer	Demersal egg layer	Broadcast spawner
Trophic Level	>3.25	2.75-3.25	<2.75

PSA Susceptibility attributes and scores

	Low susceptibility (low risk, score=1)	Medium susceptibility (medium risk, score=2)	High susceptibility (High risk, score=3)
Availability 1. Overlap of species range with fishery	<10% overlap	10-30% overlap	>30% overlap
Encounterability –Habitat and depth check (scores vary by fishery)	Low overlap with fishing gear	Medium overlap with fishing gear	High overlap with fishing gear
Selectivity (scores vary by gear type, this example is for set gillnets.	< mesh size, or >5 m in length	1-2 times mesh size, 4-5 m in length	>2 times mesh size, to say, 4 m in length
Post-capture mortality (scores vary by fishery)	Evidence of post-capture release and survival	Released alive	Retained species, or majority dead when released

Table 7. PSA score charts

An Excel worksheet can then convert the PSA scores into an MSC score, and assess the risk on a high to low scale.
The SICA and PSA scores are then added back into the standard scoring chart for the remaining performance indicators.

1.2 Harmonisation process

Harmonisation was achieved though a mixture of correspondence and meetings with representatives of the two assessment teams. In the first instance MRAG and BUREAU VERITAS CERTIFICATION exchanged draft assessment reports to compare the approaches.

Both assessments used the FAM Version 2, incorporating the generic assessment tree and it was agreed by both teams that the RBF was needed to address PI 1.1.1.

Lead assessors from the two assessment teams met in London on the margins of the MSC CB's Workshop in October 2009 to discuss further the details of the MSC assessments and to share information on stock status determination. Following some adjustments on each side, it was agreed that the final outcomes are sufficiently compatible so as to not present a risk to the integrity of MSC fishery assessments.

An overview of each Performance Indicator within P1 is given below along with explanations of the harmonisation, highlighting key differences between the scoring (where they exist).

PI 1.1.1:
Both assessments used the RBF for this PI and undertook both SICA and PSA.
The PSA outcomes were identical. The biological characteristics, and hence the productivity scores, of the fish in the two fisheries are indistinguishable. This is because the sources of information are the same – i.e. Fishbase, or reports from surveys in the Brittany region.
The characteristics of the species are generally well known and any potential geographic differences are highly unlikely to be sufficiently large to result in a different score for a PSA category.
Similarly, the operational characteristics of the fisheries – using surrounding gear of one form or another – are sufficiently similar to result in the susceptibility scores also being the same.

PI 1.1.2: Given the RBF was used for PI 1.1.1, a default score of 80 was applied in both cases (FAM V2 Table A1, page 93).

PI 1.1.3: This PI was not scored in either case because the stock is not considered to be depleted.

PI 1.2.1: The south Brittany sardine fishery scored 75 while the Cornish Sardine fishery scored 80. The harvest strategies for the two fisheries are quite different; hence the Assessment Teams did not think it was a problem that the scores for this PI were not the same.
In the case of the south Brittany fishery, which is significantly larger than the Cornish fishery, some development of the strategy is necessary to bring it up to this level.

PI 1.2.2: Both fisheries were found to be somewhat deficient with respect to harvest control rules, each scoring 75 and having conditions raised as a result. Specifically, while the current measures are considered to be appropriate for the scale and intensity of the fisheries, both management systems need to develop control measures that will elicit a clear response in the face of a decline in stock size that threatens the future productivity of the stock in order to maintain their certification.

PI 1.2.3: Both fisheries scored 90 for this PI

PI 1.2.4: Given the RBF was used for PI 1.1.1, a default score of 80 was applied in both cases (FAM V2 Table A1, page 93).

5.3 Assessment results

5.3.5 Scores Weighting

Table 5 presents for the three principles, the score weighting system and the results for each performance indicator and principle.

In order to answer to the stakeholders comments, the assessment results, in particular the scoring, presented in appendix 1, has been reviewed and justification and rationale précised.
Therefore, some performance indicators were revalue and the score slightly modified.

The following table presents the score obtained for each Performance indicator. Previous scores are in bracket.

Principle 1: score 80

Component	Weight. Level 2	Note	PI N°	Note	Performance Indicator	Weight. Level 3	Weight in principle
Outcome	0,5	80,00	1.1.1	80	Stock Status	0,5	0,25
			1.1.2	80	Reference Points	0,5	0,25
			1.1.3	-	Stock Rebuilding	--	--
Management	0,5	80,00	1.2.1	75	Harvest Strategy	0,25	0,125
			1.2.2	75	Harvest Control Rules & Tools	0,25	0,125
			1.2.3	90	Information & Monitoring	0,25	0,125
			1.2.4	80	Assessment of Stock Status	0,25	0,125

Principle 2: score 81

Component	Weight. Level 2	Note	PI N°	Note	Performance Indicator	Weight. Level 3	Weight in principle
Retained species	0,2	80	2.1.1	80	Outcome	0,333	0,0667
			2.1.2	75 (80)	Management	0,333	0,0667
			2.1.3	85 (90)	Information	0,333	0,0667
Bycatch species	0,2	75	2.2.1	80	Outcome	0,333	0,0667
			2.2.2	80	Management	0,333	0,0667
			2.2.3	65 (60)	Information	0,333	0,0667
ETP species	0,2	85	2.3.1	90	Outcome	0,333	0,0667
			2.3.2	85	Management	0,333	0,0667
			2.3.3	80 (90)	Information	0,333	0,0667
Habitats	0,2	77	2.4.1	80	Outcome	0,333	0,0667
			2.4.2	80	Management	0,333	0,0667
			2.4.3	70	Information	0,333	0,0667
Ecosystem	0,2	88	2.5.1	95 (100)	Outcome	0,333	0,0667
			2.5.2	85 (90)	Management	0,333	0,0667
			2.5.3	85 (90)	Information	0,333	0,0667

Principle 3: score 82

Component	Weight. Level 2	Note	PI N°	Note	Performance Indicator	Weight. Level 3	Weight in principle
Governance and Policy	0,5	88	3.1.1	95	Legal/Customary Framework	0,25	0,125
			3.1.2	85 (90)	Consultation: Roles & Responsibilities	0,25	0,125
			3.1.3	90 (80)	Long Term Objectives	0,25	0,125
			3.1.4	80	Incentives for sustainable fishing	0,25	0,125
Fishery Specific Management System	0,5	76	3.2.1	60	Fishery Specific Objectives	0,2	0,1
			3.2.2	65	Decision Making processes	0,2	0,1
			3.2.3	85	Compliance & Enforcement	0,2	0,1
			3.2.4	90	Research Plan	0,2	0,1
			3.2.5	80	Management Performance Evaluation	0,2	0,1

Table 8. Scoring system

5.3.6 Assessment chart

The table in appendix 1 shows, for each principle, each component and each performance indicator, the score given by the assessment team and the rationale and main bibliographic references to further discussions and exchanges of information between the team and stakeholders interviewed.

6 Certification scope

6.1 Traceability within the fishery

Each vessel member of the “Association des Bolincheur de Bretagne”, the client of the certification, records the catches into the logbooks.
Then all the landings are then recorded at the auction (even for direct sales) by the official sales notes.

The name of the vessel, the species, quantities, area and fishing date are then available by these documents, and use for cross-check and statistics of landing, and control by authorities.
The data are then used by the state for landing statistics and by Pos for their member’s individual statistics and follow up.

Additionally, the vessels identify the tanks with an individual label with the name of the vessel, the name of the PO and potentially in the future the claim “MSC”. The individual labels are managed by each PO.

The traceability from the vessel, to the first sale is possible and the vessels covered by the MSC certificate can be identified by the Buyer.

The list of the vessels that may land MSC certified sardines is presented appendix 7. The vessels are members of the “Association des Bolincheurs de Bretagne”

6.2 At-sea Processing

No processing take place on board, and no traceability risk has been identified.

6.3 Landing and selling

The sardines caught by the South-Brittany purse seiners and landed in the ports of Concarneau, St. Guénolé, Douarnenez, Loctudy, Le Guilvinec, Audierne or eventually Lorient, are for the most part (almost 98%) passed through or registered at the fish auction, whether sold directly or not.

The average sale price in the auction halls of St Guénolé, Douarnenez and Concarneau in 2006 and 2007 was 0.41 euros per kg. The price varies according to size and year from 0.37 to 0.42 euros per kg excluding port and service taxes.

The withdrawal price set each year by the European Union on a basis of 80% of the average price observed over the last 3 years in various ports in the EU are 0.31 to 0.32 euros per kg for size 10.

Where sardine remain unsold, due to low sale prices, they may be frozen for subsequent sale.
As explained in section 6.4 all subsequent buyers must enter a separate chain of custody. Therefore those who buy (take ownership) and freeze sardine must also enter chain of custody certification.

The sardine landed by the purse-seiners must be registered at a fish auction wheteher they are sold through the auction or not. Only the sardines registered at a fish auction are eligible to enter further chains of custody.

The sardines landed are (in ascending order of importance):

- Sold fresh by wholesalers to supermarkets and fishmongers (large sardines, size 10/20).

- Frozen (almost uniquely intended for the canning industry).
- Canned (small sardines, size 30/40).

The points of landing covered by the certification are the ports of Saint-Guénolé, Douarnenez, Concarneau, Loctudy, Le Guilvinec, Audierne or Lorient. There are no known risk factors after the point of landing that may influence subsequent chain of custody assessments. Chain of custody should begin from the first point of sale.

6.4 Eligibility to enter Chain of Custody

The certification scope of purse seine sardine fishery extends to landing of sardines by licensed trawlers who are members of the bolincheurs de Bretagne fishing association, fishing in the 12 nautical mile limit off the Brittany coast. The sardines landed will thus be eligible to enter the chain of custody and use of the MSC logo.
To use the MSC logo, subsequent buyers must enter a separate chain of custody certification.

The first point of sale takes place after the sardines are landed and registered.
Once the sardines are landed, they can be sold. The first buyer who takes ownership of it must enter chain of custody certification.

Target eligibility date:

In order to use the MSC logo, the date of eligibility for sardines from the fishery, conditional to certification of the fishery, is established as the 9st of December 2009.

7 Assessment conclusions and certification conditions

7.1 Determination

In light of the preliminary results of the assessment, the performance of the purse seine net sardine fishery, evaluated on the basis of principles 1, 2 and 3 of the MSC is summarised below.

Principle	Performance / Score
1- Target species stock	80
2- Ecosystem	81
3- Fishery management	82

The fishery attained a score of 80 or more against each of the MSC Principles and did not score less than 60 against any Indicators.

The assessment team recommended that the South Brittany purse-seine sardine fishery be certified according to the MSC Principles and Criteria for Sustainable Fisheries.

Seven performances indicators have been scored between 80 and 60, and consequently, conditions have been raised.

Following this recomandation and following the review by peer review and stakeholder, the certification committee of BUREAU VERITAS CERTIFICATION made a determination to certify this fishery.

7.2 Certification conditions

For performance indicators with a score between 60 and 80, certification conditions are set by the certification body. Through their implementation within the given deadlines, these conditions allow the beneficiary to improve the performance of the fishery to reach a score of 80 for the indicator concerned.

In accordance with MSC procedures, the beneficiary of certification shall implement an action plan, approved by BUREAU VERITAS CERTIFICATION in order to meet the conditions within the given deadlines, and with the support from relevant entities.

The fishery attained a score below 80 against 7 Performance indicators, shown in the table below.

Performance indicator	Score
1.2.1 – Harvest Strategy	75
1.2.2 – Harvest Control Rules & Tools	75
2.1.2- Management strategy *	75
2.2.3 – Information on bycatch species	65
2.4.3 – Information on Habitats	70
3.2.1 – Fishery-Specific Objectives	60
3.2.2 – Decision-Making processes	65

*** The comments of the stakeholders and the MSC made during the public consultation of the preliminary report and the new context of the anchovy within the fishery, have entailed the review of the scoring for some performance indicators.**
The anchovy, in this new context (captures in Area VIIe and opening of the fishing in area VIII) must now be considered as a retained species by the fishery.

In this context, the score of PI 2.1.2 moved from 80 to 75, meaning a new condition.

The detail of all the scores is given in point 5.4.1 of the report.

7.2.1.Condition 1

Performance Indicators concerned:
1.2.1: harvest strategy
There is a robust and precautionary harvest strategy in place

1.2.2: harvest control rules and tools
There are well defined and effective harvest control rules in place

Some scoring elements of SG80 are not met, and then require implementation of an action plan:

* For harvest strategy (1.2.1):
The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points

* For harvest control rules and tools (1.2.2):
Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.

Indeed, to date, no formal link has been demonstrated between the status of the stock and definition of the harvest rules. The harvest strategy isn't therefore responsive to the state of the stock.

As a result, even if at present the stock situation and the level of harvest are satisfactory, there is no established procedure in the case where the resource starts to deteriorate or in the case where the level of harvest increases to the extent that the current diagnostic becomes invalid.

Comments on the decisions concerning the daily quotas and the number of license have indeed been done by the stakeholders during the public consultation. This strengthens the need of formalization, transparency and relevance in the decision-making process.

Response to the condition and timescale

To ensure that, as a minimum, these performances indicators achieve the scoring guidepost 80, it is recommended that:

The following elements can be verified by the first annual surveillance audit:

- a clear and formalised decision making process for fishing effort (number of vessels, quotas….) and control rules. A document describes this process.
- the way the state of the stock is take into account is described
- the information on the stock are collected and help the decision making process. The result of the data collection can be verified
- the organizations implicated in the stock status evaluation, the fishing effort definition, the harvest control are implicated in the decision making process and approve it.

The following elements can be verified by the second annual surveillance audit:

- the scientific advices and the state of the sardine stock are taken into account to define the fishing effort. Evidences are available.
- the decision making process is implemented and evidences are available.

7.2.2 Condition 2

Performance Indicators concerned:
2.1.2: management strategy of retained species
There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species

Some scoring elements of SG80 are not met, and then require implementation of an action plan:

* For management strategy of anchovy
There is a partial strategy in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding

The opening of the fishing of anchovy in ICES area VIII for 2010 and the significant (authorized) captures during autumn 2009 in ICES area VIIe, are new points to be taken into account.

To insure that the fishery does not hinder recovery and rebuilding of the anchovy stock, the partial harvest strategy must to take into account this species, on all the fishing areas. The decisions must to take into account the state of the stock and not hinder its recovery.

Response to the condition and timescale

To ensure that, as a minimum, these performances indicators achieve the scoring guidepost 80, it is recommended that:

The following elements can be verified by the first annual surveillance audit:
- the management strategy of retained species is extended to anchovy. A document describes the strategy concerning anchovy (measures, response to state of the stock, fishing effort, areas….)
- the strategy is adapted to the scale of the fishery and concern all the exploitation area of purse-seiners (ICES area VII and VIII)

The following elements can be verified by the second annual surveillance audit:
- The decisions take into account the state of the stock and do not hinder the rebuilding of the anchovy's stock. The decisions are explained and transparent, based on scientific advice.

7.2.3 Condition 3

Performance Indicators concerned:
2.2.3: Information on bycatch species
Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.

2.4.3: Information on Habitats
Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.

Some scoring elements of SG80 are not met or can be improve, and then require implementation of an action plan:

* For bycatch species
- Qualitative information and some quantitative information are available on the amount of main bycatch species affected by the fishery.
-Information is adequate to support a partial strategy to manage main bycatch species
- Sufficient data continue to be collected to detect any increase in risk to main bycatch species

* For bycatch species
-Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear.
-The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery.

Response to the condition and timescale

To ensure that, as a minimum, these performances indicators achieve the scoring guidepost 80, it is recommended that:

The following elements can be verified by the first annual surveillance audit:
-The participation in programs of data collection of data on bycatch species and the habitat is planned and scheduled.

The following elements can be verified by the second annual surveillance audit:
- a data collection exist for identification of vulnerable habitats
- the volume of main bycatch species caught is knows
- information concerning bycatch species is taken into account for management strategy definition

The following elements can be verified by the third annual surveillance audit:
- a cartography of vulnerable habitats exists
- the nature and impact of gear and identified
- the spatial and temporal scale of fishing activity is known

7.2.4 Condition 4

Performance Indicators concerned
3.2.1: Fishery-Specific Objectives.
The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's P1 & P2

3.2.2: Decision-Making processes
The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives

Some scoring elements of SG80 are not met or can be improve, and then require implementation of an action plan:

* For fishery specific objectives
-Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.

* For decision making process
-Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
- Decision-making processes use the precautionary approach and are based on best available information.
- Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

The objectives are not explicitly defined in the management strategy, to know if they are consistent with achieving the outcomes of the principles P1 and P2.

In the actual decision-making process, it doesn't appears clearly
- the way the problems and the questions are taken into account
- the use of the precautionary approach
- the explanations of decisions

Comments on the decisions concerning the daily quotas and the number of license have indeed been done by the stakeholders during the public consultation. This strengthens the need of formalization, transparency and relevance in the decision-making process.

Response to the condition and timescale
To ensure that, as a minimum, these performances indicators achieve the scoring guidepost 80, it is recommended that:

The following elements can be verified by the first annual surveillance audit:
- A document explicitly describes the short and long-term objectives of the fishery.
- the objectives aim at the fishery does cause any problem for the sardine stock, for main retained and bycatch species, for ETP species, for habitat and ecosystem. The objectives aim at reducing the disputes.
- The decision-making process is clear and formalized.

The following elements can be verified by the second annual surveillance audit:
- a surveillance of the achievement of the objectives is done
- the decision-making processes respond to problems or the questions raised by research or studies on the fishery.
- Explanations provided for any actions or lack of action
- the decision-making process is transparent and understood.
- the decision-making process use the precautionary approach

7.3 Recommendations

Although no scores under 80 were observed for each of thee principles, the following points were deemed to be the most sensitive by the evaluation team. As such, the team recommends implementation of the following actions:
Suggestions for improving management rules with consideration of advice on resources.

Performance indicators concerned 2.1.3.

Although point 2.1.3 received a score of 90, formalising the acceptance of scientific advice on the species retained would represent a significant improvement in moves towards sustainable management of the fishery.

7.4 Action plan

In response to the conditions set out during evaluation of the fishery, the Association des bolincheurs has put forward an action plan described in appendix 2.

8 Peer review

The report was reviewed by two people: Gilles CAUVIN and Richard SABATIE.

Gilles CAUVIN, who trained as an agriculturist specialised in environment and spatial management, is a research engineer specialised in the ecology of aquatic environments, commercial fishing and fish farming in marine and continental environments. He has much experience in the field of aquatic ecology, preservation of aquatic environments and certification of aquatic products.
For the last 10 years he has participated in studies concerning pot and long-line fishing of Patagonian tooth-fish in the French Southern and Antarctic Lands, inshore fishing in the Bay of Biscay, monitoring of estuary resources as well as the socio-economic stakes in commercial fishing.

Richard SABATIE is a research engineer, lecturer and researcher at the Halieutics Centre of Agrocampus Ouest. A specialist in marine biology and ecology, he has a broad experience of halieutic sciences having worked for 15 years in Morocco supervising many projects concerning both the socio-economical aspect of fishing and halieutic biology. Formerly the head of a mussel farming association, since his return to France he has devoted his energies to studying diadromous fish (shad, lamprey, eels) and has become a renowned expert on this subject, taking part in tropho-dynamic studies conducted by the IRD on tuna resources in the Indian Ocean and by his laboratory on coastal ecosystems.

There reports are presented in appendix 3 with the replies provided by BUREAU VERITAS Certification, in color and in box.

9 Public consultation

The comments received during public consultation are presented appendix 4 (translation from french to English of the comments received), with the response given by the assessment team.

10 Bibliography

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R03. Anon., 2001. Report of the working group on the assessment of mackerel, horse mackerel, sardine and anchovy. Cons. int. Expor. Mer ICES CM 2001/ACFM : 06, 456 p.

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11 Abbreviations and acronyms

B :Biomasse

CNPMEM : Comité national des Pêches et des Elevages marins

CRPMEM : Comité Régional des Pêches et des Elevages marins

CLPMEM : Comité Local des Pêches et des Elevages marins

DPMA : Direction des Pêches Maritimes et de l'Aquaculture du ministère de l'Agriculture et de la Pêche

DRAM : Direction Régionale des Affaires Maritimes

ETP species ou espèces DMP : Endangered, Threatened or Protected species ou espèces en Danger, Menacées ou Protégées

F :Taux instantané de mortalité par pêche

FAO : Food and Agriculture Organisation of the United nations ou Organisation des Nations unies pour l'alimentation et l'Agriculture

ICES ou CIEM : International Council for the Exploration of the Sea ou Conseil International pour l'Exploration de la Mer

IFREMER : Institut français de recherche pour l'exploitation de la mer

MSC : Marine Stewardship Council

OP :Organisation de Producteurs

OPOB : Organisation des Pêcheries de l'Ouest Bretagne

PCP :Politique Commune de la Pêche

PELGAS : Campagne PELagiques GAScogne de l'IFREMER

PI ou IP : Performance Indicator ou indicateur de performance

PMA : Pêcheurs Manche Atlantique

PROMA :

PSA Productivity-susceptibility analysis ou analyse de la productivité et sensibilité

RBF : Risk based framework ou Evaluation par analyse de risques

SG : scoring guideposts ou balise de notation

SICA : Scale Intensity Consequence Analysis ou Analyse des Conséquence des activités

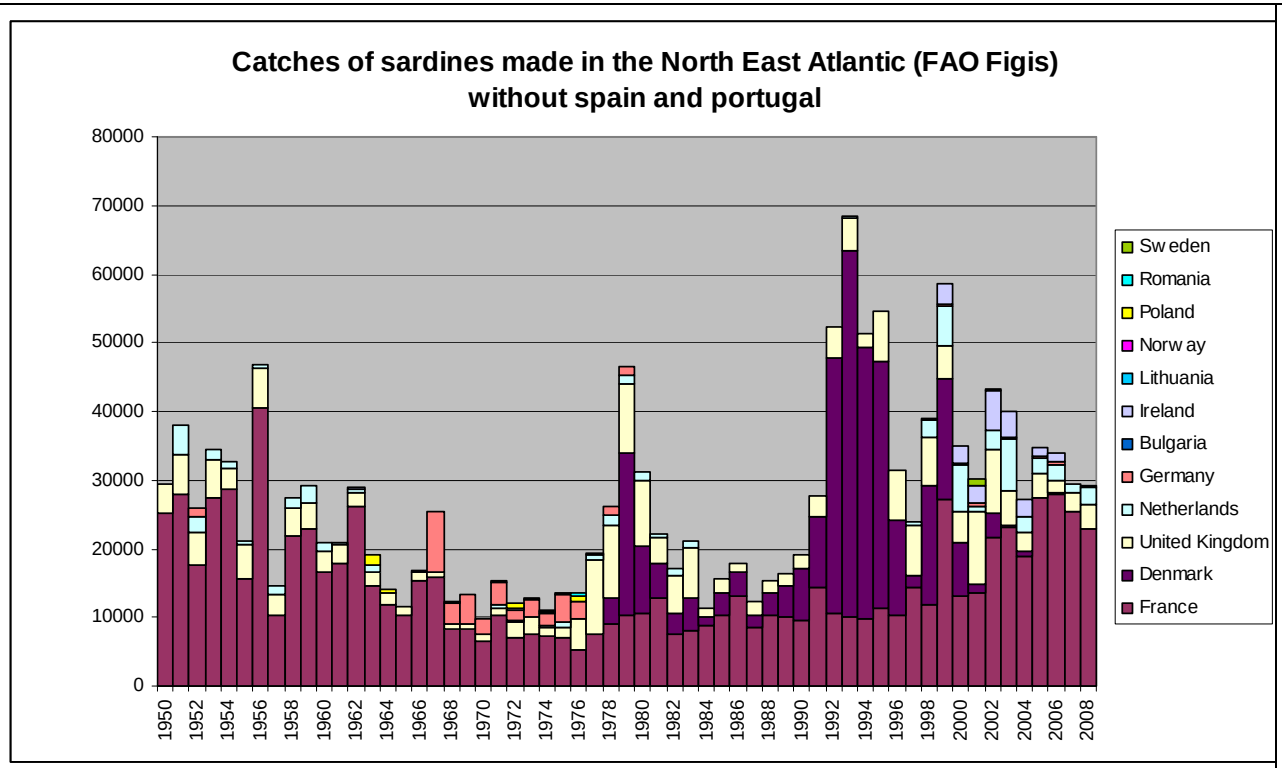
TAC : Taux admissibles de captures

12 Appendices

APPENDIX 1. Assesment tree

SCORING LEVEL	NUMBER	TITLE	PURPOSE	PONDERATION	SCORE
PRINCIPLE	1	TARGET SPECIES		1	80
COMPONANT	1.1	OUTCOME	CONSIDER THE IMPACT OF THE FISHERY ON THE TARGET SPECIES, AND PARTICULARLY WHETHER THE SPECIES/STOCK IS AT SUSTAINABLE LEVELS.	0,5	80
PERFORMANCE INDICATOR	1.1.1	STOCK STATUS (C1)	THE STOCK IS AT A LEVEL WHICH MAINTAINS HIGH PRODUCTIVITY AND HAS A LOW PROBABILITY OF RECRUITMENT OVERFISHING	0,5	80

SICA	Score rationale	References
• **Risk-causing activities** = Direct capture	Activities identified by consultation of the stakeholders: direct capture The stock unit taken into consideration is the northern stocks of sardines (*Sardina pilchardus*) in the North West Atlantic Ocean. According to the ICES, this stock mainly covers the Bay of Biscay (Zone VIII a, b, d) and extends northwards to the Celtic Sea and to the Channel (Zone VII), even to the North Sea. It is a separate entity from the stock present off the coasts of Spain (VIII c) and Portugal (XI) extending to African coastal waters. The data available in the ICES's report in 2008 shows that catches of sardines caught by the French fleet from this stock totalled 24,009 tonnes in 2007, i.e. approximately 86% of European captures. However, this evaluation does not take into account the catches of sardines by industrial fisheries from northern European countries (R 38, 39, 40). The statistical database of the FAO indicates that sardine catches for the North East Atlantic zone are substantially higher (data source: Figis). If we remove the catches of Spain and Portugal, who mainly fish outside the zone in which the stock is located (see ICES working group report), the catches exceeded 50,000 tonnes in the 1990's and reached 30,000 tonnes in recent years. The part of French catches has constantly increased over the last few years (almost 90% in 2007). Captures from major open sea fisheries, such as those caught by Danish seine net trawlers which reached significant levels in the 1990's (more than 30,000 tonnes per year), seem to have almost disappeared today (see table below). It should be noted that for the Bay of Biscay, catches of sardines by purse seiners account for approximately 90% of French captures, with the remaining 10% being caught by open sea trawlers. The proportion of catches caught in the English Channel represents less than 20% of catches made by French trawlers in zones VIII a, b, d and VII d, e (R 34). Direct capture has been identified as the activity with the greatest impact on sardine stocks. Furthermore, of all the fishing activities conducted by all the fisheries on the stock in question, catches made by purse seiners represent a very significant and dominant share.	Interviews with stakeholders, R 9,10,30, 33, 34, 37 38, 39, 40, 47, 56, 57



Relevant subcomponents = Population size	The size of the **population was determined *via* consulting the stakeholders as the component** most impacted by direct catches of sardines. However, the impact of fishing on stocks seems limited.
Spatial scale of activity	According to consultation of the stakeholders, the stock distribution zone in which direct capture of sardines is conducted by purse seiners has been evaluated at between 1 and 15% of the total stock distribution zone. In order to take into account the spatial scale of other fisheries that are likely to develop in the stock distribution zone, the spatial scale of other fishery of Bay of Biscay and Channel fishery, as the Cornwall sardine fishery should be added. These make the spatial scale at 16 to 30% of the sardine stock distribution.
Temporal scale of activity	According to consultation of the stakeholders, sardine fishing by purse seiners is mainly carried out between May and October (for 4 to 5 months), 5 days per week, i.e. for approximately 100 days during this period. From November to April, the poor weather conditions and the 2 months biological closure period respected by majority of the vessels meant that sardine fishing is less frequent. The number of sardine fishing days at this time of year is 1 to 3 per week. Taking into account the fact that some boats do not fish at the same time, the number of days during which sardine fishing is carried out by the purse seiners for this period of the year is estimated at 80 to 100 days. The total number of days on which sardine fishing is carried out therefore amounts to between 180 and 200 per year. Due consideration of the timescale for other fisheries likely to also harvest the stock, the results from the SICA for the Cornwall sardine fisheries have been taken into account.

Intensity of activity	The biomass estimated by the PELGAS programme in the Bay of Biscay amounted to 235,000 tonnes in 2006 (for zone VIII a and b) and according to FAO data, catches made on the northern stock totalled 34,000 tonnes for this same year. An initial estimation of mortality per catch is said to be less than 0.15, which amounts to less than 50% of natural mortality (natural mortality in sardines of 0.33 - (R37). It is therefore highly likely that this fishing mortality is lower than the FMSY. The FMSY is the fishing mortality that ensures the maximum sustainable yield of a stock in the long-term (a point of reference defined during the world summit on sustainable development, R56). Evaluation of the stock by the ICES in 2008 (R 38, 39, 40) used the direct estimations from the PELGAS scientific programmes as well as monitoring of the demographic structure of captures. This evaluation highlights a decrease in biomass attributed to poor recruitment in 2004 and 2005. Conversely, recruitments in 2006 and 2007 were said to be more significant, so the biomass should once again increase. It should be noted that estimates of abundance through scientific campaigns are carried out in the north of the Bay of Biscay whereas evaluation of the stock covers the entire distribution zone for the resource (north of the Bay of Biscay to the North Sea). Consequently, in the fishing zone operated by the Southern Brittany purse seiners, monitoring of the resources abundance is available (unlike anywhere else), enabling reports to be made on its development. The stocks are estimated using a broader scale that covers other fisheries (in particular the purse seiners of Cornwall). The fishery under evaluation accounts for 40% of catches on this scale. As a result, estimation of fishing mortality using these two sources leads to over evaluation of fishing mortality. Furthermore, data from the ICES working group report shows that the demographic structure of the sardine population is complete, not truncated and that all the age ranges are represented in the population. Consequently, the diagnostic for the status of this resource is not considered to be a cause for concern. This diagnostic confirms and reinforces the work of Forest (R34), which notes: "There is no evaluation that would allow the level of abundance of current sardine stocks in the English Channel and Bay of Biscay to be assessed. However, different indicators (stability of catches over at least the last 10 years, relatively low fishing effort) give rise to the theory that the stock could be under-exploited in biological terms. Though it is not possible to provide a precise figure, it is thought that the maximum sustainable production level is higher than the current production level". The impact of direct capture on the sardine population is moderately detectable at stock level.	
SICA score = 2	The impact of activity on the size of the population or its rate of growth is detectable, but no significant impact on population dynamics can be observed.	

Summary table of grading by risk analysis (SICA) using the RBF method.

Performance indicator	Activity with higher risk	Spatial scale	Time scale	Activity intensity	Affected component	SICA score
Target species stock status	Direct catches	3	4	3	Population size	2

APPENDIX 1. Assesment tree

PSA	Score rationale	References

Productivity Scores [1 3]

Average age at maturity	Average max age	Fecundity	Average max size	Average size at Maturity	Reproductive strategy	Trophic level (fishbase)	Total Productivity (average)
1	2	1	1	1	1	2	1,29

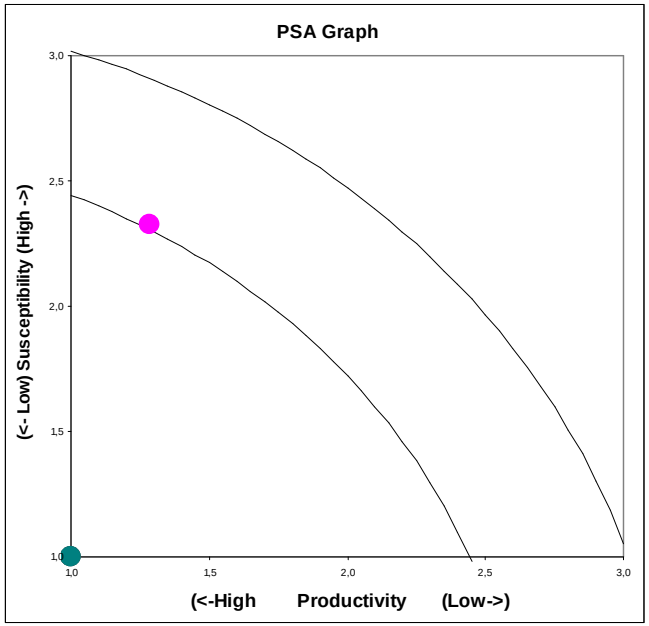
Susceptibility Scores [1 3]

Availability	Encounterability	Selectivity	Post-capture mortality	Total (multiplicative)
2	3	3	3	2,33

PSA scores (automatic)

Color on PSA plot	PSA Score	Risk Category Name	MSC scoring guidepost	MSC score*
	2,66	Med	60-80	79,6

- MSC score = -11.965 (PSA)²+ 32.28 (PSA)+78.259



APPENDIX 1. Assesment tree

	Low productivity (high risk, score=3)	Medium productivity (medium risk, score=2)	High productivity (Low risk, score=1)	Purse seine sardine
Average age at maturity	>15 years	5-15 years	<5 years	1 to 2 years (R42)
Average maximum age	>25 years	10-25 years	<10 years	Max. reported age: 15 years (R54)
Fecundity	<100 eggs per year	100-20,000 eggs per year	>20,000 eggs per year	50,000-60,000 eggs with a mean diameter of 1.5 mm (R54)
Average maximum size	>300 cm	100-300 cm	<100 cm	Max length : 27.5 cm (R46)
Average size at maturity	>200 cm	40-200 cm	<40 cm	15 cm (fishbase) 10-20 cm (R42)
Reproductive strategy	Live bearer	Demersal egg layer	Broadcast spawner	Spawn in batches in the open sea or near the coast (R55) Mode dioecism Fertilization external Spawning frequency Variable throughout ranges Batch spawner Yes. (R31bis) Reproductive guild non guarders open water/substratum egg scatterers. Description of life cycle and mating behaviour Breeds at 20 to 25 m, near the shore or as much as 100 km out to sea. (R81)
Trophic Level	>3.25	2.75-3.25	<2.75	3.05 (R74)

	Low susceptibility (low risk, score=1)	Medium susceptibility (medium risk, score=2)	High susceptibility (High risk, score=3)	Purse seine sardine
Availability 1. Overlap of species range with fishery	<10% overlap	10-30% overlap	>30% overlap	According to consultation of the stakeholders, the stock distribution zone in which fishery operates has been evaluated at between 1 and 15% of the total stock distribution zone.
Encounterability –Habitat and depth check (scores vary by fishery)	Low overlap with fishing gear	Medium overlap with fishing gear	High overlap with fishing gear	As the sardine is the target species and as the purse seine is designed to catch all the fish identified, there is a high vertical overlap between the gear and the fish.
Selectivity (scores vary by gear type; this example is for set gillnets. Selectivity for hooks is found in Table B4.4)	< mesh size, or >5 m in length	1-2 times mesh size, 4-5 m in length	>2 times mesh size, to say, 4 m in length	As the purse seine sardine identify a school of fish and is able to catch all of them, the selectivity of the gear for sardine is here considered as high risk score
Post-capture mortality (scores vary by fishery)	Evidence of post-capture release and survival	Released alive	Retained species, or majority dead when released	As sardine is the target species of this fishery, the sardines captured are retained. The post capture mortality is scored on high susceptibility.

PSA score =	The PSA score of 2,66 corresponds to a MSC score of SG80

CONSIDERING PSA AND SICA SCORE, THE SCORE OF THE PI IS BASED ON SICA RESULT. THEN, THE SCORE 80 IS GIVEN.

APPENDIX 1. Assesment tree

Performance indicator	**1.1.2**	**Reference points**	Limit and target reference points are appropriate for the stock.	**0,5**	**80**
SICA			**Score rationale**	**References**	
			Evaluation of criterion 1.1.1 using the RBF method automatically leads to a score of 80 for criterion 1.1.2.		
Component	**1.2**	Harvest Strategy (Management)	There is a management strategy is in place to ensure that harvest of the target species is maintained within sustainable levels	**0,5**	**80**
Performance indicator	**1.2.1**	**Harvest strategy**	There is a robust and precautionary harvest strategy in place	**0,25**	**75**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points. The harvest strategy is likely to work based on prior experience or plausible argument. Monitoring is in place that is expected to determine whether the harvest strategy is working.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points. The harvest strategy may not have been fully tested but monitoring is in place and evidence exists that it is achieving its objectives.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points. The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels. The harvest strategy is periodically reviewed and improved as necessary.	The harvest strategy of the fishery is composed by: * the monitoring of activities and control rules are done and defined by the PO, the Affaires Maritimes, the CRPMEM, * the management measures and the implicit or explicit management procedures are defined by CNPMEM, CRPMEM, CLPMEM and PO, * the stock evaluation is done by IFREMER, via PELGAS programme. Stock evaluation and monitoring: The PELGAS programme was set up in 2002. Its aim is to monitor the distribution and abundance of the pelagic species harvested in the Bay of Biscay. The abundance data is then transmitted to ICES. Since 2007, some purse seiners have been taking part in this programme, whose results are presented by the scientists at IFREMER to the Anchovies & Sardine Commission of the CNPMEM. However, for the moment, no formal advice has been requested from the scientists. Even is no target and limit reference points have been developed for this fishery, we consider that the fishery management ensure that the target species is maintained within sustainable level (see PI 1.1.1). Management measures, control, monitoring: Implementation of measures by the fishing committee and PO, such as declaration of catches, the daily quota, the limitation of fishing days as well as the monitoring of catches and the stock, as well as the PELGAS programme data are sufficient for establishing a sustainable harvest strategy. *These elements of the harvest strategy work together towards achieving management objectives,* and stock situation is satisfactory. *The harvest strategy is based on prior experience and plausible argument* of “Commission Pêche Côtière” or “Commission Anchois-sardine”, and the PELGAS results. *Monitoring* of the distribution and abundance and the catches *is in place and is expected to determine whether the harvest strategy is working.* The rules set out by the managing authority have to date led to sustainable management of the stock, that is why, the harvest strategy, regarding the results of monitoring is expected to achieve stock management objectives. However, the harvest strategy isn’t yet responsive to the state of the stock . → A CONDITION IS RAISED ON THIS POINT (CONDITION1)	R 09, 10, 19, 30, 47, 37, 38, 39, 40 , interviews with stakeholders	

			Moreover, for the moment, even though the *harvest strategy has not been fully tested, monitoring of biomass and catches is in place and the existing management measures and evidences (*Pelgas) *show that it has reached its objectives (*biomass assessment, status of population). **ALL ELEMENTS AT SG60 ARE MET, IN ADDITION TO THE SECOND SG80 ELEMENT. SINCE ONLY HALF OF THE FIRST SG80 ELEMENT IS MET, A SCORE OF 75 IS GIVEN.**		
Performance indicator	**1.2.2**	**Harvest control rules and tools**	There are well defined and effective harvest control rules in place	**0,25**	**75**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
Generally understood harvest control rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached. There is some evidence that tools used to implement harvest control rules are appropriate and effective in controlling exploitation.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. The selection of the harvest control rules takes into account the main uncertainties. Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached. The design of the harvest control rules take into account a wide range of uncertainties. Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.	*The harvest control rules,* implemented by PO and CRPMEM*, that are in place are well defined or generally understood and consistent with harvest strategy* (1.2.1). Implementation of measures such as declaration of captures, daily quotas and restrictions on the number of fishing days, which each year are re-assessed and supplemented by rules set out by the PO, *show the selection of the harvest control rules takes into account the main uncertainties* (determined after the report by the IFREMER subsequent to biomass evaluations) and the results of PELGAS evaluations seem to show that to date the measures in place tend toward maintenance of the biomass, and good recruitment since 2007 Exploitation rate seems to be adapted below the maximum sustainable fishing mortality. However there is no well defined procedures set out by the fishery in case of decline stock size (adaptation of fishing effort) → **A CONDITION IS RAISED ON THIS POINT** The control procedures help to keep the harvest rate at reasonable levels if decision-making rules are established thereto. Thanks to the data from the programmes, *harvest control rules take consideration of the main uncertainties.* The latest indicators for the fishery such as catches landed in relation to biomass, show that the rules implemented are suitable, and *these available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules* **ALL ELEMENTS OF SG60 ARE MET, IN ADDITION TO THE SECOND AND THIRD SG80 ELEMENT. SINCE ONLY HALF OF THE FIRST SG80 ELEMENT IS MET, A SCORE OF 75 IS GIVEN**	R9, 10, 19, 20, 21, 22, 23, 30, 37, 38, 39, 40, 47 Interviews with stakeholders	

Performance indicator	1.2.3	Information / monitoring	Relevant information is collected to support the harvest strategy	0,25	90
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy. Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy. Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. There is good information on all other fishery removals from the stock.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available. All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.	Plenty of relevant information exists for implementing the harvesting strategy, even though they are not necessarily all used at present. Stock structure and stock productivity: *Stock abundance and fish sampling and fishery removals are regularly monitored on a yearly basis, with a degree of accuracy and cover consistent with the harvest control rules*. The PELGAS campaign reports as well as those of the ICES working group, bring together information on stock (abundance, biomass, spatial distribution and demographic structure). Composition of the fleet and other information on purse seiners are available from the CRPMEM that manages the fishery, and from landings monitoring (named RIC) *Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy* *There is good information from all the other fish samples made on the stock*. The reports of the ICES working group bring together the catches made on the stock by certain countries (France, Spain, Portugal United Kingdom and Ireland). Catches of sardines made in the North East Atlantic by the other countries are accessible in the FAO (Figis) database. Furthermore, the ICES working group believes that for the sardine, landing of catches are not substantially under-declared. (ICES, 2008). Using this information, *some yearly indicators are available and monitored and help to support harvest control rules.* The necessary tools exist and their reliability is satisfactory. (number of vessels, biomass, recruitment, landings, other fisheries….) *Then, this comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information (Natura 2000, Iroise Marine reserve), including some that may not be directly relevant to the current harvest strategy, is available* **ALL THE SG80 ELEMENTS, AND THE FIRST SG100 ELEMENT ARE MET. THE SCORE OF 90 IS GIVEN.**	R9, 10, 19, 23, 29, 30, 37 38, 39, 40, 47 Interviews with stakeholders	
Performance indicator	**1.2.4**	**Assessment of stock status**	There is an adequate assessment of the stock status	**0,25**	**80**
SICA			**Score rationale**	**References**	
			Evaluation of criterion 1.1.1 using the RBF method automatically leads to a score of 80 for criterion 1.2.4.		

APPENDIX 1. Assesment tree

Principe	2	Ecosystème		1	81
Component	2.1	Retained species	Species that are retained by the fishery under assessment	0,2	80
Performance indicator	2.1.1	Outcome *Status*	The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species.	0,333	80

SG60	SG80	SG100	Score rationale	References
Main retained species are likely to be within biologically based limits or if outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species. If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.	Main retained species are highly likely to be within biologically based limits, or if outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	There is a high degree of certainty that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points.	During the fishing season, sardines represent more than 95% of catches made by the fleet (according to data supplied by the two producers' associations to which the purse seiners belong). Outside the season, the fleet can make bigger catches of other species whilst continuing to target sardines. However, it should be noted that purse seine can only be carried out on pelagic species. Such selectivity is due to the fact that this form of fishing is conducted on pelagic species that move around in mostly uniform shoals. Analysis of catch distribution conducted by the PMA trip by trip for the 10 PMA purse seiners, and from OPOB shows that: • Horse mackerel (2 pooled species) are the most often caught (about 5 to 8 % of the total catches) by the purse seiners after sardines, all throughout the year • Seabass and gilthead sea bream are important between the months of January and February. These retained species are in majority caught when sardines are not available Related main species: ▪ **Horse mackerel** (*Trachurus trachurus* and *Trachurus mediterraneus*) Even if it represents less than 1% of the total catches, regarding commercial value or context (recent local conflicts between fishermen), the following species can also be considered as main species. • **Seabass** (*Dicentrarchus labrax*), • **Gilthead sea bream** (*Sparus aurata*) At the time of the assessment and stakeholders' consultation, it has been determined that anchovy was a bycatch species. However, the recent (autumn 2009) captures of anchovy in VII area and the public comments bring the assessment team to consider the anchovy as another main retained species (because of vulnerability of species). • **Anchovy** (*Engraulis encrasicolus*) The minor species (less than 1% of the catches) are : • Black sea bream (*Spondyliosoma cantharus*), • Lance (Ammodytes spp, Hyperoplus spp) • Mackerel (*Scomber scombrus*), • Mullet (*Chelon labrosus*), In general over the year, catches of these species remain in the minority compared to catches of sardines. According to the OP data, landings of these species do not exceed 1% of total tonnage landed by the fleet (for the last 3 years) **Evaluation for the main species** Horse mackerel	Interviews with stakeholders, Fishbase, R 10, 37, 38, 39, 40, 57, 58, 61, 67, 73, 76

			Amongst the main species, only horse mackerel are subject to quotas and monitoring by ICES. For the moment, the status of horse mackerel stock does not raise any cause for concern and the catches made by the purse seiners are very low in comparison to total catches. For this retained species *there is a high degree of certainty that retained species are within biologically based limits*. **SG 90 IS MET FOR HORSE MAKEREL.** Seabass and Gilthead sea bream For seabass, purse seine nets trawlers are subject to weekly quotas (limited to 4 tonnes of seabass per week) and/or annual quotas (annual quota for sea bass and black sea bream of 30 tonnes). For Gilthead sea bream, the global catches ares very low (less than 20 tons/year) and limited to large fish, higher than 250 g / size 4..This strategy for these 2 main retained species and the very low global catches on these 2 stocks *allow us to say that they are highly likely to be within biologically based limits.* **SG 80 IS MET FOR SEABASS AND GILTHEAD SEA BREAM** Anchovy The European Commission has closed fishing for anchovies (*Engraulis encrasicolus*) since 2005 in zone VIII due to publication of pessimistic scientific assessment on stock status. Landing of this species was therefore forbidden. Nevertheless, this measure does not affect the north of the fishery (zone VII, north from 48°N), where catches are allowed. UE opinion has been renewed until 2009. In 2010, due to a better stock status, the fishing will be open in VIII area. Then *there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.* **SG 80 IS MET FOR ANCHOVY.** **FOR ALL THE MAIN RETAINED SPECIES, ALL THE SG 80 ELEMENTS ARE MET, AND FOR HORSE MACKEREL, ALL THE SG90 ELEMENTS ARE MET.** **THE SCORE OF 80 IS GIVEN FOR THE PI.**		
Performance indicator	**2.1.2**	***Management strategy***	There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species	**0,333**	**75**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding.	There is a partial strategy in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding. There is some objective	There is a strategy in place for managing retained species. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work.	Landing of the main retained species are registered and incorporated into French fishing statistics and into OP's databases. This data is used within the scope of managing each species and is taken into consideration in evaluation or monitoring of stocks. To date, the fishery has taken measures to limit its pressure on retained species and management of the fishery appears to be sustainable with regards to this point. Considering the main retained species horse mackerel, seabass, gilthead sea bream and anchovy: * Horse mackerel is subjected to quota. As a result, landings are closely monitored, especially by producers' organizations. The biomass is at full reproductive capacity according to ICES scientific advice given below. *There is a strategy in place for managing retained species, based on information directly about the species.* For horse mackerel, the stock is at a level that allows full reproductive capacity and despite	Interviews with stakeholders, R10, 37, 38, 39, 40, 23,	

The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved. There is some evidence that the partial strategy is being implemented successfully.	There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its overall objective.	the absence of reference points, the fishing effort is deemed to be fairly low. Harvesting of this species is deemed to be in line with the precautionary approach recommended by the EU. *There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring.* **SG90 IS MET FOR HORSE MACKEREL** *For sea bass, *there is a partial strategy in place* , measures are incorporated in the purse seine net fishing license in Brittany's maritime waters, to the south of 48°30: purse seiners are subject to weekly quotas (limited to 4 tons of sea bass per week) and/or annual quotas (annual quota for sea bass and black sea bream of 30 tons). For gilhead seabream, size limit to restrict landings to large fish appear also as a partial strategy allowing to limit fishing mortality for a species representing low catches for the seine fishing fleet (about 0,15%). *Based on landed information there is some objective basis for confidence that the partial strategy will work.* And there is also some evidence that *the partial strategy is being implemented successfully* (landing, status of the stock) **SG 80 IS MET FOR THESE TWO SPECIES** * For anchovy, as explained in 2.1.1, in Ices area VIII, *there is a partial strategy in place that is expected to ensure the fishery does not hinder their recovery and rebuilding. There is some objective basis for confidence that this partial strategy will work, based on some information directly about the fisheries and species involved.* (Closing fishing period, landings, stock assessment). *There is some evidence that the partial strategy is being implemented successfully.* Indeed, the fishing closing period in area VIII led to an increase of the biomass., **ALL THE SG60 ELEMENTS ARE MET, AND THE SG 80 ELEMENTS ARE MET.** However, as the strategy in place isn't extended to area VII at the north of the 48°, and as recent capture occurs in this area **THE SCORE OF 75 AND NOT 80 IS GIVEN FOR ANCHOVIES**. **THE GLOBAL SCORE FOR THE PI CANNOT BE HIGHER THAN 75**		
Performance indicator	**2.1.3**	***Information / monitoring***	Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage retained species	**0,333**	**85**
SG60	**SG80**	**SG100**	**Justification de la note**	**Références**	
Qualitative information is available on the amount of main retained species taken by the fishery. Information is adequate to	Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery. Information is sufficient to estimate outcome status with respect to biologically based limits.	Accurate and verifiable information is available on the catch of all retained species and the consequences for the status of affected populations. Information is sufficient to quantitatively estimate	Catches by purse seiners are recorded as part of the French fishing statistics system. Furthermore, all the boats in the fishery belong to a producers' organisation: PMA or OPOB. These organisations have at their disposal all the data concerning landings made by their members. For each retained species (horse mackerel, seabass, gilthead sea bream and anchovy), it is possible to find out the landings made by the purse seiners for each trip. *Qualitative information and some quantitative information are available on the amount of main retained species taken by the fishery* For horse mackerel and anchovy, the landing data is used in the ICES stocks assessments groups.. Moreover, for anchovy, monitoring also includes scientific campaign Pelgas. Thus, for these species *information is sufficient to quantitatively estimate outcome status of*	Interviews with stakeholders, R9, 10, 30, 37, 38, 39, 40, 19, 58, 61, ices, Ifremer	

qualitatively assess outcome status with respect to biologically based limits. Information is adequate to support measures to manage main retained species.	Information is adequate to support a partial strategy to manage main retained species. Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).	outcome status with a high degree of certainty. Information is adequate to support a comprehensive strategy to manage retained species, and evaluate with a high degree of certainty whether the strategy is achieving its objective. Monitoring of retained species is conducted in sufficient detail to assess ongoing mortalities to all retained species.	*mackerel and anchovy with a high degree of certainty* *Accurate and verifiable information is available on the catch of these retained species and the consequences for the status of affected populations* This information is used by managers of the fishery in order to determine fishing strategy (annual quotas, period of fishing stopping), it is assessed *adequate to support a comprehensive strategy to manage main retained species*. Quotas are set for horse mackerel. For anchovies, catches are limited to Ices area VII, and under quota for Ices area VIII. The information is then *sufficient to determine whether the strategy is achieving the objective of limitation of capture.* Yearly, *sufficient data continue (*landings, PELGAS campaign, ICES assessment, quotas…*) to be collected to detect any increase in risk level* **SG 95 IS MET FOR HORSE MACKEREL AND ANCHOVY (ALL THE SG80 ELEMENTS AND FIRST 3 SG100 ELEMENTS)** Regarding, seabass and gilthead sea bream catches by purse seiners are very low and in fact negligible compared to those of other fisheries. *For seabass, the mean annual catch is estimated to be lower than 50 tons (from PMA and OPOB statistics), while the total French annual catch is around 10 000 tons (including non commercial landings). *For the gilthead sea bream, annual bycatches by purse seiners are lower than 20 tons while French landings are higher than 500 tones. There is a high degree of certainty that such low catches do not significantly impact the stock status. Thus, it can be considered that i*nformation is sufficient to quantitatively estimate outcome status with a high degree of certainty.* *This information also appears adequate to support a partial strategy to manage the seabass and the gilthead seabream stocks.* Additionally it can be noticed that the last ICES advice regarding seabass (R38,39,40)) concluded that the stock status was satisfactory; more recently Ifremer indicated that the spawning biomass is increasing. As for seabream species, no assessment nor advice are available at the moment, but du to the low bycatches is can be assumed that no detectable change in reproduction capacity is likely to be detectable against background variability for this population. *The data collection is continuous* (Pelgas campaign for anchovies, landing data, ICES decision, Iroise Marine reserve study) *in order to get sufficient data to detect any increase in risk level.* The fishing strategy, and rules regarding main retained species, are then determined using these information. *This information is considered adequate to support the partial strategy to manage seabass and sea bream* **FOR SEABASS AND GILTHEAD SEA BREAM ALL THE SG80 ELEMENTS AND SOME OF SG 100 ELEMENTS ARE MET. THE SCORE OF 85 IS GIVEN** **CONCLUSION** **FOR HORSE MACKEREL AND ANCHOVIES SG 95 IS MET AND FOR THE SEABASS AND GILTHEAD SEA BREAM, SG 85 IS MET.** **THE GLOBAL SCORE IS SG85.**	

APPENDIX 1. Assesment tree

Component	**2.2**	**Bycatch species**	Organisms that have been taken incidentally and are not retained (usually because they have no commercial value).	**0,2**	**75**
Performance indicateor	**2.2.1**	**Outcome *Status***	The fishery does not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted bycatch species or species groups.	**0,333**	**80**

SICA	Score rationale	References
Retained Species Outcome	As a precautionary measure, it is hereby considered that the most vulnerable species that can be taken and not retained is the red sea bream. The other bycatch, in lesser quantities, can be under-sized or over-quota fish. (At the moment of the redaction of the final report, and due to new context and last capture of anchovy in ICES zone VII, this species has been considered as a retained species)	Interviews with stakeholders, R37,R38, R39, 40, 70, 71, 72
Risk-causing activities from fishery under assessment = direct capture	As regards purse seine net fishing, direct capture is the activity that has the biggest impact on this species.	
Relevant subcomponents = Reproductive capacity	Potentially, given that for this stock, questions are increasingly being asked as to their renewal capacity, their reproductive capacity could be the most severely impacted by bycatch. However, it is estimated that fishing this species by purse seiners has a minimum impact on dynamics of population	
Temporal scale of activities	For red sea bream, the stock zone is ICES zone VI, VII and VIII. It is estimated that the purse seiners' zone of activity amounts to (at the most) 1 to 15% of the stock distribution zone.	
Spatial scale of activities	Bycatch of red sea bream may especially take place at the end of the year, i.e. approximately 100 days per year.	
Intensity of activities	Catches of this species have been determined to be very limited. Furthermore, during fishing operations, if these species become trapped in the purse seiners, the fishermen can decide to release the shoal if the proportion of these species is too big; they may also this species are estimated as low. The impact of the fishery on species captured then rejected is deemed to be minor.	
SICA score = 2	In light of general regulations and measures taken by the fishery with regard to red sea bream, the impact of purse seiners fishing on the bycatch species is limited. It is determined that there is very low detectable or possible detactable change on reproductive capacity but minimal impact on population dynamics of red sea bream	

Summary table of grading by risk analysis (SICA) using the RBF method.

Performance indicator	Activity with higher risk	Spatial scale	Time scale	Activity intensity	Affected component	SICA score	MSC score
Bycatch species (rejects)	Direct catches	Sea bream 1 to 15% 2	< 100d 3	Minor 2	Reproductive capacity	2	**80**

Note: The ICES report states that a programme studying the bycatch of purse seine net boats is being undertaken in Portugal. The results were not available for the working group, but they may represent over the coming years a source of information to develop this point.

APPENDIX 1. Assesment tree

Performance indicator	**2.2.2**	***Management strategy***	There is a strategy in place for managing bycatch that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to bycatch populations	**0,333**	**80**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
There are measures in place, if necessary, which are expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. The measures are considered likely to work, based on plausible argument (e.g general experience, theory or comparison with similar fisheries/species).	There is a partial strategy in place, if necessary, for managing bycatch that is expected to maintain main bycatch species at levels which are highly likely to be within biologically based limits or to ensure that the fishery does not hinder their recovery. There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or the species involved. There is some evidence that the partial strategy is being implemented successfully.	There is a strategy in place for managing and minimising bycatch. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. There is some evidence that the strategy is achieving its objective. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring.	The main and more vulnerable bycatch of the fishery is the red sea bream. *There is a strategy in place for managing and minimising bycatch of red sea bream:.* - Quota: Within the scope of the Common Fisheries Policy , there is a quota for red sea bream (*Pagellus bogaraveo*) for zones VI, VII and VIII. This quota is rather low (253 tonnes in 2009). - License and fishing authorisation: Within the scope of license attribution for purse seine net fishing in Brittany maritime waters north of 48°30, regulations forbid fishing of red sea bream by purse seiners. One occasional landing of red sea bream in early 2009 has conduct authorities to remove licence to the fishing boat during several months preventing for further commercial catches. The measure is now strictly applied. These measures are supposed to maintain these species at levels that will enable recovery or restocking. - Gear selectivity*:* purse seine nets are selective gears, even if the mesh size used is small. This selectivity is due to the behaviour of the shoals of the pelagic species sought, which are more often homogeneous. Electronic systems on board boats (sounding machines) in general enable the nature of the shoal to be caught to be detected. In addition, boat captains also have their own business strategies. Capture of a non uniform shoal (in terms of size but also in terms of species) will require more work. In this case, boat captains prefer to stop fishing operations just before the fish is brought on board. In this case, stressed and injured fish can die. This problem, known as slipping, corresponds in fact with a type of bycatch. Then, following this evaluation of the situation, is determined that the *strategy is mainly based on information about the fishery and species involved, and there is some objectives basis for confidence that the strategy will work. .* T*here is some evidence that the strategy is being implemented successfully, and there is some evidence that the strategy is achieving its objective.* **ALL SG 80 ELEMENTS ARE MET, AND SOME OF THE SG100 TOO (FIRST AND THIRD). HOWEVER, SINCE THE TESTING OF THE STRATEGY ISN'T MORE DEVELOPED, THE GLOBAL SCORE OF 80 IS GIVEN**	Interviews with stakeholders, R37, 38, 39, 40, 41, 43	

APPENDIX 1. Assesment tree

Performance indicator	2.2.3	*Information /monitoring*	Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.	0,333	65
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
Qualitative information is available on the amount of main bycatch species affected by the fishery. Information is adequate to support measures to manage bycatch.	Qualitative information and some quantitative information are available on the amount of main bycatch species affected by the fishery. Information is adequate to support a partial strategy to manage main bycatch species. Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).	Accurate and verifiable information is available on the amount of all bycatch and the consequences for the status of affected populations. Information is adequate to support a comprehensive strategy to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective. Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.	As the RBF was used to score PI2.2.1, scoring issues concerned with information with respect to biologically based limits need not be scored, and have been released from the grid. There is *qualitative information concerning the main bycatch species* (red sea bream) affected by this fishery. Indeed, stakeholder interview, description of fishing practice and rules on red sea bream give such information. Due to - (i) the characteristics of this type of fishing, able to target its catches with minimal bycatch, (detection, release of living captures, slippage) - (ii) the control of landings and the impeachment for fishermen to sold Sea bream, and moreover, as developed in 2.2.2, here is a strategy in place for managing and minimising bycatch of red sea bream. Relating to the elements of this strategy, it is considered that the *information available* is deemed sufficient to reach a reassuring diagnostic and *adequate to support a partial strategy to manage main bycatch species* **ALL THE SG 60 ELEMENTS ARE MET, AND SECOND SG 80 ELEMENT IS MET.** **THE GLOBAL SCORE OF 65 IS GIVEN.**	Interviews with stakeholders, R58, 61	

APPENDIX 1. Assesment tree

Component	2.3	ETP species		0,2	85
Performance indicator	**2.3.1**	**Outcome** ***Status***	The fishery meets national and international requirements for protection of ETP species. The fishery does not pose a risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species.	**0,333**	**90**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species. Known direct effects are unlikely to create unacceptable impacts to ETP species.	The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species. Direct effects are highly unlikely to create unacceptable impacts to ETP species. Indirect effects have been considered and are thought to be unlikely to create unacceptable impacts.	There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species. There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species.	The ETP species that may be affected by purse seine net fishing are mainly marine mammals (porpoises and dolphins) or tortoises. Birds are not concerned and fish on the list of threatened or endangered species (appendix 5) cannot be caught by purse seiners. Catching of dolphins, porpoises or tortoises is very rare with this mode of fishing. Some ETP pelagic and amphihaline fish species found in coastal waters of southern Brittany could be caught throughout the year by purse seiners. Adult shad, salmon and sea trout move towards coastal waters in the spring (shad) and in the summer/autumn (salmon and sea trout). Juveniles are found along the coast in spring. Both species of shad (*Alosa alosa* and *Alosa fallax*), as well as the Atlantic salmon, are considered to be vulnerable at European level and are included in appendix III of the Berne Convention (1992) and in appendices II and V of the Habitats/Fauna/Flora Directive (1994). These are species of Community interest the catching in the wild and commercial fishing of which are likely to be subject to management measures within management committees for migratory fish (COGEPOMI Brittany), as well as protection measures transposed in development and water management guidelines (SDAGE). However, due to the level of capture and frequency (very rare), and considering the fishing practices detailed in other PI, it is considered *that it is highly likely that there are no significant detrimental effect (direct and indirect) of the fishery on ETP.* The fishery is fully compliant with national and international requirements on protection of ETP species. No organisation has, at first glance, identified a specific risk caused by purse seine fishing on ETP species. *There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species* **SG80 IS MET; FIRST SG100 ELEMENT AND HELF OF THE SG100 SECOND ELEMENT ARE ALSO MET.** **SG 90 IS MET**	Interviews with stakeholders, www.cites.fr, natura2000.environnement.gouv	

APPENDIX 1. Assesment tree

Performance indicator	**2.3.2**	***Management strategy***	The fishery has in place precautionary management strategies designed to: - meet national and international requirements; - ensure the fishery does not pose a risk of serious or irreversible harm to ETP species; - ensure the fishery does not hinder recovery of ETP species; and - minimise mortality of ETP species.	**0,333**	**85**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
There are measures in place that minimise mortality, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.. The measures are considered likely to work, based on plausible argument (eg general experience, theory or comparison with similar fisheries/species).	There is a strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species. There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved. There is evidence that the strategy is being implemented successfully.	There is a comprehensive strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, which is designed to achieve above national and international requirements for the protection of ETP species. The strategy is mainly based on information directly about the fishery and/or species involved, and a quantitative analysis supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is evidence that the strategy is achieving its objective.	Regarding ETP as described in PI 2.3.1, the cetaceans are the main and practically only ETP concerned by the fishery. The specifications of the regulation EC 812/2004 laying down measures concerning incidental catches of cetaceans in fisheries are not required in purse seine sardine fishery. The Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, in its article 12(4) says that Member States shall establish a system to monitor the incidental capture and killing of the animal species listed in Annex IV (a) (of which cetacean) The Iroise Marine Reserve has also a monitoring role and put measures in place for limiting fishery impact on cetacean where needed. But the Reserve authorities consider that Purse seiners have not to be concerned by these specific measures. Moreover, as we know from fishing practice, measures and gear specificity, If cetacean become surrounded during fishing, they have the means to swim up out of the net to escape or to tear the mesh and pass through the net. If caught, they are released alive, by the way of slippage process, before hauling. Thus, the stakeholders and information from the fishery ensure that the fishery doesn't pose a risk of serious harm to ETP species. Thus, *a strategy* (composed by international, national and fishermen's measures adapted to the risk and scale of the fishery) *is in place for managing the impact of the fishery on ETP species, including measures to reduce mortality to a minimum*. *This strategy is designed to be highly likely to achieve national and international requirements for the protection of ETP species.* No national or international organisation has declared that there is a problem with regard to impact of purse seine net fishing on ETP species. By the implementation of common fishery policy, and European regulation, if cetaceans are caught, information must be provided by fishermen on logbook. *Based on information directly about the fishery and the nature of ETP species in the area, there is an objective basis for confidence that the strategy will work (SG80) and there is evidence that the strategy is being implemented successfully and achieving its objective (SG100)*. **WHILE ALL THE SG80 ELEMENTS ARE MET AND EVIDENCE THAT THE STRATEGY IS ACHIEVING ITS OBJECTIVE EXIST (SG100), THE LACK OF QUANTITATIVE ANALYSIS OR MESURES ABOVE NATIONAL REQUIREMENTS BRING US TO LIMIT THE SCORE TO SG 85.**	Interviews with stakeholders, EC 812/2004, Directive 92/43/EEC of 21 May 1992	

APPENDIX 1. Assesment tree

Performance indicator	2.3.3	*Information / monitoring*	Relevant information is collected to support the management of fishery impacts on ETP species, including: - information for the development of the management strategy; - information to assess the effectiveness of the management strategy; and - information to determine the outcome status of ETP species.	0,333	80
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
Information is adequate to broadly understand the impact of the fishery on ETP species. Information is adequate to support measures to manage the impacts on ETP species Information is sufficient to qualitatively estimate the fishery related mortality of ETP species.	Information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species, and if so, to measure trends and support a full strategy to manage impacts. Sufficient data are available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.	Information is sufficient to quantitatively estimate outcome status with a high degree of certainty. Information is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives. Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species.	The specifications of the regulation EC 812/2004 lay down measures concerning incidental catches of cetaceans in fisheries, ask the states to monitor the catches of cetacean. The fishermen, indeed have to record and report all the accidentally mortality of cetacean. *The information on the nature and the quantities of ETP species possibly impacted by the fishery is today sufficient and adequate to determine the level of impact of the fishery.* Based on information collected by the experts, studies of the Iroise Marine Reserve and fishermen local knowledge, the interaction between the fishery and ETP species in the area, it as been determined *that information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species.* Due to the minimal impact of the fishing method on mortality (slippage process) and due to knowledge of the ETP species possibly impacted by the fishery, *it is determined that sufficient data are available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.* As explained in 2.3.1. and 2.3.2, level of impact on ETP species is so low that it is determined that *information is adequate and sufficient to estimate outcome status with a high degree of certainty.* **SG80 IS MET.**	Interview with stakeholders/ List of ETP species in Iroise Marine reserve	

APPENDIX 1. Assesment tree

Component	2.4	Habitat		0,2	77
Performance indicator	**2.4.1**	**Outcome *Status***	The fishery does not cause serious or irreversible harm to habitat structure, considered on a regional or bioregional basis, and function	**0,333**	**80**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.	Purse seine nets are small seine nets used for inshore fishing. The fishing technique involves catching fish on the surface in open water by surrounding them with a net moved by two ropes fixed to its ends, used to haul and steer the fish. In principle, the net does not come into contact with the sea bed and therefore does not have an impact on habitats. For inshore fishing, in shallow zones, the seine net may touch the sea bed. However, since the netting is very fragile, fishing is carried out in zones with sandy or shingle sea beds and seeks to avoid marked contact, which could rip the nets (which are very expensive). *The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm.* **SG80 IS MET.**	Interviews with stakeholder, R41, 43	
Performance indicator	**2.4.2**	***Management strategy***	There is a strategy in place that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to habitat types.	**0,333**	**80**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance. The measures are considered likely to work, based on plausible argument (e.g general experience, theory or comparison with similar fisheries/habitats).	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above. There is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and/or habitats involved. There is some evidence that the partial strategy is being implemented successfully.	There is a strategy in place for managing the impact of the fishery on habitat types. The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective.	To avoid contact with the sea bed, most purse seiners are equipped with a double rope system. The first rope is weighted to ballast the purse seine net and immerse it. The second rope is located on the top of the net and is used to move it. A large meshed net separates these two ropes. Using this system, if the purse seine net touches the sea bed, when the net turns, the netting slides several metres above the sea bed. *This partial strategy* based on technical measures, fishing practices and experimentation *is expected to achieve habitat outcome 80 level.* *Thus, there is some objective basis for confidence that the partial strategy will work, based on information directly about the fishery and /or habitats involved. (map of habitats, stakeholders interviews…).* *And there is some evidence that the partial strategy is being implemented successfully* Indeed the fact that the netting that makes up the purse seine net is very fragile can be underlined. It is therefore in the interest of the fishermen to limit the risks of tearing their net and thus limit contact with the sea bed. This risk of costly damage helps to limit the impact that this fishing technique could have on habitats. **ALL THE SG80 ELEMENTS ARE MET.**	Interviews with stakeholders, sedimentology map (ifremer)	

Performance indicator	2.4.3	*Information /monitoring*	Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.	0,333	70
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
There is a basic understanding of the types and distribution of main habitats in the area of the fishery. Information is adequate to broadly understand the main impacts of gear use on the main habitats, including spatial extent of interaction.	The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery. Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear. Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types. Changes in habitat distributions over time are measured. The physical impacts of the gear on the habitat types have been quantified fully.	*There is a basic understanding of the types and distribution of main habitats in the area of the fishery.* Types of habitat are known, and maps exist, especially in Iroise marine reserve and following Ifremer's studies (annex 9). As described in 2.4.2, the impact of gear is known and measures and experimentation to reduce it is developed. Then the existing *information is adequate to broadly understand the main impacts of gear use on the main habitats, including spatial extent of interaction*. As the impact of the gear on the habitat has been estimated to be low, it is determined *that the nature, distribution and vulnerability of some habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery*. In the area of the Iroise Marine Reserve and in some Natura 2000 area, *sufficient data continue to be collected to detect any increase in risk to habitat* (impact of purse seine, habitats composition and vulnerability…). **ALL SG 60 ELEMENTS ARE MET AND THE FIRST AND LAST SG 80 ELEMENTS TOO.** **THE SCORE OF 70 IS GIVEN TO THE PI.**	Interviews with stakeholders, sedimentology map (ifremer)	

APPENDIX 1. Assesment tree

Composant	2.5	Écosystem		0,2	88
Performance indicator	**2.5.1**	**Outcome *Status***	The fishery does not cause serious or irreversible harm to the key elements of ecosystem structure and function.	**0,333**	**95**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
The fishery is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	It was defined that the "worst case" combination of risk causing activity is the direct capture of sardine and that the other direct or indirect impact of the fishery were highly unlikely to cause serious or irreversible harm or significant detrimental effect (Habitat, main retained species, ETP, bycatch) Concerning the wider system, structure and function of the ecosystem it has been determined that: In terms of nutrition, the sardine is low-level (it feeds on the lowest ranks of the food chain, phytoplankton and zooplankton) (level 3.05; R74), similar to the other small pelagic fish, in particular the mackerel and horse mackerel, which make up the main part of catches by purse seiners. Within the ecosystem, they are prey for top predators (carnivorous fish, seabirds and marine mammals, ICES, 2008). The sardine is also one of the main preys of the dolphin family along the French Atlantic coastline (R 51), the most abundant marine mammals in the sector (R45). In light of prior observations in sections 1.2.1 and 2.2, the purse seine net fishery does not affect the sustainability of these resources and is progressively less implicated in catching other small pelagic fish. In fact, catches of sardines by French purse seiners account for less than 15% of small pelagic fish caught in 2006 in the Bay of Biscay and Celtic Sea. It is therefore possible to conclude that its impact does not disrupt the ecosystem to the extent where serious or irreversible damage would occur. In conclusion, t*here is evidence that the fishery is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.* Nevertheless, in lack of enough quantitative proof, we scored this point at SG95 **SG 95 IS MET**	R10, 37, 38, 39 40, 74, 51, 45	

Performance indicator	**2.5.2**	***Management strategy***	There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.	**0,333**	**85**
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
There are measures in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem. The measures are considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems).	There is a partial strategy in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance. The partial strategy is considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems). There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is a strategy that consists of a plan, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm. The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved. There is evidence that the measures are being implemented successfully.	The management system and partial strategy in place is especially based on gear selectivity, limited impact on habitats, rules of fishing licences, fishing practices and fishermen experiences. *This partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance (SG80) and even restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm (SG 100).* *Moreover, based on arguments above* (information from the fishery, monitoring of ecosystem involved (by Ifremer and Iroise Marine Reserve), fishing practices, fishermen experiences, gear selectivity…*) the partial strategy is considered to work.* Considering this and as the Sardine purse seine fishing has a low impact on the productivity of the ecosystem, no further measures seems necessary to insure an efficient strategy. It was defined that the direct capture of sardine and the other direct or indirect impact of the fishery were highly unlikely to cause serious or irreversible harm or significant detrimental effect (sardine, habitat, main retained species, ETP, bycatch). (Previous PI : 2.1, 2.2, 2.4 and 2.5.1).*These are evidence that the measures are being implemented successfully.* **ALL THE SG80 ELEMENTS ARE MET. PARTS OF THE SECOND, THIRD ANS FOURTH SG 100 ELEMENTS ARE MET TOO.** **THEN, THE SCORE OF 85 IS GIVEN TO THE PI**	Interviews with stakeholders, OP decisions, R58, 61	

APPENDIX 1. Assesment tree

Indicateur de performance	2.5.3	*Information / monitoring*	There is adequate knowledge of the impacts of the fishery on the ecosystem.	0,333	85
SG60	**SG80**	**SG100**	**Score rationale**	**References**	
Information is adequate to identify the key elements of the ecosystem (e.g. trophic structure and function, community composition, productivity pattern and biodiversity). Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but have not been investigated in detail.	Information is adequate to broadly understand the functions of the key elements of the ecosystem. Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but may not have been investigated in detail. The main functions of the Components (i.e. target, Bycatch, Retained and ETP species and Habitats) in the ecosystem are known. Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred. Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	Information is adequate to broadly understand the key elements of the ecosystem. Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated. The impacts of the fishery on target, Bycatch, Retained and ETP species and Habitats are identified and the main functions of these Components in the ecosystem are understood. Sufficient information is available on the impacts of the fishery on the Components and elements to allow the main consequences for the ecosystem to be inferred. Information is sufficient to support the development of strategies to manage ecosystem impacts.	Overall, all the data required for construction of ecosystem models (Ecopath, for example) is available for the recent period. Scientific work of this type is currently in progress but preliminary estimates allow to consider that the impact of small pelagics catches by purse seine has limited effects on the trophic chain in this area. Assessment of previous PI, and considering the scale and intensity of the fishery, it is determined that the fishery as a limited impact on ecosystem and structure of ecosystem. Due to low level of impact on ecosystem, *information is adequate to broadly understand the key elements of the ecosystem.* Even if mains *impacts on these key ecosystem elements have not all being investigated in detail, they can be inferred from existing information.* *Impact of the fishery on sardine, retained species and main bycath species and habitat is evaluated and main functions are known (SG80) and for some of them well understood (SG100).* In the area of marine reserve and in some Natura 2000 area, in some scientific research and during part of Pelgas campaign, *sufficient data continue to be collected to detect any increase in risk level.* In light of the information available on catches (and their weight in total samples of small pelagic fish), on impact of fishery on ecosystem component, we consider that *Sufficient information is available on the impacts of the fishery on these Components to allow some of the main consequences for the ecosystem to be inferred* **ALL THE SG80 ELEMENTS ARE MET. THE FIRST SG 100 ELEMENT AND PART OF THE THIRD SG100 ELEMENT ARE MET.** **THEN THE GLOBAL SCORE OF SG85 IS GIVEN TO THE PI.**	Interviews with stakeholders, rationale of 2.2, 2.3 and 2.4 Guénette, comm..pers.	

APPENDIX 1. Assesment tree

Principe	**3**	**Management system**		**1**	**82**
Component	**3.1**	**Governance and policy**	Captures the broad, high-level context of the fishery management system within which the fishery under assessment is found.	**0,5**	**88**
Performance indicator	**3.1.1**	**Legal and/or customary framework**	The management system exists within an appropriate and effective legal and/or customary framework which ensures that it: - Is capable of delivering sustainable fisheries in accordance with MSC Principles 1 and 2; - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework.	**0,25**	**95**

SG60	**SG80**	**SG100**	**Score rationale**	**Références**
The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2. The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system. Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance	The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2. The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the fishery. The management system or fishery is attempting to comply in a timely fashion with binding judicial decisions arising from any legal challenges.	The management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2. The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective. The management system or fishery acts proactively to avoid legal disputes or rapidly implements binding judicial	Management of the fishery takes place within a clearly defined hierarchy set out by the Common Fisheries Policy at European level and by the national government for its implementation. The French Prime Minister's Secretary General for the Sea organises inter-ministerial action at sea, supplies the strategic directions in particular for biodiversity and coordinates the action of all authorities involved in fisheries control. Two ministries are particularly involved: the Ministry for Agriculture, Fisheries and Food alongside the DPMA (Department of Marine Fisheries and Aquaculture), which carries out management as well as economic and regulatory monitoring of fishing activities; and the Ministry for the Ecology, Energy, Sustainable Development and Territorial Development, including the various departments of the DAM (Directorate for Maritime Affairs), i.e. the DRAM (regional directorates) and DDAM (departmental directorates), which are responsible amongst other things for the administration and management of fishing vessels, control of maritime activities and seamen (in particular social security, training and working conditions on-board). The purse seine sardine fishery is exclusively located within the 12 nautical miles French territorial waters. The management of fisheries in territorial waters is delegated by central government to the CRPMEM (regional committees for fishing and fish farming) by law since 1991. The Anchovies & Sardines Commission within the Brittany CRPMEM makes deliberations and decisions that, once approved by the regional prefect, become enforceable law. At regional level, the DRAM (supported by the DDAM at departmental level) monitors implementation of sustainable management of the purse seiner fishery (principles P1 and P2) of the CRPMEM the deliberations approved by the Regional Préfet. *Therefore the management system is generally consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2.* The deliberations are transmitted to the local committees for fisheries (the CLPMEMs). There are five such committees in Brittany that manage the licences of purse seiners currently active in the fishery: Douarnenez (2), Le Guilvinec (12), Concarneau (11), Lorient (1), Auray/Vannes (1), and one in the Aquitaine region (Bayonne (4)). Local committees have the power to make recommendations and provide opinions to the Regional Committees.	Interviews with stakeholders, R 14, 16, 17, 18, 29, 61, 63, 64, 65, 77

of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery. The management system has a mechanism to generally respect the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	decisions arising from legal challenges. The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom on people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The different Committees of the CRPMEM also provide a transparent mechanism for the resolution of disputes that is appropriate to the context of the fishery and has been tested and proven to be effective. This is illustrated in the minutes of a meeting concerning "Cohabitation of trades and resource management" held by the DRAM on 25th March 2009 (CRPMEM minutes) subsequent to a conflict between purse seiners and other coastal fishermen. The minutes describe a set of possible measures put forward by the participants to be submitted to the CRPMEM's Inshore Fisheries Committee. These resulted in new management measures mentioned previously in this report, such as the ban on catching of red sea bream or establishment of a quota for sea bass. *However, it is not possible at this stage to establish that the management system acted proactively to avoid legal disputes.* The Producers' Organisations (OPOB and PMA in June 2009) bring together vessel owners that have a sardine purse seine licence, to manage landing quota of all existing right holders. Their specialist committees are represented in the regional committee (CRPMEM). The POs take decisions that contribute to sustainable management of the fishery in accordance with principles P1 and P2, especially with regard to the thresholds for catches per boat and per year, as well as the protection of sensitive species (red sea bream, whose catching and storage on-board of is forbidden for purse seiners). The members of these POs are duty bound to respect these decisions, under pain of penalty such as withdrawal of a production quota. *Therefore, the management system has a mechanism to formally commit to the legal rights created explicitly or established by custom on people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.* **THREE OUT OF FOUR OF 100 ELEMENTS ARE MET. THE SCORE OF 95 IS GIVEN.**		
Performance indicator	**3.1.2**	**Consultation, roles and responsibilities**	The management system has effective consultation processes that are open to interested and affected parties. The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties.	**0,25**	**85**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood. The management system includes consultation processes	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction. The management system includes consultation processes that regularly seek and accept relevant	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction. The management system includes consultation processes	The profession, from production to processing, is well represented in the fishery management systems through the CNPMEM (national committee for marine fishing and fish farming) which works in close collaboration with the French authorities (DPMA) as well as European authorities (DG MARE and the European Parliament), FranceAgrimer, producers organisations (PO), professional organisations in other Member Sates (through RACs – regional advisory committees) and non-governmental organisations (NGO). Within the CNPMEM, the inter-professional organisation includes 14 regional committees and 39 local committees for marine fishing and fish farming, whose missions cover, amongst other things, ensuring active participation of the profession in responsible and sustainable management of marine fisheries resources. Therefore *Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.* *The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained*: The CNPMEM's Anchovies & Sardines Committee	Interviews with stakeholders, R07, 44, 14	

that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.	information, including local knowledge. The management system demonstrates consideration of the information obtained. The consultation process provides opportunity for all interested and affected parties to be involved.	that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used. The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.	meets 3 to 4 times per year. It performs national coordination of supervision of anchovy fisheries, in a broader sense, sardine fisheries, for which there is a joint scientific programme. In particular, a recent press release by this committee (in June 2009) has led to the closure of anchovy fishing for the 5th consecutive year on the basis of opinion given by the ICES concerning anchovies, which is a species governed by European TACs and quota. This opinion refers to participation of commercial fishing boats in IFREMER scientific campaigns and the desire of the inter-professional organisation to participate fully in a precautionary approach. The deliberations of the national committee for fishing, once approved by the Minister, will become enforceable law. The management system implemented by the Brittany CRPMEM (regional committee) includes consultation processes that regularly seek and accept relevant information through the CLPMEM (local committees), specialist committees such as the inshore commission and the Departmental Directorates of Maritime Affairs in charge of controlling fishing (R44). This process allows any interested party to become involved. Local knowledge is included through the collaboration between fishermen and scientists, and demonstrates consideration of the information obtained ("sentinelles" campaign/Pelgas) Within the existing Committee structure at regional and local level, a *consultation process provides opportunity for all interested and affected parties to be involved.* This process use relevant information, but does not have a visible means of encouraging them to do so or facilitating their effective involvement. The SG100 can't be met. **ALL SG 80 ELEMENTS ARE MET AND ONE OF SG100 ELEMENT IS MET. THE SCORE OF 85 IS GIVEN.**		
Performance indicator	**3.1.3**	**Long term objectives**	The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Principles and Criteria, and incorporates the precautionary approach.	**0,25**	**90**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
Long-term objectives to guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are implicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach, are explicit within and required by management policy	Long-term objectives that guide decision-making, consistent with MSC Principles and Criteria and the precautionary approach are explicit in the fishery management policy at all levels. At European level, scientific fisheries management advice is given by ICES under the CFP that determines the sustainable use of anchovy and sardines resources. Regarding Principle 2, the Bird (79/409/CE) and Habitats (92/43/CE) Directives underpin the creation of the Natura 2000 network of protected areas, which are fully integrated at national level in the "Stratégie nationale pour la biodiversité – Plan d'action "Mer" - 2008-2009" R77. The ecological challenge of the Ministerial level 'Plan Barnier' (2008) also reiterates "fisheries activities are precisely framed to ensure a sustainable management of marine resources and contribute to marine ecosystems quality". At regional level, the first mission of the Brittany CRPMEM (Décret n°92-335 du 30 mars 1992) is to « Contribute to the definition of measures to insure a balanced management of marine resources ». Four local fisheries Committees sit on the management committee of the Iroise Marine Natural Reserve set up in 2007 (ref 29 juin 2007, le décret d'application du Parc Naturel Marin d'Iroise est créé par le Ministre de l'écologie, du développement et de l'aménagement durable et publié au journal officiel le 2 octobre), which has a mission of nature conservation and sustainable development covering part of the purse-seiners fishing grounds. Last, the Brittany CRPMEM, in collaboration with the Comité Local des Pêches du Guilvinec, are in charge of the newly designated « Roches de Penmarch » Natura 2000 marine site,	Interviews with stakeholders, R7, 14, 77 + Décret n°92-335 du 30 mars 1992 + décrets, http://www.parc-marin-iroise.gouv.fr/index.php, http://www.developpement-durable.gouv.fr/	

			providing a pilot case study for the involvement of regional and local fisheries management organisation in the management of a European Marine site. To conclude, *clear long-term objectives and the precautionary approach are explicit within the management policy, but are not explicitly required by it.* **THEREFORE THIS INDICATOR MEETS THE SG90 REQUIREMENTS.**		
Performance indicator	**3.1.4**	**Incentives for sustainable fishing Score**	The management system provides economic and social incentives for sustainable fishing and does not operate with subsidies that contribute to unsustainable fishing.	**0,25**	**80**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that negative incentives do not arise.	The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and explicitly considers incentives in a regular review of management policy or procedures to ensure that they do not contribute to unsustainable fishing practices.	*The management system provides for incentives that are consistent with achieving the outcomes expressed by MSC Principles 1 and 2, and seeks to ensure that negative incentives do not arise.* Fishermen are actively involved at local, regional and national levels in plans for marine ecosystem protection and sustainable use through the Local Committees, the Brittany CRPMEM and the National Committee. They contribute actively to the development or research effort and discussions of scientific advice and of the management of protected areas. Some boats have benefited from support from the European Fisheries Fund in the past to install refrigerated vats for on-board catch storing in order to improve the quality of fish landed. No subsidies or incentives to practice non-sustainable fishing have been identified by the assessors, both at fishery level and with regard to its effects on the ecosystem. However, *the management system does not explicitly consider incentives in a regular review of management policy or procedures to ensure that they do not contribute to unsustainable fishing practices.* SG100 can't be reach. **THEREFORE THE SG ONLY SCORES 80.**	Interviews with stakeholders	

Component	**3.2**	**Fishery- specific management system**	Focuses the certification body on the management system directly applied to the fishery undergoing assessment. Performance indicators under this Component consider the fishery-specific management objectives (i.e. fishery management objectives for the fishery under assessment, specifically); the decision-making processes in the relevant fishery; the fishery's compliance and enforcement system and implementation; and research planning and monitoring and evaluation of the performance of the fishery's management system.	**0,5**	**76**
Performance indicator	**3.2.1**	**Fishery- specific objectives**	The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2.	**0,2**	**60**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
Objectives, which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system.	Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Well defined and measurable short and long term objectives, which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.	Objectives, *which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery's management system* in the national policy through its monitoring of anchovy fisheries subjected to European TACs and quotas. However, there are no short and long-term management objectives that are explicitly defined and specific to the purse seine sardine fishery. **THE SG MET IS ONLY 60.** **CONCLUSION** The development of a management plan specific to the fishery, including explicit short term and long term objectives that are compatible with Principles 1 and 2 is a condition for certification of the fishery.	Interviews with stakeholders, R 07, 77	
Performance indicator	**3.2.2**	**Decision-making processes**	The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives	**0,2**	**65**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
There are informal decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. Decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of	*Decision-making processes respond to serious issues identified in relevant research* (after Pelgas campaign results), *monitoring* (landings), *evaluation and consultation, in a transparent, timely and adaptive manner* (collective decision, regional committee…) *and take some account of the wider implications of decisions* (SG60). The extraordinary meeting of the CRPMEM on 25th March 2009 to deal with the credibility gap between trades involving the purse seiners is a recent example. Furthermore, *there are formally established decision-making processes* at both regional committee level (Brittany CRPMEM) and the POs (Producer Organisations, see part 4.2 of assessment report) *that result in measures and strategies to achieve the fishery-specific objectives* (SG80). However, there is no fishery-specific strategy or objectives that can be achieved, and therefore no established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. In the absence of a strategy, all the problems are not examined systematically, in response to important issues identified regularly, using a precautionary approach and with regular	Interviews with stakeholders, R07, 14, 16	

transparent, timely and adaptive manner and take some account of the wider implications of decisions.	Decision-making processes use the precautionary approach and are based on best available information. Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	decisions. Decision-making processes use the precautionary approach and are based on best available information. Formal reporting to all interested stakeholders describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	reports. **THE SCORE OF 65 (SG60 ELEMENTS AND FIRST SG80 ELEMENT ARE MET) IMPLIES THE NECESSITY OF CONDITIONS TO ENSURE THAT THE FISHERY RETAINS ITS CERTIFICATION.**		
Performance indicator	**3.2.3**	**Compliance and enforcement**	Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.	**0,2**	**85**
SG60	**SG80**	**SG100**	**Justification de la note**	**Références**	
Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective. Sanctions to deal with non-compliance exist and there is some evidence that they are applied. Fishers are generally thought to comply with	A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence. Some evidence exists to demonstrate fishers comply with the management system under assessment,	A comprehensive monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence. There is a high degree of confidence that	*A monitoring, control and surveillance system has been implemented in the fishery under assessment and has demonstrated an ability to enforce relevant management measures, strategies and/or rules*. However, the system is not thought to be currently comprehensive (ref: Note°43/2009 du 12 Mars du CRPMEM à la DPMA m entioned par Ifremer) Within the small fishing fleet or purse seiners, *sanctions exist to deal with non-compliance*, both as administrative proceedings by the Departmental Directorate for Maritime Affairs (DDAM), and internally to the Producer organisations, *are consistently applied and thought to provide effective deterrence.* Moreover, an incident at the start of 2009 led to an increase in controls on purse seiners, with the result of 4 infringement proceedings (between January and march 2009, 44 control in auction, 5 control offshore on 11 boats, and documentary based controls.). *Some evidence,* from the landing declarations and PO records*, exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.* In the opinion of the DDAM *there is no evidence of systematic non-compliance*, this is also confirmed by the POs (SG100). **ALL THE BASES OF THE SG80 ARE DEEMED TO BE IN PLACE BY THE ASSESSORS, AS WELL AS ONE FROM SG100. THE SCORE IS 85.**	Interviews with stakeholders, R12, 14, 18, 44	

the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	including, when required, providing information of importance to the effective management of the fishery. There is no evidence of systematic non-compliance.	fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery. There is no evidence of systematic non-compliance.			
Performance indicator	**3.2.4**	**Research plan**	The fishery has a research plan that addresses the information needs of management.	**0,2**	**90**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are available to interested parties.	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research results are disseminated to all interested parties in a timely fashion.	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2. Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.	In the absence of a formal stock assessment (Principle 1), the purse seine sardine fishery nonetheless benefit from a research plan in common with the Bay of Biscay anchovy. The research plan relies on an annual pre-recruit research cruise for sardine into the Brittany fishery area (Pelgas) that is appropriate for the scale and intensity of the fishery and which is capable of meeting the informational needs of the national (Ifremer) and European (ICES) supervising authorities. An annual pre-recruit biological research cruise, which concerns Principle 1, has been at the core of the national research plan, *providing the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principle 1.* Regarding Principle 2, the capture of other species by purse seiners, apart from anchovies, has historically been limited to non-TAC/quota species caught in small quantities (5% of total capture), and highly variable between vessels and during the year. The lack of specific P2 research was therefore reflecting a lack of significant impacts that did not warrant a specific research plan. The specific gear characteristics similarly led to a lack of concern regarding interactions with protected species or the effect of purse seine nets on the seabed (Principle 2). These issues are however included in the objectives of Iroise Marine reserve. Furthermore, *research results are disseminated to all interested parties in a timely fashion.* The assessors concluded that the *research plan provided the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.* However, in the light of recent gear conflicts (2008 and 2009) and signs of increasing fishing activities in the Iroise Marine Reserve, *it appears that there the research plan was not comprehensive enough to provide the management system with a coherent and strategic approach to research across P3.* **Therefore all the SG 80 elements are met, part of the first and the third SG100 elements are met. Final score is SG90**	Interviews with stakeholders, R07, 14, 9, 19, 30, 37, 38, 39, 40	

APPENDIX 1. Assesment tree

Performance indicator	**3.2.5**	**Monitoring and management performance evaluation**	There is a system for monitoring and evaluating the performance of the fishery-specific management system against its objectives. There is effective and timely review of the fishery-specific management system.	**0,2**	**80**
SG60	**SG80**	**SG100**	**Score rationale**	**Références**	
The fishery has in place mechanisms to evaluate <u>some</u> parts of the management system and is subject to <u>occasional internal</u> review.	The fishery has in place mechanisms to evaluate <u>key</u> parts of the management system and is subject to <u>regular internal</u> and <u>occasional external</u> review.	The fishery has in place mechanisms to evaluate <u>all</u> parts of the management system and is subject to <u>regular internal</u> and <u>external</u> review.	The fishery *has in mechanisms to evaluate key parts of the management system and is subject to regular internal and occasional external review*. Key elements such as the number of active and total licenses, the characteristics of fishing vessels and gear, the fishing periods and the daily quantity of landed per boat, are set annually by a prefectorial order issued by the DRAM, following the deliberations of the Regional Committee for Fisheries (CRPMEM). The deliberations of the regional committee are further discussed and scrutinised by the Anchovies & Sardines Commission of the National Committee for Fisheries (CNPMEM), which offers the opportunity of public examination of the fishery management. The recommendations are also scrutinised by Ifremer, and Ifremer's recommendation are in turn discussed at ICES level. **THE SG80 POINT IS MET.**	Interviews with stakeholders, R05, 15	

APPENDIX 2. Client's Action Plan

LES BOLINCHEURS de BRETAGNE

Association loi de I9OI Dépôt légal du 7 Mars 2OO5
J.O des 16 Avril et 6 Août 2005

Concarneau, le 02 juin 2010

L'association des bolincheurs de Bretagne certifie accepter les conditions révélées lors de la phase d'évaluation de la pêcherie pour une certification **msc**.
Elle a ainsi élaboré un plan d'action destiné à apporter des réponses concrètes aux conditions requises.
Enfin ,l'association dispose de moyens humains suffisants en son sein et peut ponctuellement si nécessaire bénéficier de la collaboration de l'organisation de producteur **pma**,
A cet égard, l'association des bolincheurs précise que le plan de financement de la certification **msc** intègre les frais induits par des tiers appelés à travailler sur l'élaboration de ce projet.

Le président,

Didier LE GLOANEC

12.1.5 Condition 1

Performance Indicators concerned:
1.2.1: harvest strategy
There is a robust and precautionary harvest strategy in place

1.2.2: harvest control rules and tools
There are well defined and effective harvest control rules in place

Some scoring elements of SG80 are not met, and then require implementation of an action plan:

* For harvest strategy (1.2.1):
The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points

* For harvest control rules and tools (1.2.2):
Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.

Indeed, to date, no formal link has been demonstrated between the status of the stock and definition of the harvest rules. The harvest strategy isn't therefore responsive to the state of the stock.

As a result, even if at present the stock situation and the level of harvest are satisfactory, there is no established procedure in the case where the resource starts to deteriorate or in the case where the level of harvest increases to the extent that the current diagnostic becomes invalid.

Comments on the decisions concerning the daily quotas and the number of license have indeed been done by the stakeholders during the public consultation. This strengthens the need of formalization, transparency and relevance in the decision-making process.

This condition concerns the process of decision-making concerning the fishing rules.

At the National level, four bodies, involved in the management of the sardine fishery concerned by the certification, were identified as the CNPMEM (National Fishing Committee and the Marine aquaculture), the CRPMEM of Brittany (Regional Fishing Committee and for Marine aquaculture), PMA (Fishermen of Channel and the Atlantic Ocean) and the OPOB (Organisation of the Brittany western fisheries).

Within the CNPMEM, the Anchovy sardine committee includes the national actors of the sardine fishery. This committee is an authority where are presented and discussed the scientific incomes on the sardine stock status.

The CRPMEM of Brittany is organized in various committees for the management of the various fisheries. Two committees concern the sardine fishery: the Pelagic committee and the Coastal fishing committee. The Pelagic committee being a subcommittee of the Coastal fishing committee.
These committees regroup the main actors of the fishery. Their objective is to establish fishing and management rules, by taking into account all the available issues and information.
Producers' organizations (PMA and OPOB) realize a follow-up of the fishing year and define with the producers of the market management rules.

The Association des Bolincheurs is actively involved of the definition of management fishing rules within these various bodies. So it commits to the fact that every decision is taken by taking into account the state of the sardine stock.

The following will be presented in every audit:

- The decision-making process set up within the various bodies
- A document describing the management realized within the various bodies during the year
- A document resuming the follow-up of the fishing campaign and results

12.1.6 Condition 2

Performance Indicators concerned:
2.1.2: management strategy of retained species
There is a strategy in place for managing retained species that is designed to ensure the fishery does not pose a risk of serious or irreversible harm to retained species

Some scoring elements of SG80 are not met, and then require implementation of an action plan:

* For management strategy of anchovy
There is a partial strategy in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding

The opening of the fishing of anchovy in ICES area VIII for 2010 and the significant (authorized) captures during autumn 2009 in ICES area VIIe, are new points to be taken into account.

The fishing strategy: the fishing strategy of the anchovy's stock is defined at three levels, European, national and local.
At the European community level, a stock assessment of anchovy is realized every year and the stock of anchovy is managed by the implementation of a TAC.
At the national level, the strategy of management of the fishery of anchovy integrates a management by fishing license, a management by quota and a plan of surveillance of the landings.
At the local level, a strict follow-up of the sub-quota is realized by the Producers' Organizations.

The management objectives: At the European community level, a long-term management plan is being draft. This work is realized in association with the professionals within the CCRSud.

The following will be presented in every audit:

- A document describing the management strategy at every European, national and local level (CIEM's advice, description of the measures in place, the management of the sub-quota by the OP, the control plan)

- A document presenting the progress of the works from the point of view of long-term management

12.1.7 Condition 3

Performance Indicators concerned:
2.2.3: Information on bycatch species
Information on the nature and amount of bycatch is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage bycatch.

2.4.3: Information on Habitats
Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.

Some scoring elements of SG80 are not met or can be improve, and then require implementation of an action plan:

* For bycatch species
- Qualitative information and some quantitative information are available on the amount of main bycatch species affected by the fishery.
-Information is adequate to support a partial strategy to manage main bycatch species
- Sufficient data continue to be collected to detect any increase in risk to main bycatch species

* For bycatch species
-Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear.
-The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery.

The “Association des Bolincheurs” is very invested in the implementation of observation campaign to improve the knowledge of the fishery.

Partners: the “Association des Bolincheurs”, the Marine Natural Parc of Iroise, the IFREMER (French Research Institute for the Exploitation of the Sea), the CRPMEM of Brittany (Regional Fishing Committee of Brittany)

Objectives: Identification of the interactions of the gear (purse seine) with the habitat and the démersales species, the observations of the by-catch and retained species, the data collection on the small pelagics species’ stock.

Progress of the observers campaigns: the boarding will be realized aboard the boats of the “Association des Bolincheurs”. The agents of the Natural Marine Parc of Iroise realize the observations, the data collection and issue of the final report. The IFREMER participates in the elaboration of the observation’s protocol and in the data processing. The Regional Fishing Committee of Brittany realizes the distribution of the report within the actors.

The following will be presented in first audit:

- The work carried out and the observations done. The first incomes will be presented) according to the progress of the works;

The following will be presented in second audit:

- The incomes of the observation campaigns and the conclusions of the study

12.1.8 Condition 4

Performance Indicators concerned
3.2.1: Fishery-Specific Objectives.
The fishery has clear, specific objectives designed to achieve the outcomes expressed by MSC's P1 & P2

3.2.2: Decision-Making processes
The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives

Some scoring elements of SG80 are not met or can be improve, and then require implementation of an action plan:

* For fishery specific objectives
-Short and long term objectives, which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery's management system.

* For decision making process
-Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.
- Decision-making processes use the precautionary approach and are based on best available information.
- Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

The objectives are not explicitly defined in the management strategy, to know if they are consistent with achieving the outcomes of the principles P1 and P2.

To improve the knowledge on the dynamics of the sardine stock, the "Association des Bolincheurs" participates in the implementation of "sentinel campaigns" (multiannual program). This program will bring elements and information for the short and long-term management of the sardine.

Set up program: implementation of "sentinel campaigns"

Partners: the professionals (sardine and/or anchovy fishermen) (the "Association des Bolincheurs", The Bottom trawlers), the IFREMER (French Research Institute for the Exploitation of the Sea)

Objectives: Build an economic indicator of the pelagic resource, improvement of the understanding of the dynamics of the resource; build an early indicator of the arrival of the recruitment, follow up over the year of the sardine population, estimation of the various areas' productivity.

The following will be presented in every audit:

- A document describing the advance of the researches on a resource tendency's indicator, the results obtained and the possibility of using this indicator in the short and long-term sardine stock management.

APPENDIX 3. Complements to action plan

In answer to the stakeholder's comments, and coming to support the action plan of the Client, the CRPMEM of Brittany produced this additional document.

Comments transmitted by e-mail on May 27th, 2010

COMITE REGIONAL DES PECHES MARITIMES
ET DES ELEVAGES MARINS DE BRETAGNE
--------Loi n° 91-411 du 02 mai 1991-------

Object: role of the CRPM in the resource management. Particular case of the Purse-seine

I - ORIGIN AND LEGAL FOUNDATIONS OF the CRPMEM OF BRITTANY

It is the law n°91-441 of May the 2nd, 1991 that gave to the interprofessional organization of the maritime fishing activities its current form. The structure is pyramidal and consists of a National Committee, 13 Regional Committees situated in the main regions dependent on the fishing and on local Committees implanted in the most important ports in terms of landings of fishing products. Each of these structures is endowed with a legal entity and a financial autonomy.

Besides the global defence of the interests of the professional, the law of 1991 entrusted several particular missions to the interprofessional organization of the maritime fishing:

- Insure the representation and the promotion of the general interests of the producers, the first buyers and the transformers of the fishing products and the marine aquaculture.
- Participate in the organization of a well-balanced management of the resources
- Participate in the implementation of precautionary measures intended to harmonize the interests of the actors of the fishing sector
- Participate in the improvement of the conditions of production and in a general way in the implementation of economic and social actions in favour of the professionals

The Fishing Committees have a consultative role on the questions regarding the fishing and the maritime world

II-ROLE AND COMPETENCE OF COMMITTEES

It is the Decree n°92-335 of March 30th, 1992 taken in application of the law of May the 2nd, 1991 relative to fising interprofessional organization, that specify specific missions entrusted to the fishing Committees in their territorial competence.

A / MISSIONS OF THE LOCAL COMMITTEES (CLPMEM)

In their territorial competence, the CLPMEM handles:

- to insure economic information to all professionals interested by maritime fishing and marine culture sector;
- to supply a technical support in the activities of the Maritime Fishing and the Marine culture;
- to notice and to make proposals on questions by which they are concerned, to the regional committees or, if necessary, to the national committee;
- to apply at local level the compulsory deliberations of the national committee and the regional committees
- to realize social actions in particular accident prevention, hygiene and safety of the work, vocational training and the guarantee against bad weather.

The Local Committees constitute on site, an indispensable interface between professionals and authorities (at European, departmental, regional, national level).

It is by them that transit the voice and the opinion of the professionals. They are also the main point of information towards fishermen.

The Committees of local level handle questions regarding the activity of their professional and their ports. The decisions and the deliberations of the Local Committees constitute most of the time the base of the regional and national deliberations.

Fishing licenses management is also done by them: information, distribution of request forms, collection of the requests, advice on result of a request (some committees set up Advisory committees of allocation of licenses or Committees of dispute).

B B/MISSIONS OF THE REGIONAL COMMITTEES (CRPMEM)

At the level of the Region, the CRPMEM:

- participate in the definition of the measures to insure a well-balanced management of the marine resources
- insure the information of all the professionals interested by the fishing and marine culture sector, of the measures taken by the National Fishing Committee
- supply a technical support in the fishing activities in the Region
- contribute to experiments, to research works in socioeconomic studies, as well as in their applications in the field of the development of the marine and aquacultural resources
- coordinate, in contact with the National Fishing Committee, the action of the Local Fishing Committees in Brittany.

On the basis of these texts, the regional Committee must act, propose and intervene by watching every time the fragile balance between the measures needed to preserve the maritime fisheries and the diverse interests stemming from the variety of the practices and the fishing methods in Brittany.
In collaboration with the Local Committees, the balance is reached thanks to the elaboration, the adoption and the application of resolutions by the CRPMEM of Brittany made, for certain, compulsory by Order of the Prefect of Region.

The Regional Committees are key organism of definition and implementation of the regional fishing policies. They coordinate the collective actions of the professionals when they exceed the frame of a single Local Committee.

C/ THE FISHING COMMITTEES AND THE MANAGEMENT OF THE FISHING EFFORT

By their Resolutions, the Fishing Committees can take the following measures:

- The fishing activity management concerning the limitation of the fishing effort, the opening and closing dates, the fishing of some species, the definition of fishing areas and cohabitation rules between various fishermen
- The adequacy, for certain species or certain fisheries, of the gear and activity to the available resource, by the institution of quota, fishing licenses, the adjustment of the fishing effort concerning the size, the power of boats and the standardization of the characteristics of the fishing gears
- The limitation of the volume of the captures of certain species, by the definition of quota
- The definition of the harvest conditions of the marine vegetables and their culture
- As regards aquaculture, the coexistence between the various activities.

These resolutions, taken on initiative of the professionals, contain technical measures of management of the fishing effort and resource conservation in the coastal area.

The control of the respect for these regulations is not the competence of Committees, which have no police competency, but is the role of the administration (Affaires Maritimes). Nevertheless, Committees can name and pay guards in order to controle that the measures taken are respected.

The coastal management was wished by the professionals and their representatives; thus the supervision of theses fisheries is facilitated. Most of the professionals are indeed worried of protecting

the future of their activity. By consequence, they are aware of the necessity of a sustainable resource management and setting up management tools and reasonable technical measures.

Besides the elaboration of fishing regulations, the Fishing Committees watch the good cohabitation between professional on the fishing sectors. They also represent the interests of the professionals with authorities or in the interregional conferences of accords Baie de Granville, Accords Manche Centrale…).

III - COMPOSITION AND OPERATION OF COMMITTEES

A / COMPOSITION

The interprofessional organization of the fishing activities is an equal structure in which the producers (ship-owners and crew), the wholesalers and the fishmongers, the processing companies have a legal obligation to join and subscribe.

The Regional Committee of Brittany is composed of 70 members distributed in 7 schools:

- Employees of the companies of the fishing sector
- Managers of the companies of the fishing sector
- Employees of the seafood processing companies
- Managers of the seafood processing companies
- Maritime Cooperatives
- Local Committees
- Representatives of the whelk fishing

These 70 members form the commission which is the governing body of CRPMEM Brittany. The commission approves the projects of deliberations andvotes for the budget. It is renewed every four years and elects a chairman and six vice-chairman.

B/PROCEDURE OF ADOPTION OF THE DELIBERATIONS OF the CRPMEM Brittany

The Committees' deliberations do not constitute a law. They are made compulsory and opposable against all from the moment they are approved by order of approval signed by the Prefect of Region.

Before they are presented for approval in the commission of the CRPM, the projects are discussed and studied by the concerned specialized Commission which is composed by representatives of the profession elected or named according to their professional category and on the basis of a key of representation adopted by the commission of the CRPM. The representatives of the state and the IFREMER are also systematically invited to participate in these commissions in order to give their opinion.
In exceptional cases, the chairman, six vice-chairmen (the "Bureau" consisted of the members of board members), the chairmen of committees and the honorary chairman can be also requested to adopt deliberations.

Deliberations are recorded by minutes signed by the chairman and transmitted to the "Prefet" of region for approval of the " Affaires Maritimes"'s regional director. They are then sent to the chairman of the Fishing National Committee.

(See Figure 11, point 4.2).

IV- PURSE SEINERS ACTIVITY

1-Introduction:

Historically, it is at the request of purse seiners that the fishing license system was established for Purse-seine in territorial waters of Brittany by the Fishing Regional Committee of Brittany. The implementation process is done under the usual decision-making process - such as described higher and in figure 11

Throughout the various steps, the association of Ifremer and state in the taken decisions, allows to make sure that the reserved measures do not violate on one hand the regulation in force and on the other hand the good resource management.

A particular lighting must be brought on the events of the last months, further to the increase of the tonnage to 20 daily tons of sardines. This tonnage, after discussions, was authorized considering the state of the market, but also on the very good status of the stock - what will be confirmed by the IFREMER in its answer at the request of opinion formulated by the Iroise Marine Natural reserve on December 23rd, 2009.

It is advisable to also note also that in a concern of long-term management, this tonnage was fixed to 20 tons provisionally for year 2010, and that it can be revised at any time and reduced if necessary.

The fixation of the contingent of boats authorized to practise the Purse-seine fishing activity lead to legitimate questions on behalf of the other professionals too, in particular for the fishing area inside of the Marine Reserve. A collective motion was adopted on February 24th, 2010 in board meeting of the Regional Committee widened to the chairmen of the Local Committees. This position takes into account in the opinion of the IFREMER and of that of the management advice of the Marine Reserve. It is advisable to remind that the number of ships authorized to practise the purse-seine fishing activity was 40 in 2001 and that this figure was changed to 27 in December, 2009.

2-REGULATORY MEASURES:

To complete this analysis, the supervision of the Purse-seiners activity at the level of the Fishing Regional Committee is composed by a certain number of professional measures which we can list in the following way

DELIBERATION "BOLINCHE AU NORD DU 48°30′-CRPM-2009 A" DU 27 MARS 2009
PORTANT CREATION ET FIXANT LES CONDITIONS D'ATTRIBUTION DE LA LICENCE DE PECHE A LA BOLINCHE DANS LES EAUX MARITIMES RELEVANT DE LA REGION BRETAGNE AU NORD DU 48°30′

Remarks: this text is presented as a reminded because the following deliberation "B" a zero contingent.

DELIBERATION "BOLINCHE AU NORD DU 48°30′-CRPM-2010-B" DU 27 MARS 2009
***FIXANT IE NOMBRE DE LICENCES ET L'ORGANISATION DE LA CAMPAGNE DE PECHE A LA BOLINCHE DANS LES EAUX MARITIMES RELEVANT DE LA REGION BRETAGNE* AU NORD DU 48° 30′ POUR L′ANNEE 2009**

Remarks: in the North of 48°30 ' the Purse-seine fi shing activity remains forbidden.

DELIBERATION "BOLINCHE AU SUD DU 48°30′-CRPM-2009-A" DU 27 MARS 2009
PORTANT CREATION ET FIXANT LES CONDITIONS D'ATTRIBUTION DE LA LICENCE DE PECHE A LA BOLINCHE DANS LES EAUX MARITIMES RELEVANT DE LA REGION BRETAGNE AU SUD DU 48°30′

Remarks: text which establishes the Purse-seine license and fixes the conditions of attribution.

DELIBERATION "BOLINCHE AU SUD DU 48°30′-CRPM-2010-B" DU 04 DECEMBRE 2009
FIXANT IE NOMBRE DE LICENCES ET L'ORGANISATION DE LA CAMPAGNE DE PECHE A LA BOLINCHE DANS LES EAUX MARITIMES RELEVANT DE LA REGION BRETAGNE AU SUD DU 48° 30′ POUR L′ANNEE 2010

Remarks: the contingent was fixed to 27 licenses to take into account renewals and announced projects. To date 24 licenses were allocated and 3 remain unallocated, waiting for attribution

RECOMMANDATIONS DE l'ORGANISATION INTERPROFESSIONNELLE DES PECHES MARITIMES CONCERNANT LES SANCTIONS ADMINISTRATIVES POUR LA CAMPAGNE 2010 DE PECHE A LA BOLINCHE DANS LES EAUX MARITIMES RELEVANT DE LA REGION BRETAGNE CONSEIL DU 11 JUIN 2010

Remarks: the profession not being competent to take penalties towards boats violating measures adopted and approved by the authority of the state, a scale of severe penalties is recommended concerning the various scenarios of quotas exceeding, until the request of license suspension

DECISION N ° 048 /2010 DU 26 FEVRIER 2010
PORTANT ORGANISATION DE LA CAMPAGNE DE PECHE A LA BOLINCHE AU SUD DU 48° 30′ POUR 2010

Remark: this decision constitutes the most recent issue of the decisions taken in a difficult context of relations between professionals. It arises from numerous meetings and translates a compromise adopted in extraordinary meeting of the CRPM's board widened to the chairmen of all the CLPM.

Its complete retranscription must be made because it specifies the opinions of the IFREMER, the management opinion of the marine reserve, the Coast fishing committee and the board of the CRPM; and in its measures fix a precise supervision of the fishing activity on various species.

Le président du Comité Régional des Pêches Maritimes et des Elevages Marins de Bretagne,

VU la délibération BOLINCHE AU SUD DU 48° 30′ – CRPM – 2009 - A du 27 Mars 2009 du Comité Régional portant création et fixant les conditions d'attribution de la licence de pêche à la bolinche dans les eaux maritimes relevant de la Région Bretagne,

VU la délibération BOLINCHE AU SUD DU 48° 30′ – CRPM – 2010 - B du 04 décembre 2009 fixant le nombre de licences et l'organisation de la campagne de pêche à la bolinche dans les eaux maritimes relevant de la Région Bretagne au Sud du 48° 30′,

VU l'avis de la Commission Pêche Côtière en date du 29 janvier 2010

VU l'avis du Conseil de gestion du Parc Naturel Marin de la Mer d'Iroise en date du 02 février 2010,

VU l'avis de l'IFREMER en date du 23 décembre 2009,

VU l'avis du Bureau du Comité Régional des Pêches Maritimes élargi aux présidents des Comités Locaux des pêches Maritimes et des Elevages Marins de Bretagne en date du 24 février 2010,

Considérant la nécessité d'encadrer l'activité de pêche à la Bolinche au sud du 48° 30′, et d'assurer la transparence des débarquements,

Considérant le caractère transitoire de certaines dispositions de la présente décision dans l'attente des résultats des travaux de recherche en cours,

DECIDE

Article 1 : Plafond de tonnage de pêche de sardines.

Pour l'année 2010, les débarquements de sardines ne peuvent dépasser **20 tonnes** - à titre transitoire-par navire et par jour, ventes directes comprises, dans les ports relevant de la Région Bretagne.

A l'intérieur du périmètre du Parc Naturel Marin de la Mer d'Iroise crée par le décret n° 2007-1406 du 28 septembre 2007, ce tonnage est stabilisé à titre transitoire au tonnage de sardine réalisé au cours de l'année 2009, soit 8.910 tonnes (source IFREMER), dans la limite de 20 tonnes par navire et par jour.

Article 2 : Activité de pêche des bolincheurs pour l'année 2010

Pour l'année 2010, les navires titulaires de la licence Bolinche :

- ne captureront pas de daurade rose.

- respecteront un tonnage maximum de captures et de débarquement de bars fixé par navire à 3 tonnes hebdomadaires et à 5 tonnes hebdomadaires de dorades grises décomptées selon les horaires hebdomadaires de sorties autorisées par la délibération « BOLINCHE AU SUD DU 48° 30'- CRPM-2010-B » du 04 décembre 2009.

- ne dépasseront pas un total de 30% de bar par jour par rapport au total des captures journalières détenues à bord et débarquées.

- ne dépasseront pas un plafond total individuel annuel de captures de bars et daurades grises par navire fixé à 30 tonnes pour l'ensemble de ces deux espèces.

- n'effectueront pas de transfert de bar et de daurades grises d'un navire à l'autre par quelque moyen que ce soit y compris salabardage c'est-à-dire par embarquement des captures détenues dans la senne d'un navire par un autre navire.

- s'annonceront au centre de surveillance des pêches d'ETEL (CSP ETEL) au minimum 1H avant le retour au port s'ils ont plus de 1,500 tonne de bar et /ou daurades grises à bord.

Article 3 : Dispositions particulières pour le Parc Naturel Marin

A titre transitoire, à l'intérieur du périmètre du Parc Naturel Marin de la Mer d'Iroise, le nombre de bolincheurs autorisés à pêcher simultanément est fixé à 20 navires.

Article 4 : Repos biologique sur le bar.

Dans le cadre de la licence Bolinche, il est institué un régime de repos biologique sur le bar, pour la période courant du 15 février au 15 mars 2010, durant la quelle la pêche de cette espèce est interdite aux bolincheurs.
Des captures accessoires de bar peuvent toutefois être détenues à bord et débarquées, dans la limite de 100 kg par navire et par jour.

Article 5 : Statistiques de pêche

Dans un souci de transparence, un état trimestriel des données des captures des différents métiers concernés sera centralisé au Comité Régional de Pêches Maritimes.

Article 6 :

La Présente décision annule et remplace la décision n°199 / 2009 du 14 décembre 2009

Le Président **Le Président de la Commission Pêche Côtière**
André LE BERRE **Yannick HEMEURY**

English Translations of the decisions

Article 1: maximum of tonnage of fishing of sardines.

For year 2010, the landings of sardines cannot exceed 20 tons – transitional decision- by boat and by day, included direct sales, in ports from the Region Brittany.

Inside of the Iroise Marine Natural Reserve create by the decree N 2007-1406 of September 28th, 2007, this tonnage is provisionally stabilized in the tonnage of sardine realized during year 2009, that is 8.910 tons (IFREMER source), within the limits of 20 tons by ship and by day.

Article 2: fishing activity of purse-seiners for year 2010

For year 2010, the licensed Purse-seiners:

- Will not capture red sea bream.

- Will respect a maximum tonnage of captures and landing of sea bass fixed by boat to 3 weekly tons and gilthead sea bream to 5 weekly tons deducted according to the weekly schedules of activity authorized by the consideration « BOLINCHE AU SUD DU 48° 30'-CRPM-2010-B » du 04 décembre 2009.

- Will not exceed a total of 30 % of seabass a day with regard to the total of the daily captures detained on board and landed.

- Will not exceed an annual individual total maximum of captures of sea bass and gilthead sea bream by boat fixed to 30 tons for all these two species.

- Will not make a transfer of sea bass and gilthead sea bream from a boat to another one whatever means it is including salabardage (that is to say by loading of captures in a purse seine by another boat).

- Will announce to the fishing surveillance center ETEL (CSP ETEL) at least 1 hour before arrival in the port if they are more than 1,500 tons of sea bass and/or gilthead sea bream on board.

Article 3: specific arrangements for the Marine Natural reserve

Provisionally, inside the perimeter of the Iroise Marine reserve, the number of purse-seiners authorized to go fishing simultaneously is fixed to 20 boats.

Article 4: biological stop on the seabass.

Within the framework of the Purse-seine license, it is established that a regime of biological stop on the seabass, for a period from February 15th till March 15th, 2010, during the which fishing of this species is forbidden for purse-seiners.
Seabass can be however detained on board and landed, within the limits of 100 kg by boat and by day.

Article 5: statistics of fishing

In the aim of transparency, a quarterly statement of the captures' data of the various concerned gears will be centralized to the Fishing Regional Committee.

Article 6:

The Present decision cancels and replaces the decision n°199 / 2009 of December 14th, 2009

V - REMINDER OF DATES CONCERNING THE PURSE-SEINERS ACTIVITY

- Coast fishing committee of June 11th, 2009: review and update of the contingents;
- Board of June 12th, 2009: adoption of the new contingents;
- Coast fishing committee of November 23rd, 2009: presentation of the requests for year 2010;
- Board of December 04th, 2009: adoption of the new contingents;
- Workshop in DAM 29 on January 27th, 2010: study of the issue of the board agenda of management of the Marine Reserve;
- Coast fishing committee of January 29th, 2010:

Below, the confirmed and raised decisions during this committee:

1: Maximum of fishing tonnage of sardines for purse-seiners
For 2010, the landings of sardines cannot exceed 20 tons – transitional decision- by boat and by day, included direct sales, in ports from the Region Brittany.
(Note: this tonnage is modifiable on simple decision according to the market or to the status of the resources)

2: Fishing activity of purse-seiners for 2010
For year 2010, it is acted that purse-seiners:

- Will not capture red sea-bream.

Note: without agreement on the quantification of a directed fishing, the sentence: " will not direct fishing on seabass and gilthead sea bream " is replaced until new order by the following sentence: " will respect a maximum tonnage of seabass fixed to 3 weekly tons (instead of 4) by boat and of 5 weekly tons of gilthead sea bream", deducted according to the weekly schedules of authorized activity.

- Will not exceed an annual individual total maximum of captures of seabass and gilthead sea bream fixed to 30 tons.

- Will not make a transfer of seabass and gilthead sea bream from a boat to another one whatever means, including by salabardage.

- Will announce in the harbour authorities 1 hour before return in the port if they are more than 1,500 tons of seabass or gilthead sea bream on board.

Note: reminder of the timetable: fishing forbidden:

- From Friday, 10:00 till Sunday, 14: 00 of 1 ° in January on February 28th and of 1 ° in June on December 31st.
- From Friday, 10:00 till Sunday, 08: 00 of 1 ° in March on May 31st.

3: Specific arrangements for the Bay of Douarnenez

For the eastern part of the Bay of Douarnenez, at the east of the line joining Cap de la Chèvre to the pointe de Beuzec:

- The number of purse-seiners authorized to go fishing simultaneously is limited to 22 boats;
- The maximum tonnage of sardines is of 15 tons by boat.

4: Biological stop on seabass fishing for purse-seiners

Within the framework of the Purse-seine license, it is established that a biological stop on seabass fishing, for period from February 15th till March 15th, 2010, during the which purse-seiners will not fish this species. Secondary captures within the limits of 100 kg noted during the landing are nevertheless authorized.

5: Administrative penalties for purse-seiners

- In case of non compliance with the biological stop period on the seabass: (to define)
- In case of non compliance with the weekly maximum tonnage of sea bass and gilthead sea bream , the Affaires Maritimes made a commitment to proceed to the withdrawal of the fishing authorization of on these 2 species till the end of year 2010.

- Plan in case of non compliance with the weekly individual maximum tonnage of 3 tons of seabass:
Any exceeding noticed by the weekly individual maximum tonnage of 3 tons of seabass by boat will be taken and sold for the benefit of the Caisse de Chômage Intempérie of Finistère.

6-Agreement relative to the campaign of boarding on purse-seiners working in the marine reserve of Iroise

Reminder of the 4 issues: the effect of the seine on the small sea beds the bycatch, the secondary captures, the data collection.

7-For liners

- Calculation of the fishing effort of liners in bay Douarnenez. : To supply before March 2nd, 2010. (See DPMA)
- the annual Renewal of the biological fishing stop on the seabass: from February 15th to March 15th, 2010.
- Management board of the Marine Reserve of February 2nd, 2010: adoption of an opinion on the purse-seiners activity in the reserve area
- boars of the CRPM on February 24th, 2010: decision N 048/2010.

G.HUSSENOT in May 27th, 2010

APPENDIX 4. Review Report

Preliminary Report

Evaluation in accordance with MSC standards for sustainable fishing

Purse seine net sardine fishing in Southern Brittany

Reviewer 1

As a foreword, I would like to make two remarks about the people consulted for the evaluation.
1/ The evaluation team
This is under no circumstances an attempt to call into question the competence of all the people who make up the team, all renowned in their areas of expertise.
Halieutic skills centres in France are few and far between. This surely explains why 3 members out of 5 in the evaluation team and one of the two reviewers are employed by the halieutic centre at Agrocampus in Rennes. One advantage of this working context is that it certainly facilitates the collective evaluation process. Yet perhaps questions could be raised on the relevance of involving a wider range of bodies in the evaluation team.
2/ Governance
Whilst the WWF took part in drawing up the specifications for the MSC standard, would it not be relevant to consult other local NGOs within the scope of projects like the one concerning purse seine net sardine fishing.

No other NGO stakeholder of this fishery assessment was identified of showed itself during this assessment. The WWF France, independent from the MSC, was so the only consulted NGO.

The elements of this preliminary report demonstrate that, globally, the purse seine net fishery in Southern Brittany displays the assets that satisfy the principles and criteria of the MSC standard.

Nonetheless, for the fishery to fully satisfy MSC standard requirements, there are points that require completion. The most important points that I found are identical to those identified by the evaluation team and feature in paragraph 7.2 “Evaluation Conditions” (pages 30-32).

In addition to these evaluation conditions, which have already been amply discussed, I believe it to be useful that the report be completed with the various elements featured in the table below. The observations are listed by paragraph and by page of the preliminary report.

Reference	Page	Comments
3.2 Fishery history	p9	For better understanding of the context of sardine fishing, it would be interesting to note several explanations on the development of catches per trade: in the Bay of Biscay, what explains the sharp decline in sardines caught by trawlers and the increase in sardines caught using purse seine nets (in quantity and percentage in relation to total captures)?
→ Further information is given point 3.2.3, but little explanation was founded regarding decline of capture by trawlers		
3.3.2 Evaluation of sardines	p11	The observations made within the scope of PELGAS surveys are not performed on the entire stock distribution zone operated by the Client. Please explain the problem that this represents, what could be the effect on estimates of stock abundance with regard to the stock distribution zone. Would it not be necessary to encourage development of biological monitoring of other sub-populations?
→ Noted, and paragraph added in 3.3.2, under table 2		

Reference	Page	Comments
3.4.1 Fleet	p13	Out of 20 active boats, 19 are members of the Purse seiners de Bretagne Sud association. Please explain why one boat does not wish to be part of the association.
→ A personal choice explained by the geographical situation of this vessel, while operating more in the East in bay of Quiberon and landing essentially in the port of Lorient which explains the fact that this active vessel is not a member of the association.		
3.4.3 Sardine captures	p14	For the catches in 2008, there is a contraction between Figure 6 and Figure 7: Figure 6: total catches (purse seine nets + trawling) of sardines = 16,000 t Figure 7: Purse seiners de Bretagne Sud catches = 16,000 t Please explain these figures. In 2008, were all the sardines caught in Southern Brittany and by purse seine net boats? Or, more likely, can this lack of consistency between the 2 figures be explained by the data sources (ICES in the first case and POs in the second)?
→ The figure of the CIEM presents the collected data only until 2007 (ICES 2008 report). So, both figures cannot be compared over the year 2008. The comparison of the 2007 seems to display less difference, and this difference is very probably the results of the different sources of data.		
3.4.4 Other species caught	p16	Since 2008, fishing of red sea bream is banned but are there conflicts for space with fishermen who target it using other techniques?
→ Arisen in March, 2009 after a capture of 2 tons of pink sea bream by a purse seiner, an important conflict was born between the various coastal fishing fleets. Besides the administrative and judicial consequences given to this breach, the Fishing Regional Committee of Brittany undertook the management of the conflict by gathering the various representatives of the fishermen to undertake a better joint management and besides requested the support of the DPMA for the revision of the fishin timetables of or periods of consumption of the quotas. On the other hand, in September, 2009, was create a committee " pelagic fish" by the CRPM of Brittany to gather the various actors of the professional coastal fishing for the resolution of the problems of cohabitation and conflicts.		
4.2 Management authorities	p19	The comment featured below table 4 is not clear. It does not correspond to the figures in the table. Is there a difference between the “contingent” and “attributed” licenses? Please define each term to enable better understanding. According to table 4, the number of contingent licenses in 2009 is 33 including 4 for boats from Bayonne, but in the comment only 23 licenses attributed including 2 for Bayonne are mentioned. Lower down, a reference is made to closure of anchovy fishing. For a more comprehensive description of the context, it would be interesting to know whether this closure has had an impact on purse seine net sardine fishing (deferral of fishing effort?) and to explain the link between the fisheries. It is a pity nothing is said of the number of pelagic trawlers and management of this fishery.
→ Noted and corrected point 4.3. The contingent of licences is the total number of licences that can be attribuated to the couple vessel/fisherman each year. → comment noted and some complementary elements have been added on 3.4.4 concerning anchovy captures → Point 4.2 and 4.3 are describing the management system of the fishery under assessment, for puse seine fishery		

Reference	Page	Comments
4.4 Control	p20	Regulations are only efficient if they are technically relevant, enforced and controlled. Within the scope of this report, it is necessary to know the resources (boats, manpower, etc.) and the methods of control (how frequent, etc.). Elements are provided for 2009, but they are insufficient. How many times was the ULAM involved? How many boats were controlled? During the first 10 months of the year, how many infringements were observed? What punishments were handed out?
→ Noted. Precisions added point 4.4 on the nature of the inspection and means		
7.2 Certification conditions Condition 1/ Action required	p30	I fully agree with what is written. However, in case of stock decline, does it fall to the "sole beneficiary" to define the actions to be implemented or should it be the "beneficiary in collaboration with the organisations concerned (CRPMEM, CNPMEM)"?
→ The client, can, if required, collaborate with other management organisations of the fishery in order to implement management action plan of of the fishery. In this case, the Client collaborates with CRP for the implementation of the fishing rules of the fishery.		
APPENDIX 3 Performance indicator 1.1.1 Stock Status **Activity causing the greatest risk for the stock = direct catching**	p43	"Catches from… Danish seine net boats…/… seem to have almost disappeared today" is written on this page. How can this situation be explained? Is it likely to change? Is this situation a certainty? If not, which points are possibly doubtful?
→ Few elements allow the explanation of this situation, and its evolution isn't easily predictable. This uncertainty on the evolution of the captures of the other fisheries is to be taken into account in the management of the fishery and the reactions to be planned in case of impact on the stock.		
Spatial scale of practice of the activity	p44	"The stock distribution zone in which direct catching of sardines is conducted by purse seine net boats has been evaluated at between 1 and 15% of the total stock distribution zone" is written on this page. What percentage of total catches do the catches made on these 1 to 15% represent? Are there grey areas concerning the catches from the rest of the area used for fishing (1 to 85%)?
Spatial scale of practice of the activity	p45	It is very positive to take into consideration the SICA results for the Cornwall purse seine net boats and as a result boats in the north of the stock distribution zone. Is it not also necessary to take into account data on sardine fishing to the south of the border between the regions of Brittany and Pays de Loire?
→ The SICA analysis allows here to assess on which part of the stock distribution area, the fishing activity of any fishery is done. The SICA score for the spatial scale obtained after stakeholders' consultation was determined to 3 that is 16/30 % of the zone. For a better understanding, the paragraph of the PI 1.1.1 was completed to explain the consideration of the other fisheries in the analysis.		
Time scale of activity	p44	Please provide more elements on biological rest. Why is it respected by some but not others? Would it be relevant for it to be respected by all? For the total number of days during which sardine fishing is conducted, please state if it is a number of days per boat and per year.
→ Noted, further information given in PI 1.1.1. and point 3.4.4		
Performance indicator 2.1.1	p50	Without it being specified in the comments, secondary catching is

Reference	Page	Comments
Results and status		used with two meanings: that of the MSC standard (catch non-targeted and non-retained) and that of the evaluation team (catch non-targeted and retained). The latter is equivalent to the definition of retained catch in the MSC standard.
→ noted and corrected		
Component 2.4.	p57	The European network of Natura 2000 protected zones is being extended to the sea. Is the fishing zone of the Purse seiners de Bretagne Sud concerned? If so, what are the consequences?
→ The Natura2000 network of offshore protected area, according to the directive Birds or Habitats, covers or will cover a wide part of the purse seiner activity's area, in the South of the Marine Reserve of Iroise or on Finistère's coast. Rules and Objectives documents of these areas have not being defined yet. The consequences on the purse seiner activity are not still known, but the current studies are followed in particular by the OP PMA. The results of impact studies on birds or habitats realized within the framework of Natura2000 areas will allow the data collection and the improvement of the knowledge on the impact of the fishery. The map of sites concerned in Brittany is presented in appendix 6.		
Performance indicator 2.5.1 Results and status	p59	Even if catches of sardines by purse seine net boats only represents 15% of small pelagic fish caught in the Bay of Biscay and Celtic Sea, why consider that the ecosystem is not modified? Beyond the general points presented, is it not correct to consider that the catching of sardines as an impact amongst others on the ecosystem and would it not be better to have greater knowledge of the sardine's role in the ecosystem?
→ The assessment realized considers that the impact of the fishery does not disturb the organization of the ecosystem in a point where a serious or irreversible damage would appear. The remark is taken into account and any new element that could help in knowing the role of the sardine in its ecosystem will be taken into account during the surveillance assessment of this fishery.		
Client action plan	Ap 2	Concerning, the action plan of the Association des Bolincheurs, I have no particular comment except that the brought elements let augur that "the Association " will answer favorably to the requirements of the experts. However, to verify the commitments of " the Association ", it is evident that a new assessment must be made within the time limit indicated by the experts.

APPENDIX 4. Review Report

Preliminary report review: Reviewer 2

Assessment against the MSC standard for sustainable fishing

SOUTHERN BRITTANY'S PURSE SEINE SARDINE FISHERY
Association des bolincheurs de Bretagne

I) Overall:

The report is well written, clear and well documented, and contains much of the information needed to understand the location of sardine stocks, the operation of the assessed fishery and presents the regional ecosystem (biosystem and social system) in a way making it possible to follow the notification justifications and procedures given in appendix 3 and in the conclusions. In particular, if the stock is not assessed by ICES, it is clearly indicated, however, that it is analysed accurately each year through Ifremer's PELGAS campaigns.

However, several comments are required (see "specific comments") and there is an unfortunate lack of bibliographical references in the text; they only appear in the tables in appendix 3. It would be better to choose two or three of the most relevant references providing a justification of the text and show them directly as footnotes (in small font).

→ Noted – Bibliographic references added in the text.

An introductory table of the acronyms and abbreviations used would be useful; in particular, it is not advisable to keep abbreviations in English for text written in French (for example, in 5.1.7. ETP species: i.e. endangered, threatened or protected species, why not replace this by DMP: in a French text: espèces en Danger, Menacées ou Protégées)

→ Noted – List of Acronym or abbrevations added

II) Specific comments

3. Fishery context

- 3.1. Presentation of the target species
  - *3.1.5. Species*

* add to the 3rd paragraph (ICES zones IXa and VIIIc)

→ Corrected

* The last paragraph states that Laurent (2005) (and this should be not be written as Laurent V., but Laurent) suggests that the southern boundary of the North Atlantic stock should be shifted southwards.

It would be best for this shift to appear in figure 1. (or if it has been updated it would make sense for the former limit to be specified) and the caption be changed. In fact, this figure is not linked to the

text of the paragraph which attempts to justify the results of genetic work, whereas this illustration only shows the results of morphometric and meristic work.

→ Noted, corrected by the a figure added (figure 3)

Adding the ICES fishery areas concerned to this figure would also be more informative at the beginning of the document rather than in appendix 1 dissociated from the text.

→ Noted, Annex 's figure moved to the text in figure 1

- *3.1.2. Biology*

- complete "...small pelagic, neritic, ..."

→ corrected

- *3.1.7. Behaviour*

More details should be given about this in these two paragraphs, even though the work is not intended to go into any great length on it.
Indeed, it is surprising that Furnestin's valuable and fundamental work in this area (1943-1959) was not consulted as it provides details of the biology and mechanisms of sardine migration in the Bay of Biscay and Brittany.
These migration patterns may bring about variations in the accessibility to resources and probably give rise to activity seasonality (or even the crisis mentioned in the background). In the context of a rise in the temperature of waters, these biological data may help to provide a picture of the functional reaction of this stock.
At the beginning, mention is made of sardine distribution being determined by the water temperature (to be specified), light intensity (to be specified) and quantity of food. This is redundant with the second paragraph which also does not provide any further clarification about these "low-amplitude seasonal movements".
What are these movements? References? Lateral and/or coastal movements as against movements out to sea? Distances? etc.
The last sentence of the first paragraph is not really very clear.

→ Noted, corrected and paragraph completed

- 3.2. Fishery history

* the phrase "...But in 1910, 3,700 boats ... .30,000 in the canneries" is strange... why use "but"? Shouldn't it rather be "Nevertheless, in 1910...."? ?

→ corrected

- 3.3. Stock scientific assessment

* The presentation of the data gathering process (Fig. 2) underscores the network quality and the responsibilities in place to ensure good readability of the fisheries system. The well detailed PELGAS campaigns also show the value of the analysed data in understanding the dynamics of pelagic resources and in particular those of the sardine.

* add to the caption of figure 2 "...by ICES area".

→ corrected

* In this general presentation, it would be best to indicate the role of the species in the food web and what its predators are, to provide a wider picture needed to understand the potential impact of fisheries on the components of the ecosystem.

→ Noted, parapgraph 3.1.4 added
The main identified predators for whom the sardine represents a fraction of the diet are the big pélagiques (tuna), hake, haddock, whiting, sea-bass
It seems that the fishery does not decrease enough the abundance of sardines so that it has a sensitive impact on their predators. The fishing remains weak towards the estimated biomass, for the sardine.

- 3.4. Fishery activity

  - *3.4.1. Fleet*

- The name "Saint Guenole" should be added to Penmarch so as to locate this port, which is, moreover, mentioned several times elsewhere, correctly on the map (Fig. 4).

→ corrected in the figure's legend

  - *3.4.3. sardine catches*

* as regards figure 6

a) the purse seiner catch data are not equivalent to the data in fig. 7 for the last three years in particular.
b) The total (in red = 16 mt) is less than what is indicated (20-25 mt) in the fig. in appendix 3 (principle 1-component 1.1-indicators 1.1.1.)
c) It would also be useful to include in this figure (relationship with CPUE) the variation in the number of purse seiners which is described as increasing steadily since 1995 (last paragraph in 3.2.) without any indication of the pace of the change.

→ The figure of the CIEM presents the collected data only until 2007 (ICES 2008 report). So, both figures cannot be compared over the year 2008. The comparison of the 2007 seems to display less difference, and this difference is very probably the results of the different sources of data.
Further information in 3.4.3

- fig. 8 does not provide any information relevant to the text and should be deleted.

→ Noted, corrected

  - *3.4.4. other species caught*

a) nothing is said about how bycatches are recorded and quantified (table 3); should this be taken to mean that such catches are all registered in the logbook and/or during auction? (see paragraph 3.3.1.).
b) before anchovy fishing was discontinued, it should perhaps be indicated that this species was probably "targeted" on a seasonal basis since a quota was allocated? Keeping the term "catch" suggests that they were only bycatches

→The fish caught and landed by purse seiner are recorded by means of the statements Logbook and the captures followed by the PO

→At the time of the assessment of the sardine fishery, the anchovy was not a retained species by this fishery because of the closure of the fishing in Bay of Biscay and the absence of the other captures in VII area. Before the fishing closure this species was captured.
The paragraph has been modified.

- **4. Fishery management system**

All is well detailed and the management measures point to a context conducive to proper monitoring and control of the fishery, even though some effort is required as regards this aspect.

→ Has been taken into account in conditions' writing

- **5. Assessment results, fishery scoring**

The scoring process is well described and table 8 provides a useful overview of the calculations.

- **6. Certification scope**

- **7. Assessment findings and conditions**

The certification conditions, which are clearly stated and applied to the 6 performance indicators with the lowest scores, provide a good framework for accurately specifying the timescales required to implement concrete actions to improve any weaknesses in the assessment.

- **Appendix 3.**

IP 1.1.1.

- The R51 reference in the productivity table (p 47) is probably incorrect.

→ Corrected

IP 1.2.1. and 1.2.2.

- Despite the fairly favourable context of a moderately fished stock, several reservations were expressed.
  In light of these uncertainties over decision rules and regulatory procedures relating to possible technological progress (gear) or as regards better identification and prospecting of shoals conducive to better yields which were not mentioned, the score of 75 thus seems appropriate in my view.

IP 1.2.4. a consistency problem: is the score for (7.2.) 75 or 80 (page 50)?

→ Corrected

IP 2.1.1.

- The terms of the last paragraph raise the question of the actual status of the anchovy and pink bream. Were they really "bycatches" and thus rejected and not landed (within the meaning of the definition of Principle 2 page 20)? I doubt this since there was already a quota and tonnages are given (for Anchovy, see page 15). Under certain conditions, the species could certainly be a target species. So it was more an "included" species such as the pink sea bream up to 2008 (indeed, the term "banned", on page 15, should be changed to "not included").
- In this context, how is it possible to talk of sound, responsible practices and a so-called "not included" bycatch species when it is known that the year concerned is

characterised by abundant catches of anchovy done - it is to be hoped - only north of the 48°30 parallel (ICES northern area VIII, an area coming under the Brittany region, but it is true outside the Bay anchovy regulations), of up to a few hundred tonnes. This is a good reflection, for a so-called sensitive "bycatch" species, which is in fact included, the lack of a cooperative spirit and responsible behaviour on the part of purse seiners. These facts underscore the absence of any real local fishery management by the OPs, CLPMEM or even CRPMEM, whereas the species should be particularly protected and respected given the known depletion of broodstock and the discontinuing of fishing since 2005 (EC regulation 1037/2005 of 07/01/2005)

- Under these conditions that can be referred to as *raising questions over management authorities* (described in paragraph 4.2.) and plans for the long-term management of anchovy (CNPM and CCR South in July 2009), the rating must be less than 80.

→ Generaly speaking, the MSC distinguishes 3 groups of species:
- The target species = species under assessment (here the sardine)
- the retained and landed species
- the bycatch spaecies, not retaines.

At the time of the assessment, stakeholders consultation and the scoring, it has been determined that the anchovy was a bycatch species, as the the pink sea bream.

The recent captures of anchovy question the status of the anchovy within this fishery and the need to revalue the impact of the fishery on this species.

Constituting a new element appeared after the consultation step and scoring, it is suggested integrating this comments into the report and planning the review of the status of the anchovy and the impact of the fishery on it during the first surveillance assessment.

The consideration of these remarks and the analysis of the new status of the anchovy as a retained species (because of captures in ICES area VII not raised at the time of the assessment), will end then in the possible revision of the scoring of component 2.1 and, 2.2. After consideration of the necessary measures of supervision and management implemented by the managers of the fishery.

I.P. 2.1.2.

- The prevailing fears over bycatches (see paragraph 2.1.1. above) and the increased fishing effort due to the presence of new, higher performance units, calls for, in a real context in which good practices are not formalised in spite of the supervision of the fishery, a score lower than 90 given that there are clearly problems for these species (see IP 2.1.1. and 2.2.3.).

→ A revision of the scoring was made by taking into account the remarks concerning the possible increase of the fishing effort and the need of formalization of the measures of sustainable management of this effort, in the long term.
→ The remarks relative to the status of the anchovy are taken into account as done above (cf answer to the remarks on IP2.1.1)

I.P. 2.2.2.

- In the context of the remarks made in 2.1.1., it would seem that reservations need to be made about the management strategy and the calculated score of 85 should be lowered.

→Noted, scoring adapted

I.P. 2.3.1., 2.3.2., 2.3.3.

- Mammals and seabirds are not the only faunal groups that could be affected by purse seine fishing. Some species of ETP pelagic and amphihaline fish found in the coastal waters of southern Brittany can be fished throughout the year by purse seiners.
- Shad, salmon and sea trout move, in the adult stage, towards coastal waters in spring (shad) and in summer/autumn (salmon and sea trout). Juveniles are found along the coast in spring.
  Both species of shad (*Alosa alosa and Alosa fallax*), as well as the Atlantic salmon, are considered to be vulnerable at European level and are included in appendix III of the Berne Convention (1992) and in appendices II and V of the Habitats/Fauna/Flora Directive (1994). These are species of Community interest the catching in the wild and commercial fishing of which are likely to be subject to management measures within management committees for migratory fish (COGEPOMI Brittany), as well as protection measures transposed in Development and water management guidelines (SDAGE)

- Without being alarmist, it would appear that the quantitative or qualitative information on the catching of these species is not really known and the justification for the IP 2.2.3. score (= 60) underlines the fact that "knowledge is insufficient for certified management..." and that steps should be taken to this effect. So given the lack of reliable data on bycatches and because of the rationale of the justification in IP 2.2.3. with a score of 60, I think that the score is too high and should be lowered (between 70-80) for these three IPs.

→ Noted, scoring reviewed.
Furter information given in appendix 1, for each PI 2.3.1, 2.3.2, 2.3.3

I.P. 2.5.1.

- It is strange, when describing the diet of sardines, to mention work carried out in the Eastern Mediterranean (Severt et al., 2005) where the hydroclimatic conditions differ significantly from those of the Atlantic coasts and which probably give rise to a productivity which is quantitatively and qualitatively different from lower trophic levels.

→ It seemed that no recent study was published on the diet of sardines in the Bay of Biscay.
Although the hydroclimatic conditions differ in the Mediterranean Sea, the trophic position of the sardine seems to be equivalent in Bay of Biscay. Because of the lack of local data, the study is based on comparable data relative to another ecosystem. However, this uncertainty does not bring here difference on the global realism of the model and have only little incidence on the score of the PI 2.5.1

I.P. 3.1.1.

- How can it be that the sustainable management of OPs is only based on the protection of the sea bream, and not on all the so-called 'sensitive' species to which anchovies belong?

→ The current fishing management by the OP tends to set up measures of surveillance of fishing and possible limitation of captures or fishing effort.
Given the anchovy fishing closure in ICES areas VIII and of the absence of capture in zone VII these last years, the OP concentrated their efforts of management, concerning purse seiners, on the pink Sea bream in particular. On the other hand, within the framework of the anchovy fishing closure, the OP

comes in support to vessels for the organization of the biological stops respected by the majority of purse seiners.

III Action plan

The customer very clearly indicates its desire to subscribe to the comments made and meet the required conditions within quite reasonable deadlines.
The action plan responds in particular to a few points raised above.

APPENDIX 5. Stakeholder public consultation

Comment 1: Association des ligneurs de la pointe de Bretagne

Received by e-mail on 5th December 2010
By Gilles Bernard - Association des Ligneurs de la Pointe de Bretagne
Subject: Publication of the MSC assessment report / public consultation

We have a problem to deal with:
in the course of the period covered by the consultation which finished, if my memory serves me right, during the 2nd half of May 2009, the eco-label project concerned a fishery described as stretching between 5 and 10 miles from the coast.
Today in your report, you mention a fishery that stretches between 0 and 12 miles from the coast: it is clear that this changes everything and that the comments that may have been made by third parties could have been completely different.
When examined through this angle, from a strictly formal viewpoint, the entire procedure needs to be restarted.
From what I know of the ethics of MSC, the respect of formal procedures is of the utmost importance and not even the slightest infringement is accepted, for this thoroughness is the sole guarantee of the authority of the procedure.
I have taken note that the description of the fishery has been modified very recently on the MSC web site, which, in the case of arbitration, could be looked upon in a very negative light.
We await your response.
Gilles Bernard

Received by e-mail on 9th December 2010
By Gilles Bernard - Association des Ligneurs de la Pointe de Bretagne
Subject: Publication of the MSC assessment report / public consultation

The Association des Ligneurs de la Pointe de Bretagne (western Brittany line-fishing association) held a special meeting of its governing board yesterday afternoon on this subject.
Please do not see this as a personal viewpoint; I will try to transcribe the positions adopted as accurately as possible.
As regards the form: the movement will effectively be uncompromising on the issue of respecting formalities and shall assert its rights by all means possible. This “mistake”, assuming that it was indeed a mistake, led at the time of the consultation to a section of coast being excluded from the fishing zone. The majority of this coastal stretch is today covered by the Natura 2000 network. It goes without saying that the very controversial point of the effect on the resident flora and fauna of the repeated scraping of lines on the sea bed did not fail to provoke contrasting reactions from the organisations representing small-scale fishing and environmental NGOs. From this basis, the entire consultation of third parties is tainted by a formal defect that calls into question the validity of the consultation.
As regards the content: this consultation was conducted on the basis of a fishery operated by 22 purse seiners and with framework regulations restricting daily catches to 10 tonnes of sardines. Since then, in what may be a scheduling coincidence, the Regional Committee for Fishing established an increase of daily limits from 10 to 20 tonnes and is currently working on the attribution of 5 to 7 new licenses for the new generation purse seiners with increased capacity in comparison to traditional smaller purse seiners (of these projects, 2 had been planned for a long time and have not met with any specific opposition).
For these reasons concerning both the form and content, the governing board, on behalf of the 120 active liners who are members of the association, requests that its hostile position to the eco-label as presented be officially established. Concurrently, the board nonetheless reiterates its desire to see the traditional purse seiners rewarded in the end for their management efforts by means of an eco-label.
It would in fact appear that the traditional purse seiners behind the project are, for vast majority of them, hostile to the attribution of these new licenses to players who essentially come from the ranks of industrial fishing, motivated by strategies blatantly declared as opportunist (see the issue of Le Marin dated Friday 4th December). It would also appear that these same traditional purse seiners are also for the most part disinclined, or even openly opposed, to the change of daily limits on catches from 10 to 20 tonnes.
We therefore believe, on the condition that these traditional purse seiners can regain control of the directions assigned to the fishery, it would be perfectly legitimate to grant them the MSC recognition.
Each mistake has a price and, in this instance, this mistake perhaps offers MSC the opportunity to display its will for the responsible practices of our traditional fishermen to be able to impede the voracious appetites of several operators who have only very recently arrived on the scene of the fishery.
The Governing Board is at your full disposal to progress with the dialogue.
Regards,
For the Chairman of the Board
Chief Technician
Gilles Bernard

APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 5th May 2010

Good Morning

Thank you for your comments on the preliminary draft report of MSC assessment of the purse seine sardine fishery of South Brittany
We took into account your remarks in the continuation of our assessement and integrated it into the revised report, which will be published soon on the MSC web site.
To answer more exactly your e-mail of December 9th, and looking forward to the publication of the revised report, here is our answer in blue

The assessment team of the fishery and the client received your comments and took it into account for revision of the draft assessment report, of the scoring and the conditions.
So, was assessed a need of improvement of the decision-making process and establishment of management rules (in particular in condition 4) and of adjustment of the fishing effort to the state of the resources.
In its action plan, the "Association des Bolincheurs" is able to define the improvements waited in terms of management of the fishing activities and decision-making.
It can be noted that the conditions are established for any performance indicator 's score lower than SG80.
For the performance indicators which score is superior to 80 or for the issues out of the MSC assessment scope, no particular condition was raised.
The revised report, will present the revised scoring, the conditions and the action plan of the "Association des Bolincheurs " and will then complete the answer.

I remain at your disposal for further question, and would hold you informed about the issue of the revised assessment report.

Best regards

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APPENDIX 5. Stakeholder public consultation

Comment 2 : Fédération des Comités des Pêches Maritimes du Finistère

Received by e-mail on 22th December 2010
By the Federation of Committees for Finistère Marine Fisheries
Ergué Gabéric, 21st December 2009

The Federation of Committees for Finistère Marine Fishing supports the eco-certification application for purse seine sardine fishing.
Purse seine fishing is an essential trade for the socio-economic balance of ports in the Cornouaille area and we hope that this application will enable economic consolidation of commercial opportunities for purse seine sardines.

In light of principle No. 3 of the MSC assessment currently in progress, we nevertheless consider that substantial improvements must be put forward:

- On the one hand, to clarify the rule according to which the purse seiners "shall not conduct fishing of bass and rubberlip grunt" because in its present state it is inapplicable and the inspectors cannot conduct their work in good and proper conditions
- On the other hand, to provide more guarantees of openness with regard to effective enforcement of common management rules.

- In view of the tense climate between trades (intra-profession) and the repercussions in terms of image for fisheries in Finistère in general.
- In view of the necessity to reach a balanced agreement via constructive dialogue that respects all the parties involved.
- In view of the catching efficiency and capacity of the purse seine boats which makes them likely to carry out, even occasionally, large catches from fishing resources shared by different trades.
- In view of the difficulty, due to the limited means of the State, who are in charge of broad range of missions, of regularly inspecting catches made.
- In view of the necessity to objectify the debate by establishing hard facts for all the parties involved.

The Federation of Committees for Finistère Marine Fisheries proposes that the following are included in the attribution of eco-certification:

1. The adoption by the parties involved of a **clear and applicable statement of "directed" fishing**, based on the level of bass and rubberlip grunt catches authorised for each tide in the form of a ratio (%) between the volumes of bass and rubberlip grunt caught and the total volume of catches for the tide.

2. **The commitment to a voluntary inspection programme conducted by a sworn official.** To this effect, the Federation of Committees for Finistère Maritime Fisheries proposes to purse seiners who wish to certify their good practices, in respect with common management rules, to participate in a joint and shared programme. It is proposed that the organisation of this work and supervision of the inspections be discussed and planned by a steering committee that brings together all the parties involved (fishery committees, professional associations, the authorities, Iroise marine natural reserve, etc.). This partnership approach based on the sincere desire of the professionals and their organisations would enable a guarantee of the balance and fairness of the procedure, with constant due regard to respecting the fishermen concerned.

Furthermore, with regard to form, some remarks and errors mean that further information is required, without calling into question the fundamental analysis:

Point 1: On pages 11 and 15 (in 2 different places), zone **VII** ab instead of **VIII** ab.

Point 2: The coherence of the various production figures is problematic, as highlighted by the reviewers, but given insufficient consideration in our opinion:
For example, for the same year in 2007

- P17, point 3.4.3 figure 8 = 14,000 t for zones VIII a and b
- P17, point 3.4.3 figure 9 = 12,800 t for zones VIII a and b **and VIIe** (the PO cover the entire fishing zone).
- P46, appendix I, point 1.1.1 = 90% of 24,000 t, i.e. 21,600 t for zones VIII abd **and VII.**

For 2006, the differential is as follows:

- P17, point 3.4.3 figure 8 = 13,800 t for zones VIII a and b
- P17, point 3.4.3 figure 9 = 11,000 t for zones VIII a and b **and VIIe** (the PO cover the entire fishing zone).

Whilst it is true that the data sources are different (FAO, PO and ICES), it would be better to provide more explanations, in particular, for example, the fact that though at first glance the entire fishing zone is included, the PO figures are in the end considerably lower than all the other assessments.

Moreover, the RIC figures, mentioned on page 12, are not presented in this report, even though the data is readily available to the assessors.
The aim is not to fundamentally call the diagnostic into question, but merely to achieve as much openness as possible.

Point 3:
Page 19, point 4.1, the North Finistère CLPMEM has been left out, even though its remit covers the entire northern section of the Bay of Douarnenez where a part of the purse seiners are based.

Point 4:
Page 19, point 4.2 and page 67, appendix I point 3.1.2: the position of the Anchovy-Sardine Commission of the CNPM in 2009 was to approve a decision to not open fishing of anchovies in the 2nd half of 2009, but this decision falls within the remit of the EU on advice from the STECF.

We hope that our comments will be given due consideration.

The president, Robert BOUGUEON

APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 5th May 2010

Good Morning

Thank you for your comments on the preliminary draft report of MSC assessment of the purse seine sardine fishery of South Brittany
We took into account your remarks in the continuation of our assessment and integrated it into the revised report that will be published soon on the MSC web site.
To answer more exactly your e-mail of December 9th, and looking forward to the publication of the revised report, here is our answer in blue

Général remarks

Reading these comments and in order to take it into account in the best way, The "Association des Bolincheurs" and the assessment team revised and completed the MSC assessment report.
So, the conditions of certification were reviewer and specified, by integrating the issues of retained species management (in particular condition 3) and of fishing control rules (in particular condition 1/4). The action plan of the client defines then the implementation and the answer to these conditions.

It can be noted that the conditions are established for any performance indicator 's score lower than SG80.
On the other hand, the recent proposals and the decisions of the CRPMEM of January, 2010 concern in particular these points and tend to specify the fishing rules of the purse seiners.
The revised report will present the revised scoring, the conditions and the action plan of the "Association des Bolincheurs " and will then complete the answer.

Point 1 : these errors were corrected

Point 2 :
The paragraph under the figure 8 specifies that for the data CIEM, a substantial part of the French catch results from divisions VIIh and VIIth, but these catches were assigned to the division VIIIa because of their location very concentrated on the border between VIIIa, VIIh and VIIth. This consideration allows to compare more easily the data of figures 8 and 9.
Whilst it is true that the data sources are different (FAO, PO and ICES), it would be better to provide more explanations
The various sources of data, OP, IFREMER, FAO(FOOD AND AGRICULTURE ORGANIZATION), OFIMER (extraction of the data RIC) explain effectively a big part of the variations in the data of capture.
The data remaining all the same coherent, the paragraph 3.4.3 was modified to bring more precision

Point 3 : issue corrected in the report

Point 4 : Issue corrected and completed in the report

I remain at your disposal for further question, and would hold you informed about the issue of the revised assessment report.

Best regards

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APPENDIX 5. Stakeholder public consultation

Comment 3: Iroise Marine Reserve

Received by e-mail on 5th January 2010
By: Philippe Le Niliot Philippe.LENILIOT@aires-marines.fr
Subject: Publication of the MSC assessment report / public consultation / Iroise marine natural reserve

Dear Mrs. Lagadec,

We have studied your MSC assessment report on the purse seine sardine fishery.
Just before the fateful date of 6th January, here are some comments it gave rise to concerning the Iroise marine natural reserve.

1- There is a lack of clarification concerning contextual elements about the Iroise marine natural reserve and in particular its perimeter which includes strategic zones for the entire fishery (such as the north of the Audierne bay and the bay of Douarnenez where a significant percentage of total catches of sardines are made: zone CIEM 25 E5). However, the Natura 2000 zones are indicated in the appendices.
2- The context of protected marine areas (concerning both the Iroise marine natural reserve and the Natura 2000 zones) requires heightened assessment of the impact of fishing equipment on natural habitats. The French law of 14th April 2006 on marine natural reserves stipulates in particular compliant notification procedures for authorisation of activities that may significantly affect the marine environment. These aspects related to protected marine areas are mentioned in the conditions and actions required for certification but not in the contextual elements nor in the specific rules of the fishery.
3- Appendices 1 and 2 suitably take account of the specific actions of the Iroise marine natural reserve (of which one of the fundamental goals is the sustainable use of resources) with regard to this fishery and highlight an observation programme designed to precisely assess the impact of fishing equipment on habitats (double lines) and the rejects as well as accidental catches made by the fishery. This work also features in the conditions for certification, which from our viewpoint is satisfactory.

See you soon
Regards,

Philippe Le Niliot
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APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 5th May 2010

Good Morning

Thank you for your comments on the preliminary draft report of MSC assessment of the purse seine sardine fishery of South Brittany
We took into account your remarks in the continuation of our assessment and integrated it into the revised report, which will be published soon on the MSC web site.
To answer more exactly your e-mail of December 9th, and looking forward to the publication of the revised report, here is our first answer in blue

Point 2:
In order to respond to this lack of information, and to include the information relative to the Reserve, a point 3.4.5 was added on the Marine Natural Reserve of Iroise and the Natura 2000 areas to present it more exactly, and describe the links with the fishery.
A map of the reserve was also added.

I remain at your disposal for further question, and would hold you informed about the issue of the revised assessment report.

Best regards

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Comment 4 : Motion commune Association des ligneurs de la pointe de Bretagne, Greenpeace France, WWF France, BLOOM, Collectif Bar Européen.

Received by email the 5th January 2010

Contextual elements

Currently, 22 active boats are operating in the fishery for an annual tonnage of 15,000 to 20,000 tonnes. The certification concerns 18 of these 22 units grouped together in the Association des Bolincheurs de Bretagne.
We have not taken into account the fishery data and in particular the limitations (boat size, catch tonnage, spatial and time restrictions) that are featured in the preliminary report.
However, it seems important to highlight the fact that the formulation of the definition of the fishing zone for which the certification will be granted has changed during the process. Indeed, it seems that the assessment has been conducted for a fishery operating at a distance included in between 5 and 10 miles from the coast (see Paragraph 3.4.2. of the intermediate report) whereas the most recent documents published refer to a zone stretching from 0 to 12 miles.
Such an encroachment of purse seine fishing on the coastal margin is not desirable inasmuch as it would entail specific risks and inconveniences that are less marked or even absent from a distance of 5 miles from the coast (impact on habitats and young life forms in particular).
The issue of minimum distance of the presence of purse seine fishing in relation to the foreshore must imperatively be clarified in the original option (the 5 to 10 miles zone). Failing this, the assessment could be cancelled, thus casting doubt over the entire certification process.

Recent developments

Extra requests for licenses…

Nonetheless, one item of data from the fishery deserves to be retained and put into perspective: **the boats currently working in the fishery all have a load capacity (holds) of around 12 tonnes.**
Such being the case, recent convergent events and information have revealed that aside from the traditional fishing boats undergoing MSC certification, two other companies (Dhellemmes and Scapêche) have submitted, in collaboration with players downstream in the sector (Halios and Makfroid1), applications for authorisation to join the fishery[2].
Dhellemmes owns either partially or fully two very recent units and Scapêche announced, during the latest governing board meeting of the Brittany Regional Committee for fisheries, its intention to purchase a boat from a Basque company on the one hand and to start construction of another on the other hand.
On this occasion, two important and disconcerting decisions were approved:
– The presence of 27 to 29 purse seiners in the zone from 2010 onwards as opposed to the 22 purse seiners operational to date.
– The increase from 10 to 20 tonnes of the daily limit on sardine catches for the fleet as a whole.

In other words, preparations are underway for the arrival of larger boats than the units that have been operating in the fishery before today (see following paragraph).

… which could lead to an increase in fishing pressure of 80%

In total, **four to five extra boats** could therefore join the fishery.
Furthermore, these raw figures may not paint the full picture.
These new boats boast a hold capacity of around 35 tonnes (the maximum technically feasible capacity on a 17 metre boat), compared with the 10 to 12 tonnes of the units currently undergoing certification.
The theoretical load capacity would therefore increase from 200 tonnes to a figure between 340 and 380 tonnes, **i.e. an increase of 80%** on these 4 to 5 new boats alone. It is difficult to imagine these boats, which involve such considerable investments, being used for anything other than the full yield of their 35-tonne load capacity with the view to optimum profitability.
It should be remembered that the species targeted by the two projects are sardines (a species not subjected to quotas but merely "protected" by a minimal catch size measure) and black sea bream[3] **even though fishing focused on the latter is forbidden!** 4

Furthermore, other elements could incite new boats to join the fishery as soon as possible:
– The zone undergoing certification overlaps the perimeter of the Iroise marine natural reserve[5] which will soon finalise and publish its management plan.
– Another marine reserve project is taking shape (Mor Braz).

– The Natura 2000 sea zoning map will be validated (including implementation projects at Penmarch, Les Glénans and Trévignon).
– It is therefore more than likely that in the short term, it will not be possible to accept new admissions.

The marine eco-system cannot tolerate such increases

An eco-system based approach, even minimal, demonstrates that an increase in fishing pressure on sardines in this zone would represent a **certain risk of significant alterations to the site's eco-system which could prove to be irreversible.**
The unanimously agreed initial effect would be a brutal reduction in the biomass of forage fish and a related decline in the stocks of carnivorous fish targeted by commercial fishing (it is well known that the abundance of such stocks is directly linked to that of forage fish).
A second impact, on habitats this time, lies in the effects of scraping on the sea bed of rings and cables located at the bottom of the fall on purse seine nets.
In addition to these direct impacts, other knock-on effects on the lower levels of the food chain are to be feared, with consequences that are currently difficult to represent:

– Increases in blooms of plankton with a negative impact on young fish.
– Disruption of the eco-system with possible incidences on the production of green algae.
– Endangering of nurseries of flat fish and green ray present in the Bay of Douarnenez.
Even if it is impossible to be sure that all these events will occur, the sole possibility that one of them may occur or let alone a combination of some of them **is largely sufficient, in the name of the principle of precaution, to suspend the applications for new licenses.**

How is MSC certification involved in this context?

Even if the scope of certification in terms of boat numbers is clearly defined, MSC cannot remove itself from the situation in the field and ignore that the opportunities for added value offered by the certification would provoke an influx to the fisheries. This influx involves the emergence of new players in the fishery who would indirectly benefit from the image provided by certification without being subjected to its constraints.
The 18 certified units would provide a product named "MSC certified Southern Brittany purse seine sardines" and the new (uncertified) arrivals would be landing "Southern Brittany purse seine sardines". This perfectly legal **formulation** would obviously create **confusion** amongst consumers and, which is a legitimate concern, among certain players in the sector downstream. Furthermore, it may, to a certain extent, be seen as an "unspoken" **claim** of inclusiveness with the label.
The MSC must recognise this indirect responsibility and assume it publicly, by drawing the attention of the public authorities and professional organisations to at least the two following points:

The certification is only granted as part of a management plan drawn up during the certification procedure, on the basis of established catch tonnages. The attribution of the certification would be called in to question if this tonnage is exceeded.

Beyond the debate concerning commercial issues, since granting new authorisations would lead to an increase in the fishing effort and fishing pressure, this would be detrimental to the quality of the eco-system in the zone concerned by the certification and therefore the certification itself.
In the more general context of fishing conflicts6, the stakes are far from being neutral. MSC certification will only become a positive means of restructuring fisheries insofar as it manages to convey improvement of the environmental performance of the fisheries certified and to take into consideration the activity of neighbouring fisheries.
Nevertheless, it should not be discounted that, as an organisation, the MSC, currently an external contributor in relation to the fisheries, could in spite of itself become **a major lever in the internal power struggles within the profession**. The organisation would then find itself in a delicate or even extremely awkward position, due to a failure to gauge the true value of its actions in political terms, in the name of a principle of neutrality that may be seen as a form of idealism, or even, by its detractors, as a refusal to face facts that is at the very least expedient.

The role of the assessor

In the capacity of assessor, the Bureau Veritas is for all practical purposes, whilst not the driving force behind the certification project, the major player. The unreserved certification, certification under reservations or the non-certification of the applicant fishery will depend on the conclusions and recommendations that it will make in its report.
However, its role does not stop once the certification has been granted. It extends over the conservation of the certification by means of annual assessments. As such, it is obvious that the current plans to open up the fishery to new players would be highly detrimental to the outlook for a lasting certification for purse seine sardines.

Benefitting from certification is a long-term approach. Under no circumstances can it be used for a marketing and media campaign: a distinction that is obtained but then soon forgotten. In the absence of an established objective of durability, the certification will be exposed to a lack of recognition and approval from the markets, which are not yet captured due to a lack of awareness with regard to consumers and due to issues of technical credibility with regard to environmental associations after rather controversial, or even disputable, certification processes concerning several fisheries.
It is therefore the assessors' responsibility to formally notify the MSC organisation of the risks linked to certification of a fishery if the professional organisations and public authorities decided to increase the limits on catches in this very same fishery at rates that are incompatible with the eco-system in which it operates.
A label is a long-term project. Certification is only the first stage. The following steps involve improving the environmental performance of the fisheries.
For that reason, the perspective of opening the purse seine sardine fishery in the zone in question appears incompatible with the spirit of certification and **it is the assessors' responsibility to make sure there is no ambiguity with regard to this issue.**

Gwenn Pennarun
Chairman
Association des ligneurs de la Pointe de Bretagne

François Chartier
Ocean Campaign Manager
Greenpeace France

Charles Braine
Sustainable Fishing Manager
WWF France

Claire Nouvian
Chairwoman
BLOOM

Stéphan Beaucher
Chairman
European Bass Collective

1 Makfroid has made it known to the public authorities that it is ready to make an investment of 5.5 million euros, which corresponds to a processing unit with a capacity of 5,000 tonnes of sardines per year. Sensitive to the "jobs" aspect (26 new jobs will be created by Makfroid), the local authorities and public authorities are very "open" to this proposition. 2 Even though, for the moment at least, there is no question of these new arrivals applying for MSC certification.

3 In Le Marin dated 4th December 2009 (page 15). Tristan Douar Appointed Managing Director of Scapêche: "It (the future boat) will fish all pelagic fish, mainly sardines and sea bream".
4 In Order 0330 of the Prefecture of Brittany dated 23rd April 2009 in which article 2 (general and permanent management measures) stipulates that "purse seine fishing **cannot be focused on bass and grey sea bream**". Pink sea bream cannot be caught or landed by boats conducting purse seine net fishing".
5 Indeed, as underlined by the intermediate report, the majority of the catches come from the zones included within the perimeters of the IMNP.

6 It should be remembered that over one month ago (December 2009), the arrival of **one single** new boat in the emblematic Bay of Biscay prawn fishery caused an upheaval from the local and departmental fishing organisations that was conveyed by a veritable movement of defiance against the National Committee for fisheries and the suspension of payment to the National Committees of the prawn fishery licence fees.

APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 5th May 2010

Good Morning

Thank you for your comments on the preliminary draft report of MSC assessment of the purse seine sardine fishery of South Brittany
We took into account your remarks in the continuation of our assessment and integrated it into the revised report, that will be published soon on the MSC web site.
To answer more exactly your e-mail of December 9th, and looking forward to the publication of the revised report, here is our first answer in blue :

Contextual elements

As specified to the "Association des Ligneurs de la Pointe de Bretagne", I confirm you that since the beginning of the assessment of the purse seine sardine fishery, in particular according to the exchanges with the stakeholders, the unit of certification of the fishery was defined on the zone of 0-12 miles.
The stakeholder consultation, the visits and the assessment report indeed allow to describe the unit of certification of the fishery. In that case it was define that the fishing zone was of 0-12 miles.
The MSC web site, presents for every current assessment a presentation of the fishery. An error was done in this presentation, the fishery was presented as as taking place on the 5 to 10 miles area.
After raising this error concerning the unit of certification, we (Bureau Veritas Certification) informed the MSC about it so that a correction was done by them.

Recent developments

In its review of the assessment report, the scoring and the establishment of the conditions, the assessment team and the client acquainted with your comments and took them into account.
So, was assessed a need of improvement and strengthening of the decision-making process and establishment of management rules (in particular condition 4) and of adaptation of the fishing effort to the state of the resources.
In its action plan, the client was able to define the improvements waited in terms of fishing activity management and decision-making process.
It can be noted that the conditions are established for any performance indicator's score lower than SG80.
For the performance indicators which score is superior to 80 or for the issues out of the MSC assessment scope, no particular condition was raised.
The revised report will present the revised scoring, the conditions and the action plan of the "Association des Bolincheurs" and will then complete the answer.

How is MSC certification involved in this context?

By the release of the stakeholder's comments in the final report, your remarks above will be transmitted to the MSC.
The management of the fishing effort and its adequacy with the health of stocks and quality of the ecosystems was also taken into account in the assessment and during the review of the report further to the public consultation.
The revised report will present the revised scoring, the conditions and the action plan of the client and will then complete this answer.

The role of the assessor

In its project of MSC certification, the "Association des bolincheurs" appealed in a certification body.
In its assessment ending at the certification of the fishery or not, the certification body must to respect a set of rules, procedures and methodologies of assessment and certification defined by the MSC.
The assessment process is an opened process, with the regular exchanges between the certification body and the client of the fishery assessed and the MSC.
Among the rules of the MSC, those concerning the scoring help for the decision of certification. So any inadequate PI's score (from the expertise of the assessment team and consultation of the stakeholders) lead to the establishment of conditions.
In answer to these conditions, and for the given deadline, the client has to establish and implement an action plan, allowing him to improve his coring and to strengthen the weak points of the fishery.
A fishery obtaining the certification, and having defined a short and medium-term action plan makes then a commitment in a continuous improvement approach, and in order to respond to the preestablished conditions.

So, the weak points or points of improvement of the fishery management rules, the decision taking process and the fishing effort definition were assessed. The scoring ended in the establishment of conditions (conditions 1 - 4) which the "Association des bolincheurs" answered by an action plan.
The objective of this action plan and the revised report is to guarantee the improvement of the fishery on these weak points, in order not to loose the certification.
Finally, the field of certification of the fishery describes the boats covered by the certification, and the client responsible for the certification (the "association des bolincheurs de Bretgane" and its members).

I remain at your disposal for further question, and would hold you informed about the issue of the revised assessment report.

Best regards

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Supplementary response of the Client

Elements of reflection on the evolution of the business rules of the purse seine sardine fishery for 2010

The analyzed figures are the ones the 10 purse-seiners of " the Association of Bolincheurs " members of the Producers' Organization PMA over the years 2007-2008-2009.

Annual production

The average number of days of sardine landing by boat is included between 120 and 140 days according to years.
The average tonnage by landing and by boat varies between 6 and 8T according to years.
The annual production of a boat varies over these three years from 700 to 1100 T.

Fishing rules for 2010

To date 24 licenses were allocated for year 2010 and 3 licenses are outstanding. The decision N°048 / 2010 of February 26th, 2010 sets a maximum of tonnage of sardine of 20T a day. For the record this maximum was setted to 10T in 2009.

These two elements lead to questions on the consequences of these measures in terms of production with regard to relevant years for the MSC certification. The assessment realized in 2009 considered that the impact of the fishery on the target species could corresponds to a sustainable fishing (score=80).

To bring elements to this reflection, a work on the inventory of the capacities of tanks of boats and a fine analysis of the landings were realized.

The capacity of average tank is of 16T.

An analysis of the landings allowed to classify tides in two categories; the tides where less than 9 T of sardines are off-loaded and the tides where more of 9T of sardines are off-loaded.
For the first group of tide, it is considered that the measure of upper limit of tonnage (10T in 2009) was not limiting. For the second group of tide, it is assume that the upper limit of tonnage was limiting and would not be it any more in 2010 (change from 10 to 20T). The limiting data would thus become the capacity of tank (that is 16T).
These data allow to consider that the increase of the production further to the modifications of the rule would amount to 2 in 3 %.

Then, it is possible to estimate for year 2010 a rough increase of 2000 T, further to the allocation of 2 licenses.

So the evolution of the production of the sardine fishery with regard to the data collected in the preliminary assessment report according to the principles and the criteria of the MSC for a sustainable fishing in 2008 maybe assessed at 15 %.

APPENDIX 5. Stakeholder public consultation

Comment 5 : CNPMEM

Received by e-mail on 6th January 2010
By Delphine Cioleck - CNPMEM
Subject: MSC assessment report / public consultation: CNPMEM opinion

Good evening,

Please find below several comments concerning the MSC assessment report on the Southern Brittany purse seine sardine fishery.

Page 5:

"*Since the Southern Brittany purse seine sardine fishery fishes the Iberian stock unit, or the Southern Atlantic sardine sub-population, it did not appear necessary to conduct harmonisation of its assessment with the Portuguese fishery which fishes the North Atlantic stock unit".*

Page 9:

"The Southern Brittany's purse seine sardine fishery assessed here thus fishes the northern part of the Atlantic species stock."

There is confusion. What is the gist here? Are you sure that the Portuguese fishery fishes the northern unit? In this case, if the Brittany fishing boats do likewise, why is there no harmonisation?

Page 10:

What do you mean by a "*small pelagic species*"? Is this a problem related to the translation of "small pelagics" (to use the term species of small pelagics)?

Page 11:

"*The main pelagic fish, an essential component of the marine ecosystem in the Bay of Biscay, which are caught in this sector are sardines (Sardina pilchardus), anchovies (Engraulis encrasicolus), Atlantic Mackerel (Scomber scombrus), blue whiting (Micromesistius poutassou) and horse mackerel (Trachurus trachurus) (Villalobos, 2008)*".

Are you referring to small pelagics only? For I believe that the albacore tuna is a pelagic fish that can be found in significant numbers in the Bay of Biscay.

"*The impact of fishing activity or the competition for prey such as sardines or anchovies can put some of these species in a vulnerable position.*

Is this not a value judgment? What is the link between the competition of marine mammals for sardines and their vulnerability?

Page 18:

What does the following mean: "*Before closure of anchovy (Engraulis encrasicolus) fishing in the Bay of Biscay in 2005, the anchovy was also targeted by purse seiners and retained from mid-September to the end of October"*?

Page 19-20:

"*In a recent release (June 2009), this committee thus extended the closure of anchovy fishing for the 5th consecutive year on the basis of ICES advice for anchovy which is a species subject to European quotas*".

Please note: it was the European Commission which extended the closure and not the CNPMEM Anchovy and Sardine Commission.

Page 36:

"It has been suggested that the Anchovies & Sardine Commission of the CNPMEM is supplied with formal advice each year by IFREMER (French Research Institute for Exploitation of the Sea) concerning the state of sardine stocks in the Bay of Biscay, confirming that there has not been a distinct decline in the biomass due to fishing, or, should the opposite be true, establishing reference points to be incorporated into stock management measures".

It is not within the remit of IFREMER on its own to adjudge sardine stocks. They do not possess all the data. There are working groups within the ICES and the STECF; it is rather their recommendations which should be looked into.

The role of the CNPMEM is to deal with cases of national scope. Therefore, if it draws conclusions on purse seine practices, it also concerns purse seine fishing in Aquitaine. Indeed, given that the licensing system is managed by the Brittany CRPMEM, it should instead be the latter that is mentioned in this paragraph and not the CNPMEM.

"Implementation of information gathering is required, enabling the impact of purse seine net fishing on secondary species (rejects) to be evaluated.

Quantitative data may be collected by means of participation in reject observation programmes or via the quantifiable and auditable declarations".

Data may also be collected via the sentinel fishing program implemented by the CNPMEM and IFREMER in 2009, in which the purse seiners did not take part, even though two days per tide were scheduled, in August then in Autumn 2009 (in December, in fact).

Regards,

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APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 5th May 2010

Good Morning

Thank you for your comments on the preliminary draft report of MSC assessment of the purse seine sardine fishery of South Brittany
We took into account your remarks in the continuation of our assessment and integrated it into the revised report, that will be published soon on the MSC web site.
To answer more exactly your e-mail of December 9th, and looking forward to the publication of the revised report, here is our first answer in blue

Page 9 : indeed, an error was made here, entailing a confusion between both stocks .
The paragraph 2.2 was adjusted. The purse seine sardine fishery of south Brittany fish the northern stock, as presented at point 3.1.1

Page 10 :
It is indeed the catches of small pelagic species that are concerned here.

Page 11 :
Are you referring to small pelagics only? For I believe that the albacore tuna is a pelagic fish that can be found in significant numbers in the Bay of Biscay
The accent was put here on the main catches of s mall pelagic species fished in the distribution area of the stock, without being exhaustive on all the pelagic species.
The Tuna is evoked as a predator of sardines. The paragraph was completed to specify the species Tunnus alalunga

“The impact of fishing activity or the competition for prey such as sardines or anchovies can put some of these species in a vulnerable position. Is this not a value judgment? What is the link between the competition of marine mammals for sardines and their vulnerability?
This general paragraph about the Bay of Biscay precise that interactions exist between mammals and birds and their preys, of which are a part sardines and anchovies. So, although they are not still quantified and well known, the fishing activities can have an impact on the small pelagics’ predators. (Interaction with the gear, competition for a prey)

Page 18 :
What does the following mean: “Before closure of anchovy (Engraulis encrasicolus) fishing in the Bay of Biscay in 2005, the anchovy was also targeted by purse seiners and retained from mid-September to the end of October”?
The paragraph 3.4.4 was review for more clarity. It is simply explained here that the south Brittany purse seine fishery was fishing anchovies before the closing fishing period in the Bay of Biscay.
Then the anchovy is considered as a retained species

Page 19-20 :
Please note: it was the European Commission which extended the closure and not the CNPMEM Anchovy and Sardine Commission.
The paragraph was corrected

Page 36 :
These last remarks were taken into account by the assessment team and the client.
Further to the stakeholder consultation, the conditions and the action plan of the client were reviewed and specified.
The consideration of the scientific data and the data collection process will be presented in the action plan integrated into the revised report, published soon

I remain at your disposal for further question, and would hold you informed about the issue of the revised assessment report.

Best regards

Xavière LAGADEC

Comment 6 : MSC

Received by e-mail on 25th June 2010

To Xaviere Lagadec
Bureau Veritas

24-Jun-10

Sent via email

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SUBJECT: MSC Review and Report on Compliance with the scheme requirements

Dear Xaviere

Please find a below the results of our partial review of compliance with scheme requirements.

	CB	Bureau Veritas
	Lead Auditor	Xaviere Lagadec
	Fishery	South Brittany Sardines purse seine
	Fishery assessment product type	Public Comment Draft Report
	Type of review	Traceability desk study

No.	Type of finding	Scheme requirement	Reference	Details
1.	*Major*	Section 5.2, Appendix 1 of FCM v6 'The report shall (...) describe known risk factors prior to or after the point of first landing that may influence subsequent chain of custody assessments.'	Pg 39, 6.1	Section 6.1 describes the possibility for vessels to individually identify their tanks as "MSC" when MSC-certified fish is stored (and probably not using the label when non-MSC-certified fish is caught). The section 6.1 does not take into account this information when describing the known risk factors that may influence subsequent chain of custody.
2.	*Major*	Section 5.2, Appendix 1 of FCM v6 'The report shall (...) describe known risk factors prior to or after the point of first landing that may influence subsequent chain of custody assessments. The report specifically state whether products may or may not enter further chains of custody'.	Pg 39, 6.3	The report does not state whether the process of withdrawing products due to low sale price is a known risk factor that may influence subsequent chain of custody assessments. The report does not state whether products removed from the market due to low sale price may or may not enter further chains of custody. The report does not state whether the portion of fish not going through auction house (2% of the landing) is eligible to enter further chains of custody or not.

3.	*Guidance*		Pg 39, 6.3	The second paragraph (from "The average price" to "service taxes") can be removed as it is not essential to the traceability section.
4.	*Major*	Section 5.2 Appendix 1 of FCM v6 The report shall set out the scope of the fishery assessment in the context of the assurances the certification body can make about the point to which products from the fishery can be traced.	Pg 40, 6.4	The report does not state the point to which products (...) can be traced: 6.3 states the CoC should begin from the first point of sale. 6.4 states the certification scope of purse seine sardine fishery extends to landing of sardines.
5.	*Major*	TAB D-021 v1	Pg 40, Target Eligibility date	The target eligibility is 'any date prior to the certification of the fishery back to a maximum of six months prior to the publication of the most recent PDCR'. The eligibility date shall not be earlier that 08/12/09.

This report is provided for action by the Certification Body and ASI in order to improve consistency with the MSC scheme requirements; MSC does not review all Certification Bodies work products and this review should not be considered a checking service. If any clarification is required, please contact Wetjens Dimmlich at wetjens.dimmlich@msc.org for more information.

Regards,

Daniel Suddaby

Senior Fisher Certification Manager

Standards and Licensing Departement

cc: Accreditation Services International

APPENDIX 5. Stakeholder public consultation

Response of the Assessment team BUREAU VERITAS

Response by email of the 28th June 2010

Section	MSC Comments	BV draft response to be included in final report
P39, 6.1	Section 6.1 describes the possibility for vessels to individually identify their tanks as "MSC" when MSC-certified fish is stored (and probably not using the label when non- MSC certified fish is caught). The section 6.1 does not take into this information when describing the known risk factors that may influence subsequent chain of custody.	Every purse seiner licensed and member of the Association des Bolincheurs, and listed on the MSC fishery certificate is covered by the MSC certification scope. As explained in the report no known risk factor has been identified that may influence the subsequent chain of custody. The tanks of sardine landed by these vessels are eligible to enter the chain of custody certification.
P39, 6.3	The report does not state whether the process of withdrawing products due to low sale price is a known risk factor that may influence subsequent chain of custody assessments. The report does not state whether products removed from the market due to low sale price may or may not enter further chains of custody. The report does not state whether the portion of fish not going through auction house (2% of the landing) is eligible to enter further chains of custody or not.	Where sardine remain unsold, due to low sale prices, they may be frozen for subsequent sale. As explained in section 6.4 all subsequent buyers must enter a separate chain of custody. Therefore those who buy (take ownership) and freeze sardinee must also enter chain of custody certification. The sardine landed by the purse-seiners must be registered at a fish auction wheteher they are sold through the auction or not. Only the sardines registered at a fish auction are eligible to enter further chains of custody.
P49, 6.4	The report does not state the point to which products (…) can be traced: 6.3 states the CoC should begin from the first point of sale. 6.4 states the certification scope of purse seine sardine fishery extends to landing of sardines.	The first point of sale takes place after the sardines are landed and registered. Once the sardines are landed, they can be sold. The first buyer who takes ownership of it must enter chain of custody certification. Sardines that are landed are then eligible to enter chain of custody, and the first buyer must be certified.
P40	The target eligibility is 'any date prior to the certification of the fishery back to a maximum of six months prior to the publication of the most recent PDCR'. The eligibility date shall not be earlier that 08/12/09.	This point was discussed with Phil Crocombe. Indeed, the TAB-021' foot-page comment number 2 tells that " publication of the public comment draft report is determined as the date that the public comment draft report is first made available for comments by stakeholders .. " Then it is not clear if the target eligibility date must be 6 months prior to the publication of our first or our second public report.

Without other comments of your part, these precisions and answer will be included in the final report.

And if needed depending of your response to the last issue, please find attached the notification for revised eligibility date on the 1st January 2010.

Xavière LAGADEC
MSC Technical Manager

MSC Principles and Criteria for Sustainable Fishing

At the centre of the MSC is a set of *Principles and Criteria for Sustainable Fishing* which is used as a standard in a third party, independent and voluntary certification programme. These were developed by means of an extensive, international consultative process through which the views of stakeholders in fisheries were gathered.

These Principles reflect a recognition that a sustainable fishery should be based upon:

– The maintenance and re-establishment of healthy populations of targeted species;

- The maintenance of the integrity of ecosystems;

- The development and maintenance of effective fisheries management systems, taking into account all relevant biological, technological, economic, social, environmental and commercial aspects; and

- Compliance with relevant local and national local laws and standards and international understandings and agreements

The Principles and Criteria are further designed to recognise and emphasise that management efforts are most likely to be successful in accomplishing the goals of conservation and sustainable use of marine resources when there is full co-operation among the full range of fisheries stakeholders, including those who are dependent on fishing for their food and livelihood.

On a voluntary basis, fisheries which conform to these Principles and Criteria will be eligible for certification by independent MSC-accredited certifiers. Fish processors, traders and retailers will be encouraged to make public commitments to purchase fish products only from certified sources. This will allow consumers to select fish products with the confidence that they come from sustainable, well managed sources. It will also benefit the fishers and the fishing industry that depend on the abundance of fish stocks, by providing market incentives to work towards sustainable practices. Fish processors, traders and retailers who buy from certified sustainable sources will in turn benefit from the assurance of continuity of future supply and hence sustainability of their own businesses.

The MSC promotes equal access to its certification programme irrespective of the scale of the fishing operation. The implications of the size, scale, type, location and intensity of the fishery, the uniqueness of the resources and the effects on other ecosystems will be considered in every certification.

The MSC further recognises the need to observe and respect the long-term interests of people dependent on fishing for food and livelihood to the extent that it is consistent with ecological sustainability, and also the importance of fisheries management and operations being conducted in a manner consistent with established local, national, and international rules and standards as well as in compliance with the MSC Principles and Criteria.

Preamble

The following Principles & Criteria are intended to guide the efforts of the Marine Stewardship Council towards the development of sustainable fisheries on a global basis.
They were developed assuming that a sustainable fishery is defined, for the purposes of MSC certification, as one that is conducted in such a way that:

– it can be continued indefinitely at a reasonable level;

– it maintains and seeks to maximise, ecological health and abundance,

– it maintains the diversity, structure and function of the ecosystem on which it depends as well as the quality of its habitat, minimising the adverse effects that it causes;

– it is managed and operated in a responsible manner, in conformity with local, national and international laws and regulations;

- it maintains present and future economic and social options and benefits;
- it is conducted in a socially and economically fair and responsible manner.

The Principles represent the overarching philosophical basis for this initiative in stewardship of marine resources: the use of market forces to promote behaviour which helps achieve the goal of sustainable fisheries. They form the basis for detailed Criteria which will be used to evaluate each fishery seeking certification under the MSC programme. Although the primary focus is the ecological integrity of world fisheries, the principles also embrace the human and social elements of fisheries. Their successful implementation depends upon a system which is open, fair, based upon the best information available and which incorporates all relevant legal obligations. The certification programme in which these principles will be applied is intended to give any fishery the opportunity to demonstrate its commitment to sustainable fishing and ultimately benefit from this commitment in the market place.

Scope

The scope of the MSC Principles and Criteria relates to marine fisheries activities up to but not beyond the point at which the fish are landed. However, MSC-accredited certifiers may be informed of serious concerns associated with post-landing practices. [1]

The MSC Principles and Criteria apply at this stage only to wildcapture fisheries (including, but not limited to shellfish, crustaceans and cephalopods). Aquaculture and the harvest of other species are not currently included.

Issues involving allocation of quotas and access to marine resources are considered to be beyond the scope of these Principles and Criteria.

[1] Other complementary certification programmes (e.g., ISO 14000) provide opportunities for documenting and evaluating impacts of post landing activities related to fisheries products certified to MSC standards. Constructive solutions to address these concerns through appropriate measures should be sought through dialogue with certification organisations and other relevant bodies.

PRINCIPLE 1

A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery [2]:

Intent:

The intent of this principle is to ensure that the productive capacities of resources are maintained at high levels and are not sacrificed in favour of short term interests. Thus, exploited populations would be maintained at high levels of abundance designed to retain their productivity, provide margins of safety for error and uncertainty, and restore and retain their capacities for yields over the long term.

Criteria:

1. The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.

2. Where the exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential yields within a specified time frame.

1. Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.

PRINCIPLE 2:

Fishing operations should allow for the maintenance of the structure, productivity, function and

diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Intent:
The intent of this principle is to encourage the management of fisheries from an ecosystem perspective under a system designed to assess and restrain the impacts of the fishery on the ecosystem.

Criteria:
1. The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes.

[2] The sequence in which the Principles and Criteria appear does not represent a ranking of their significance, but is rather intended to provide a logical guide to certifiers when assessing a fishery. The criteria by which the MSC Principles will be implemented will be reviewed and revised as appropriate in light of relevant new information, technologies and additional consultations

2. The fishery is conducted in a manner that does not threaten biological diversity at the genetic, species or population levels and avoids or minimises mortality of, or injuries to endangered, threatened or protected species.

3. Where exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.

PRINCIPLE 3:
The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

Intent:
The intent of this principle is to ensure that there is an institutional and operational framework for implementing Principles 1 and 2, appropriate to the size and scale of the fishery.

A. Management System Criteria:
1. The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.
The management system shall:

2. demonstrate clear long-term objectives consistent with MSC Principles and Criteria and contain a consultative process that is transparent and involves all interested and affected parties so as to consider all relevant information, including local knowledge. The impact of fishery management decisions on all those who depend on the fishery for their livelihoods, including, but not confined to subsistence, artisan, and fishing-dependent communities shall be addressed as part of this process;

3. be appropriate to the cultural context, scale and intensity of the fishery – reflecting specific objectives, incorporating operational criteria, containing procedures for implementation and a process for monitoring and evaluating performance and acting on findings;

4. observe the legal and customary rights and long term interests of people dependent on fishing for food and livelihood, in a manner consistent with ecological sustainability;

5. incorporates an appropriate mechanism for the resolution of disputes arising within the system[3];
[3] Outstanding disputes of substantial magnitude involving a significant number of interests will normally disqualify a fishery

from certification.

6. provide economic and social incentives that contribute to sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing;

7. act in a timely and adaptive fashion on the basis of the best available information using a precautionary approach particularly when dealing with scientific uncertainty;

8. incorporate a research plan – appropriate to the scale and intensity of the fishery – that addresses the information needs of management and provides for the dissemination of research results to all interested parties in a timely fashion;

9. require that assessments of the biological status of the resource and impacts of the fishery have been and are periodically conducted;

10. specify measures and strategies that demonstrably control the degree of exploitation of the resource, including, but not limited to:
a) setting catch levels that will maintain the target population and ecological community's high productivity relative to its potential productivity, and account for the non-target species (or size, age, sex) captured and landed in association with, or as a consequence of, fishing for target species;
b) identifying appropriate fishing methods that minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;
c) providing for the recovery and rebuilding of depleted fish populations to specified levels within specified time frames;
d) mechanisms in place to limit or close fisheries when designated catch limits are reached;
e) establishing no-take zones where appropriate;

11. contains appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event that they are.

B. Operational Criteria
Fishing operation shall:

12. make use of fishing gear and practices designed to avoid the capture of nontarget species (and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive;

13. implement appropriate fishing methods designed to minimise adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas;

14. not use destructive fishing practices such as fishing with poisons or explosives;

15. minimise operational waste such as lost fishing gear, oil spills, on-board spoilageof catch, etc.;

16. be conducted in compliance with the fishery management system and all legal and administrative requirements; and

17. assist and co-operate with management authorities in the collection of catch, discard, and other information of importance to effective management of the resources and the fishery..

List of Iroise Marine Parc's species

MARINE BIRDS :
Fulmar boréal : Liste rouge nationale ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Puffin des anglais : Liste rouge nationale ; Convention de Berne annexe II ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Océanite tempête : Liste rouge nationale ; Directive Oiseaux annexe I ; Convention de Barcelone annexe II ; Convention de Berne annexe II ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Grand cormoran : Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Cormoran huppé : Liste rouge nationale ; Convention de Barcelone annexe II ; Convention de Berne annexe II ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Goéland argenté : Liste rouge nationale ; Directive Oiseaux annexe II ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Goéland brun : Directive Oiseaux annexe II ; Convention de Berne annexe III ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Goéland marin : Liste rouge nationale ; Directive Oiseaux annexe II ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Mouette trydactyle : Liste rouge nationale ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Sterne naine : Liste rouge nationale ; Directive Oiseaux annexe I ; Convention de Berne annexe II ; Convention de Barcelone annexe II ; Convention de Bonn annexe II et accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Sterne caugek : Liste rouge nationale ; Directive Oiseaux annexe I ; Liste rouge nationale ; Directive Oiseaux annexe I Convention de Berne annexe II ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Sterne pierregarin : Liste rouge nationale ; Directive Oiseaux annexe I ; Convention de Berne annexe II ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Macareux moine : Liste rouge nationale ; Convention de Berne annexe III ; Liste des espèces de vertébrés protégées menacées d'extinction en France ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Guillemot de Troïl : Liste rouge nationale ; Convention de Berne annexe III ; Liste des espèces de vertébrés protégées menacées d'extinction en France ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français.
Plongeon catmarin : Directive Oiseaux annexe I ; Convention de Berne annexe II ; Convention de Bonn annexe II et Accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Plongeon arctique, Plongeon imbrin : Directive Oiseaux annexe I ; Convention de Berne annexe II ; Convention de Bonn accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Puffin cendré : Liste rouge nationale ; Directive Oiseaux annexe I ; Convention de Barcelone annexe II ; Convention de Berne annexe II ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Puffin fuligineux : Liste rouge mondiale ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Puffin des baléares : Liste rouge mondiale ; Directive Oiseaux annexe I ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Fou de bassan : liste rouge nationale ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Macreuse noire : Directive oiseaux annexes II et III ; Convention de Berne annexe III ; Convention de Bonn annexe II et accord AEWA ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français
Petit pingouin : liste rouge nationale ; Convention de Berne annexe III ; Arrêté fixant la liste des oiseaux protégés sur l'ensemble du territoire français ; Arrêté fixant la liste des espèces de vertébrés protégées menacées d'extinction.

MARINE MAMMALS
Grand dauphin : Liste rouge mondiale de l'UICN - Liste rouge des mammifères marins de France métropolitaine - Directive Habitats-Faune-Flore : annexes II et IV - Convention de Berne : Annexe II - Convention de Berne : Annexe II - Convention de Barcelone : Annexe II - Convention de Bonn : Annexe II et accord ASCOBANS - Liste nationale des vertébrés menacés d'extinction : mammifères marins protégés (Article 1).
Dauphin commun : Directive Habitats-Faune-Flore annexe IV - Règlement communautaire CITES annexe A - Convention de Berne annexe II - Convention de Barcelone annexe II - Convention de Bonn annexe II et accord ASCOBANS - Liste nationale des mammifères marins protégés article 1 - Liste rouge des espèces menacées en France.
Dauphin de Risso et Globicéphale noir : Directive Habitats-Faune-Flore annexe IV - Règlement communautaire CITES annexe A - Convention de Berne annexe II - Convention de Barcelone annexe II - Convention de Bonn annexe II et accord ASCOBANS - Liste nationale des mammifères marins protégés article 1 - Liste rouge des espèces menacées en France.
Phoque gris : Liste rouge nationale - Directive Habitats-Faune-Flore : annexes II et V - Convention de Berne : Annexe III - Convention de Bonn : Annexe II - Liste nationale des vertébrés menacés d'extinction : mammifères marins protégés (Article 1).

List of Iroise Marine Parc's species

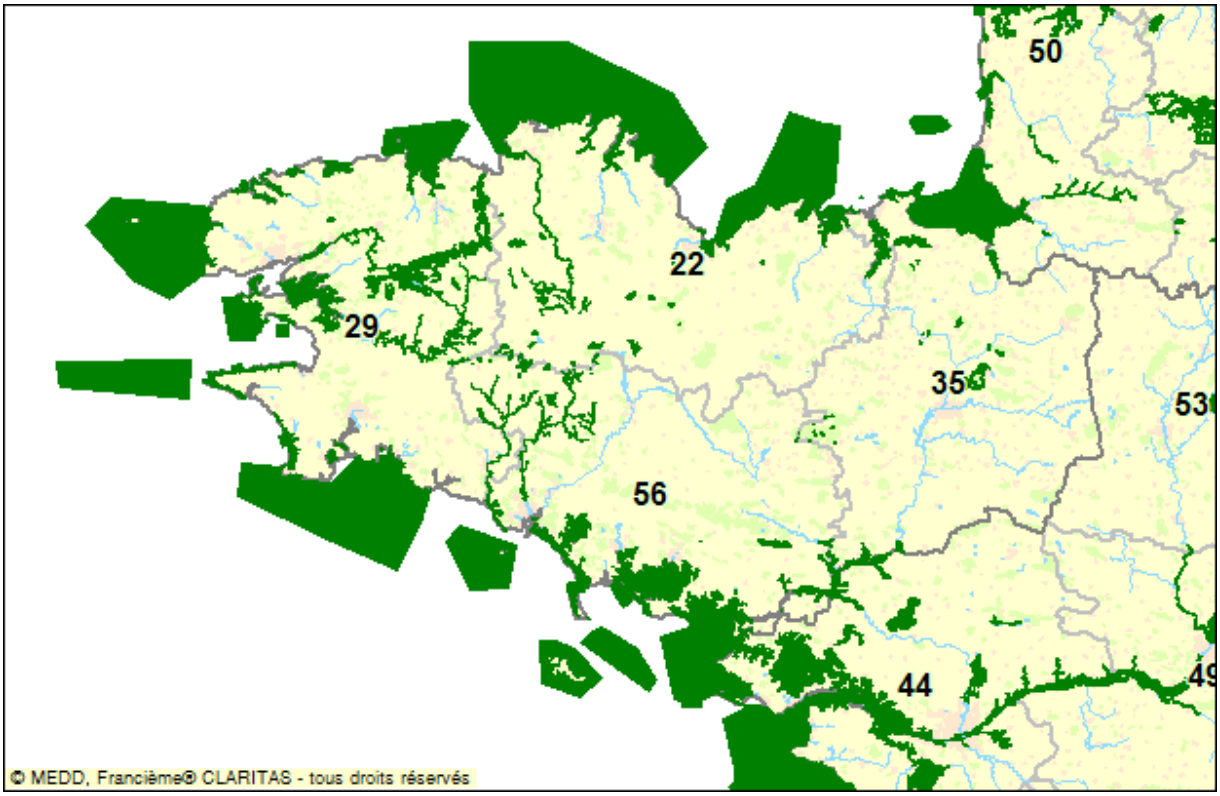
Marsouin commun : Directive Habitats-Faune-Flore annexes II et IV - Règlement communautaire CITES annexe A - Convention de Berne annexe II - Convention de Barcelone annexe II - Convention de Bonn annexe II et accord ASCOBANS - Liste nationale des mammifères marins protégés article 1 - Liste rouge des espèces menacées en France.
Requin pèlerin : Liste rouge mondiale de l'UICN - Règlement communautaire CITES annexe B - CITES (Convention de Washington) annexe II - Convention OSPAR annexe V - Convention de Barcelone annexe II - Convention de Berne annexe II.

FISH
Requin, Ange de mer commun, Aiguillat commun, Emissole tachetée, Emissole lisse, Peau bleu, Requin hâ : Liste rouge mondiale de l'UICN - Convention OSPAR [sauf émissoles, Peau bleu, Requin hâ] - Convention de Berne Annexe III [sauf Aiguillat commun, émissoles et Requin hâ]- Convention de Barcelone Annexe III [sauf Aiguillat commun, émissoles et Requin hâ].
Raies et pocheteaux : aucune protection pour la Raie brunette - Liste rouge mondiale de l'UICN [Raie blanche, Pocheteau gris, Raie douce, Raie bouclée] - Convention OSPAR.

TURTLES
Tortues : Liste rouge mondiale de l'UICN pour Caouanne - Liste rouge nationale - Directive Habitats-Faune-Flore annexe IV - Règlement communautaire CITES annexe A - Convention de Berne annexe II - Convention de Barcelone annexe II - Convention de Bonn annexes I et II - Convention OSPAR annexe V - Liste nationale tortues marines protégées article 1 - Caouanne : Cette espèce a été retirée de la liste de référence française des espèces justifiant la désignation de sites Natura 2000 (espèce rare en France).

APPENDIX 7. Natura2000 areas

Natura2000 areas in Brittany



The main sites the purse seiners are concerned with are the sites of Glenan archipel, the Ouessant-Molène, Chaussée de Sein, Roches de Penmarc'h and Groix island, and Crozon coasts.

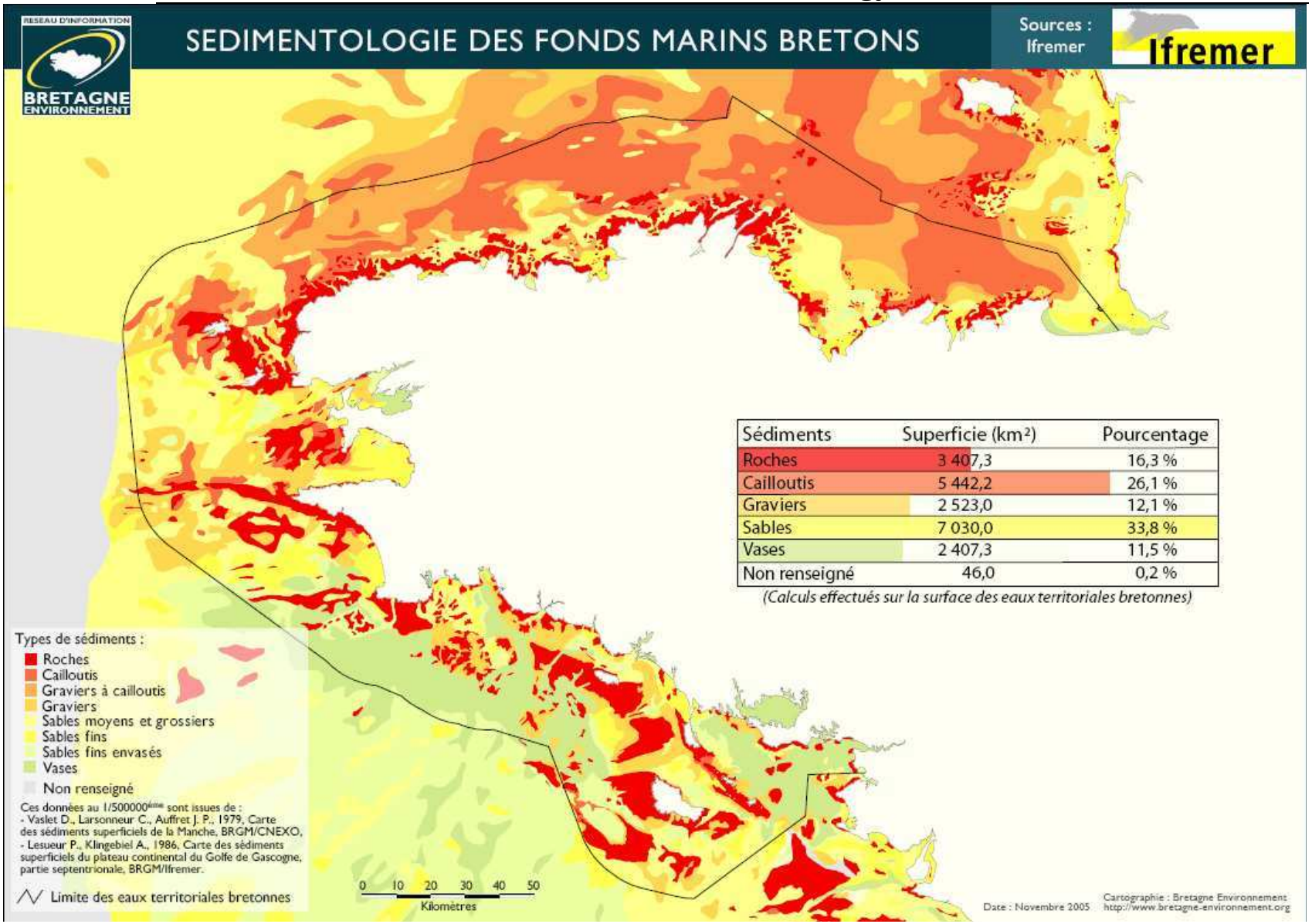
For every sites, the remarkable, very important or important species and habitats are difined
http://natura2000.environnement.gouv.fr/regions/REGFR52.html

APPENDIX 8. List of vessels

The following list presents the vessels members of the Association des bolincheurs de Bretagne, client of the fishery assessment, and owner of a purse seine license for 2010.(in blue the new in 2010)

Q/M	Imm.	Navire	L.H.T	KW	Nom	Prénom
CC	176298	LYCIA	15,86	287	BEVIN	STEPHANE
CC	683666	ETOILE POLAIRE III	15,02	242	BOURHIS	RAYMOND
CC	911295	BERCEAU DE L'OCEAN	15,52	180	GOUYEC	DIDIER
CC	635474	MAGRITIC	14,30	147	LAPPART	GAETAN
CC	661051	BARR A VEL	16,38	220	LE BOURHIS	JEAN
CC	544907	VAG A LAMM	15,64	159	LE GLOANEC	DIDIER
CC	899957	JIMORHAN	16,95	315	MILLOUR	MICHEL
CC	899971	WAR RAOG IV	17	360	SAS DE LA BAIE/JEANTET	HERVE
CC	898415	WAR RAOG III	19	294	SAS WARAOG/JEANTET	HERVE
DZ	176257	REINE DE L'ARVOR II	14,71	162	LASTENNET	RENE
LO	922633	TXIMISTARRI II	15,9	280	SARL SCAPECHE / PERIER	DOMINIQUE
GV	642406	LESK NE DA LAR	16,5	285	COIC	LAURENT
GV	385555	LISANAIS	13,92	281	GAONARC'H	JEAN LUC
GV	317545	STEREDEN AR MOOR	15,64	305	LELAY	YVAN
GV	898402	FACE A LA MER	14,98	159	LE LOUPP-CARADEC	DOMINIQUE
GV	302887	NOTRE DAME DE LA JOIE	14,05	158	LE TANTER	GWENAEL
GV	176269	EN AVANT	15,50	158	SARL EN AVANT/ROLLAND	HUBERT
GV	716633	BASSE GOUACH	15,90	236	SARL ETOILE D'ARVOR /BOUSSARD	PASCAL
GV	365109	L'AIGLE DES MERS	15,40	169	SCUILLER	CHRISTIAN
GV	329018	KAN AR MOOR	16,1	176	SCUILLER	GILLES
GV	317522	ETENDARD	15,46	118	SCUILLER	ROBERT

APPENDIX 9. Marine sedimentology



APPENDIX 10. Table of figures

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