

FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY:	Chilean Anchovy (<i>Engraulis ringens</i>) Regions XV-IV
LOCATION:	Chile
DATE OF REPORT:	Jan 2012
ASSESSOR:	Sam Peacock

Global Trust Certification Ltd, 3rd Floor, Block 3, Quayside Business Park, Mill Street, Dundalk, Co. Louth, Ireland Tel: 042 932 0912 Fax 042 938 6864

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME			
Name: Corpesca S.A; Camanchaca; Orizon S.A; Lota Protein S.A.; Pesquera Itata & El Golfo			
Address:			
Country: Chile		Zip:	
Tel. No:		Fax. No:	
Email address:		Applicant Code	IFFO 125; IFFO 126; IFFO 128; IFFO 130; IFFO 132
Key Contact:		Title:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification Ltd.	
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-certification
Sam Peacock	Mike Platt	20	Initial Fishery Assessment Report
Assessment Period	13 th May – 6 th Jan 2012		
Scope Details			
1. Scope of Assessment	IFFO RS approval of fishery.		
2. Fishery	Chilean Anchovy (<i>Engraulis ringens</i>)		
3. Fishery Location	Chile		
4. Fishery Method	Purse Seine gear		
Outcome of Assessment			
5. Overall Fishery Compliance Rating	Medium-High for Region XV-IV ,(on condition of improving by-catch assessment)		
6. Sub Components of Low Compliance	See section 5		
7. Information deficiency	Largely by-catch related.		

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<p>8. Peer Review Evaluation</p>	<p>The management system for the Chilean anchoveta fishery, and the implementation, monitoring and control activities for enforcement of legislation are solid and indicative of an organized fishery capable of managing fishery resources sustainably. The stock assessment activities carried out for its management are adequate in Regions XV-IV.</p> <p>The Chileans operate a no discard policy for by-catch and all the catch is therefore landed. At landing the catch is sampled and weighted accordingly by Sernapesca. However, information on bycatch species is not available as it treated as an “other” complex (grouped together). An improvement of this practice, by collecting species specific data, could result in a better assessment of the bycatch impact of this fishery on the ecosystem.</p>
<p>9. Recommendation</p>	<p>Approve the anchovy stock in Regions XV-IV (on condition of improving by-catch assessment).</p>

<p>2. QUALITY OF INFORMATION</p>
<p>Detailed bycatch information is not available.</p>
<p>3. COMPLIANCE LEVEL ACHIEVED</p>
<p>Medium-High for Region XV-IV (on condition of improving by-catch assessment)</p>
<p>Recommendation</p>
<p>Approve the anchovy stock in Region XV-IV (on condition of improving by-catch assessment)</p>
<p>4. GUIDANCE FOR ONSITE ASSESSMENT</p>
<p>Based on HIGH compliance findings</p>
<ul style="list-style-type: none"> On site Assessment shall verify whether SUBPESCA has or is developing a new framework/plan to manage and control the artisanal effort effectively.
<p>Based on MEDIUM compliance findings</p>
<ul style="list-style-type: none"> By-catch from the Chilean anchovy fishery is not formally taken into account by the management organization. The Chileans operate a no discard policy for by-catch and all the catch is therefore landed. At landing the catch is sampled and weighed by SERNAPESCA; however, by-catch species are not recorded, representing a significant data shortfall. An improvement of this practice, by collecting species specific data, would allow a more thorough assessment of the impact of this fishery on the ecosystem. There is little information describing the scientific process used by IFOP to generate recommendations to SUBPESCA, and the recommendations themselves appear not to be publically available. Greater transparency in the methodology used to calculate quotas and make broader management decisions would allow a more thorough assessment. <p>On site assessors should review the following information on site.</p> <ul style="list-style-type: none"> Verify what information fishermen are required to submit in relation to landings of target and non-target species to SERNAPESCA, and what other information is collected when catches are landed. Ask and record how fisherman deal with birds, sea mammals, turtles, sharks and other large animals which enter/get caught in the purse seining net. Verify whether any type of management plan exists to address the by-catch issue in this fishery.

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- Determine whether the process and results of IFOP analyses are publically available.

Based on LOW compliance findings

5. ASSESSMENT DETERMINATION

The stock in Regions XV-IV is recommended to be Approved against the IFFO RS standard.

HIGH Compliance

A1, A3, B2, D1, D2, E1, E2.

MEDIUM Compliance

A2, B1, C1, D3.

LOW Compliance

SUMMARY OF LEVEL OF COMPLIANCE					
	The Management Framework and Procedures	Stock assessment procedures and management advice	Precautionary approach	Management measures	Implementation
Legal and administrative basis	A1				
Fisheries management should be concerned with the whole stock unit	A2				
Management actions should be scientifically based	A3				
Research in support of fisheries conservation and management should exist		B1			
Best scientific evidence available should be taken into account when designing conservation and management measures		B2			
The precautionary approach is applied in the formulation of management plans			C1		
The level of fishing permitted should be set according to management advice given by research organisations				D1	
Where excess fishing capacity exist, mechanisms should be in established to reduced capacity				D2	
Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment				D3	
A framework for sanctions of violation of laws and regulations should be efficiently exists					E1
A management system for fisheries control and enforcement should be established					E2

KEY: Low Compliance: Medium Compliance: High Compliance:

NOTE: This report reviews solely the Anchovy (*Engraulis ringens*) fishery in Chile, Regions XV to II.

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6. RATIONALE OF THE ASSESSMENT OUTCOME		
A. THE MANAGEMENT FRAMEWORK AND PROCEDURE		
LEVEL OF COMPLIANCE		
<i>A1. The management of the fishery must include a legal and administrative basis for the implementation of measures and controls to support the conservation of the fishery.</i>		
LOW	An administrative framework that ensures an efficient management of the fishery for its conservation is not established.	
MEDIUM	An administrative framework that ensures an efficient management of the fishery for its conservation is somehow established, but there is evidence of not being efficient to ensure the conservation of the stock.	
HIGH	A legal and administrative framework that ensures an efficient management of the fishery for its conservation is established and works efficiently toward the conservation of the stock.	
<p>Determination: <i>A legal and administrative framework that ensures an efficient management of the fishery for its conservation is established and works efficiently toward the conservation of the stock.</i></p> <p>Institutional framework</p> <p>The Chilean institutional structure governing the fisheries and aquaculture sector centers around three key organizations, with a number of other institutions providing additional research and enforcement support (such as the Navy). These three organizations have a degree of operational independence while performing a crucial and interlinked function within the broad institutional framework.</p> <ul style="list-style-type: none"> • The Subsecretariat de Pesca (Undersecretariat of Fisheries, SUBPESCA or SSP) is positioned within the Chilean Ministry of Economy, and provides the policy settings and regulatory framework for the domestic management of the sector. It also manages policy direction and provides input into international fisheries issues. • The Servicio Nacional de Pesca (National Fisheries Service, SERNAPESCA) is also based within the Ministry of Economy. It is responsible for executing national fisheries policy, for supervising its enforcement and for ensuring proper application of the legal rules and regulations on fishing. In practice, compliance is checked by Intertek Caleb Brett Chile SA, acting on behalf of SERNAPESCA. • The Instituto de Fomento Pesquero (Fisheries Development Institute, IFOP) is the research arm of the institutional framework. A non-profit organisation created in 1964 under a joint agreement between the Chilean government, the FAO, and the UN Development Program, it is the primary source of scientific advice to the SSP on fisheries and aquaculture agreement issues. Its work includes stock assessment, advising on total allowable catch levels for the wild fisheries, and the environmental and health aspects of aquaculture production. It draws a proportion of its funding from SUBPESCA but also has to compete for funding from a range of public funding sources. <p>Additional management organisations</p> <p>The National Fisheries Council was created by the Fisheries and aquaculture Law 18.892 for the purpose of managing the participation of all stakeholders in the fisheries and aquaculture sector. It is a ruling, advisory and consultative body for matters such as establishing fishing quotas for industry and artisanal fishers, for dealing with Fisheries and Aquaculture plans and Laws as well as for development proposals for small scale fishing. There are also five Zonal Fisheries Councils</p>		HIGH

<p>aimed at contributing to the decentralization of management measures to be taken by authorities, and to enhance regional participation of fisheries and aquaculture stakeholders. They communicate new and amended regulations through regional bulletins and acts published several times a year to fishery stakeholders. Finally, Regional Fisheries Councils are aimed at studying fisheries and aquaculture problems affecting their zones and to propose solutions and management measures to SUBPESCA.</p> <p>Industrial fisheries management</p> <p>The management regime for Chile's industrial fisheries industry has evolved from one based on open access to one based on total allowable catches, where market based instruments are used to allocate and trade quotas in most fisheries. Under the Maximum Catch Limit per Firm (MCLF) system quota shares are allocated to firms, with these quotas being tradable with the sale of the vessel to which the quota is attached. Management regimes differ between fisheries which are over-exploited, recovering or under development.</p> <p>Artisanal fisheries management</p> <p>Artisanal fishers have obtained exclusive access rights over a five mile zone adjacent to the Chilean coastline, and have negotiated with the industrial fisheries to obtain important shares of fisheries that straddle this zone through the Artisanal Extraction System (AES). Of particular significance, artisanal fishers associations are allocated territorial rights over specified regions of seabed, which appears to have resulted in population recovery in several benthic invertebrate species.</p> <p>References: R1 to R6.</p>	
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LEVEL OF COMPLIANCE	
<i>A2. Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account fishery removals and the biology of the species.</i>	
LOW	Fisheries management is not concerned with the whole stock unit over its entire area of distribution and do not take into account any of the matters listed in 'A1'.
MEDIUM	Fisheries management is concerned with matters listed in 'A1' but not entirely. Fisheries, in relation to 'A1' statement, should improve to ensure the long term conservation of the marine resource.
HIGH	Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account: <ul style="list-style-type: none"> • All fishery removals • The biology of the species

<p>Determination: <i>Fisheries management is concerned with the whole stock unit over its entire area of distribution and take into account the biology of the species but not all fishery removals (i.e. bycatch is not taken into account).</i></p> <p>There are three different anchovy (<i>Engraulis ringens</i>) stocks off the Chilean coast:</p> <ul style="list-style-type: none"> • Southern Peru/Chilean Northern Regions XV-I-II, managed separately by both Peru and Chile. • Chilean Regions III-IV, managed by Chile • Chilean Regions V-X, also managed by Chile. <p>Anchovy stock assessment is conducted separately for each fishery unit, reflecting the current scientific understanding that each stock is an independent population unit. Quotas are issued at the Regional level. Data from annual stock assessments are used to inform management decision</p>	MEDIUM
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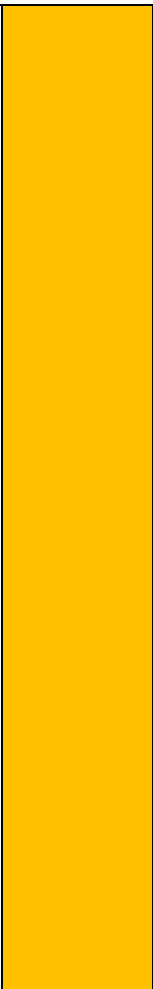
making, and the conclusions of this process are made available in June/July. The TAC for the subsequent year is then preliminarily set, with scope for adjustment. The 2012 quotas have therefore been set primarily in reference to 2010 survey data, but may be updated in response to the results of the 2011 survey when these become available.

IFOP is the main organization that provides the necessary scientific support for the sector. Universities and technological institutions such as the School of Oceanographic and Natural Sciences at Universidad of Concepcion are also engaged independently or participate in public bidding to undertake research work ordered by the State on a case by case basis only. IFOP has a regionalized structure with research stations situated the length of Chile. IFOP also owns and operates an oceanic research vessel (the *Abate Molina*), and rents others as necessary to carry out basic work on population dynamics, population surveys, etc. Artisanal vessels are utilized in shallower waters closer to coast.

There is a no discard policy in place for Chilean fisheries, meaning all bycatch is landed, but only target species appear to be sampled by SERNAPESCA. Information on the species composition and volume of bycatch is therefore likely to be unavailable for management and research organisations, preventing the ecosystem-wide impacts of fisheries from being factored into management regimes.

The management of the Region XV-II and III-IV stocks as separate populations assumes minimal interaction between them, and with other anchovy populations. If evidence of significant interactions or interdependence arises, it may become unreasonable to manage the stocks separately.

References: R1, R5-R10.



LEVEL OF COMPLIANCE

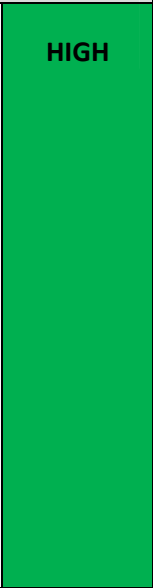
A3. Management actions should be based on long-term conservation objectives

LOW	Management actions are not based on long term management objectives.
MEDIUM	Management actions are based on long term management objectives. However the actions are not scientifically formulated.
HIGH	Management actions are based on long term management objectives, and actions are science based.

Determination: *Management actions are based on long term management objectives, and actions are science based.*

Management actions generally aim at keeping spawning biomass at 60% of unfished levels to sustain the reproductive viability of the stock, according to SUBPESCA technical reports. Under the Chilean General Law for Fisheries and Aquaculture, “the provisions of the Act shall subject the preservation of aquatic resources, and all extractive fishing, aquaculture, research and sport activities, which takes place in inland waters, internal waters, territorial sea or exclusive economic zone of Chile in accordance to Chilean laws and its signed international treaties”. The Fisheries Research Fund under the Ministry of Economy is to finance research projects in aquaculture and fisheries, providing for the adoption of management measures of fisheries and aquaculture activities, which aim at the conservation of aquatic resources, considering both the biological and socio-economic aspects of fisheries.

References: R8-R11.



B. STOCK ASSESSMENT PROCEDURES AND MANAGEMENT ADVICE		
LEVEL OF COMPLIANCE		
<i>B1. Research in support of fisheries conservation and management should exist.</i>		
LOW	Research to support the conservation and management of the stock, non-target species and physical environment does not exist	
MEDIUM	Research to support the conservation and the management of the stock, non-target species and physical environment exists, however research programmes could be significantly improved to decrease scientific advice uncertainty.	
HIGH	Research to support the conservation and the management of the stock, non-target species and physical environment exist, and existent research is considered most adequate for the long term conservation of the target, non-target species and the physical environment	
<p>Determination: <i>Research to support the conservation and the management of the stocks exist, and existent research is considered adequate for long term conservation. However, research on the effects of the fishery on non-target species appears to be lacking. Additionally, greater transparency in the methodology used to calculate quotas and make broader management decisions would allow a more thorough assessment.</i></p> <p>REGIONS XV-I-II</p> <p>Spawning biomass is estimated annually using the Egg Production Method (EPM) and acoustic surveys (although in 2010 the EPM study was not conducted due to budgetary restraints). The spawning biomass estimates showed high values between 2004 and 2006 (from 757,000 to 970,000 t), and then decreased between 2007 and 2009, with biomass approaching 200,000 t.</p> <p>The Undersecretary of Fisheries annually requests a report from IFOP on the "Status Research and Evaluation Operational Strategies and Spanish Sardine Anchovy XV, I and II Regions". This project utilises the information from several sources, including the above surveys, to make an indirect assessment of the stock in order to establish the resource assessment and recommend a total allowable catch (TAC).</p> <p>REGIONS III & IV</p> <p>An annual hydroacoustic assessment of Regions III and IV has been conducted since 2006. IFOP conducted the fifth year of the project between the 5th and 26th February 2010. The total abundance of anchovy estimated for 2010 in the surveyed area was 8 billion individuals, the lowest of the series 2006-2010, with a 10.1% decrease from 2009. However, the total biomass increased by 51% compared to 2009, due to the presence of an increased proportion of adults, as demonstrated by the length structure of the population.</p> <p>The biological information of the stock of anchovy fishing in Regions III and IV is incorporated into a structured model which considers biological and fishery information length and mean weight of individuals, the CPUE in the period 1986-2009, the rate of live biomass from 2006 to 2010 (as a relative index of total biomass of anchovy and 1 March each year) and landings from 1985 to 2010 (assuming a landing of 47,000 tonnes 2010). Thus, the model utilises estimates of stock biomass (total biomass, spawning stock and recruits), together with the levels of fishing mortality and exploitation rates, among other indicators.</p> <p>Research visibility</p> <p>The original IFOP advice to SUBPESCA was not available for review by the assessment team, and so in section D1, comparisons between scientific recommendations and final quotas are based on the</p>		MEDIUM

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SUBPESCA reports. While greater transparency in the process of converting IFOP reports into SUBPESCA reports would be useful, the SUBPESCA reports contain sufficient technical detail to convince the assessment team that they are equivalent to the original conclusions.		
Reference R 19		
LEVEL OF COMPLIANCE		
<i>B2. Best scientific evidence available should be taken into account when designing conservation and management measures.</i>		
LOW	Scientific advice is not taken into account when designing conservation and management measures.	
MEDIUM	Scientific advice is taken into account, when designing conservation and management measures. However some areas of discrepancy are identified that could have a significant impact in the long term conservation of the marine environment.	
HIGH	Scientific advice is taken into account, when designing conservation and management measures, in a comprehensive manner.	
<p>Determination: <i>Scientific advice seems to be taken into account when designing conservation and management measures, including a feedback system which ensures future research is prioritised according to the information needs of management organisations.</i></p> <p>Fisheries research is largely funded by the Fishery Research Fund (FIP), although money is also available from other non-specific Government funds. Research results from the FIP form the basis of regulations developed by the administration. Also involved in the process are the National Fisheries Council, the National Oceanographic Council, experts in the fishing field (including 2 from the university sector), and representatives of producers' associations.</p> <p>Each year, the Zonal and Regional Fisheries Councils give their suggestions for the annual programme of fishery and aquaculture research, including their priorities. With this information SUBPESCA proposes the annual programme of Fishery Research to the National Fisheries Council which gives the final approval.</p> <p>Research is sometimes constrained by funding. Importance is given to economic utility when competing research proposals are evaluated. It is not considered desirable for the State to maintain large and expensive research infrastructure, so joint public-private co-operation in research is very important.</p> <p>References: R8-R10, R13, R18</p>		HIGH

C. THE PRECAUTIONARY APPROACH	
LEVEL OF COMPLIANCE	
<i>C1. The precautionary approach is applied in the formulation of management plans.</i>	
LOW	The precautionary approach is not applied in the formulation of management plans.
MEDIUM	The precautionary approach is applied, however not all uncertainties are taken into account.
HIGH	The precautionary approach is applied, taking into account uncertainties relating to the dynamic of fish population (recruitment, mortality, growth and fecundity), and the impact of the fishing activities, such as discards and by-catch of non-target species as well as on the physical environment (Habitats).
<p>Determination: <i>The precautionary approach is applied in management plans for the target stock; however not all uncertainties are taken into account.</i></p> <p>The biological equilibrium reference point for both stocks has been set to prevent the spawning stock from decreasing to less than 60% of that which would exist in the absence of fishing. In other words, it means that the stock should be exploited keeping at least 60% of the egg production in the long term (10-year period).</p> <p>In addition, given the different sources of uncertainty and high fluctuations due to environmental conditions, management measures aim to ensure that the risk of failing to reach the resource conservation objective in the long term should not exceed 10%.</p> <p>References: R8-R10.</p>	
MEDIUM	

D. MANAGEMENT MEASURES	
LEVEL OF COMPLIANCE	
<i>D1. The level of fishing permitted should be set according to management advice given by research organisations.</i>	
LOW	The level of fishing permitted is not set according to management advice given by research organisations.
MEDIUM	The level of fishing permitted is higher than management advice given by research organisations. However, the difference is not considered to have a significant impact of the sustainability of the stock
HIGH	The level of fishing permitted is set according to management advice given by research organisations.
<p>Determination: <i>The level of fishing in 2012 has been set according to the advice of scientific organisations, and in the case of regions XII-I-II substantially below the advice.</i></p> <p>Once SUBPESCA receives IFOP’s scientific reports, it writes its own technical report, summarising the status of the fishery and issuing its own TAC recommendation to the National Fisheries Council, along with a recommendation for the distribution of the quota. SUBPESCA’s reports, along with economic and social considerations, are discussed by the National Fisheries Council, where a final decision is made regarding the quota level and its distribution. Finally, the Minister of Economy, Development and Reconstruction proceeds to sign the TACs for each fishery unit and its distribution, in accordance with the Fisheries and Aquaculture Law.</p> <p>The TAC for the anchovy fishery is split to accommodate commercial and research purposes, and the commercial share is subdivided to accommodate the industrial and artisanal sectors. TACs are then allocated in several periods throughout the fishing season taking into account the seasonality of the catch.</p> <p>Regions XII-I-II</p> <p>In 2011 the fishing industry did not agree with the scientific advice of a maximum quota of 500,000t. In cases of TAC dispute the industry used to have the right not accept the TAC, and according to Chilean regulations in these cases a provisional TAC is set at 80% of the previous year.</p>	
HIGH	

In 2011 this resulted in a 1million tonnes TAC being agreed.

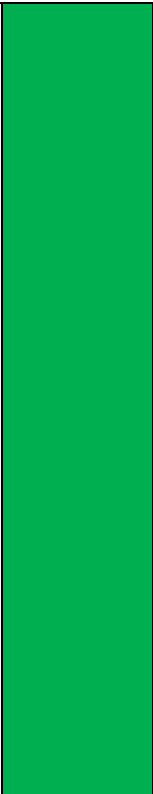
The 2010 survey, used to inform 2012 quotas, was conducted using a preliminary methodology and resulted in the recommendation a TAC of 1.35 million tonnes for 2012. Citing the preliminary nature of the research methodology, SUBPESCA recommended a TAC of 800,000t for 2012, which has since been adopted as the preliminary TAC for this year. It is subject to change only in the light of the results of the 2011 surveys.

As SUBPESCA recommended a substantially higher TAC for 2012 than the previous year, Global Trust commissioned an independent review to ensure the new survey methods are credible and meet international standards. The independent reviewer is an internationally respected scientist with over 40 years of experience of the stock assessment mechanics of pelagic species. His determination is that the acoustic approach did use sound scientific methods and that the increase in recommended TAC from 2011 to 2012 was justified.

Regions III & IV

In 2011 the TAC for this region was set at 84,000t despite the scientific advice recommending a quota no greater than 60,000t, for similar reasons to those described above. However, the 2012 preliminary quota has been set at 60,000t, in line with this year’s scientific advice.

References: R1, R5-6, R8-10, R13, R19



LEVEL OF COMPLIANCE

D2. Where excess fishing capacity exist, mechanisms should be in established to reduced capacity to allow for the recovery of the stock to sustainable levels.

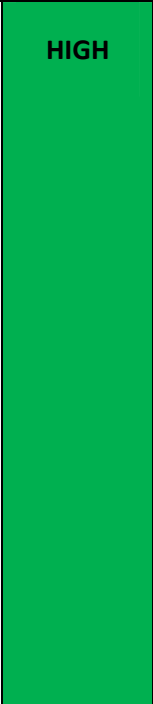
LOW	Mechanisms to allow for recovery of the stock to sustainable levels are not established.
MEDIUM	Mechanisms to allow for recovery of the stock to sustainable levels are somehow established. However there is no evidence of the efficiency of the methods used.
HIGH	Mechanisms are established to reduce capacity to allow for the recovery of the stock to sustainable levels and there are evidences of recovery.

Determination: *Mechanisms are established to reduce capacity to allow for the recovery of the stock to sustainable levels and there are evidences of capacity reduction. On site Assessment shall verify whether SUBPESCA has or is developing a new framework/plan to manage and control the artisanal effort effectively.*

In 1985, the high demand for fishing permits to work in pelagic fisheries forced SUBPESCA to regulate access to the fisheries, freeze the size of the fleet and the related fishing power and refuse new permit. All pelagic fisheries were declared to be fully exploited a definition that had not been used before in Chilean fisheries.

In 2001 a new management scheme named Maximum Catch Limit per Firm (MCLF) was established, which is applicable to fully exploited fisheries. With the application of the MCLF management system, a high proportion of the most important Chilean fisheries became subject to a form of Individual Transferable Quota (ITQ) system. In this, whenever a firm wants to sell a part of its fishing quota, that share is linked to the corresponding vessels and their respective licenses. The MCLF regime has caused a major reduction in fishing capacity in all regulated fisheries (without State intervention) and has increased the profitability of the industrial sector.

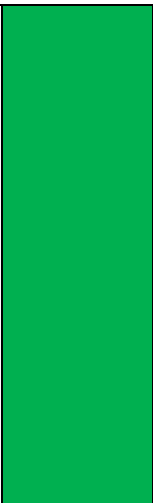
Artisanal fishers are registered on the National Registry for Artisanal Fishermen (NRAF) in the



particular area they live. This program serves to control their number per Regional Area. Artisanal fishers are allocated exclusive fishing rights in the first five miles contiguous to the coastline and only under exceptional and regulated conditions can industrial fishing be authorized in these areas. In general terms, artisanal fisheries are granted free access. This effectively open and exclusive access for the artisanal sector within the five mile zone has resulted in the overexploitation of a number of important coastal fisheries.

Although the artisanal sector exceeds its share of the TAC in some years, industrial catches almost never reach their quota as the resource is mainly distributed within the exclusively artisanal zone; however this does increase the importance of effective artisanal effort control in the long-term management of the fishery.

References: R1, R8-R10.



LEVEL OF COMPLIANCE

D3. Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.

LOW	There are no management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment.
MEDIUM	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. However it is not science based.
HIGH	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. Measures are based on scientific information.

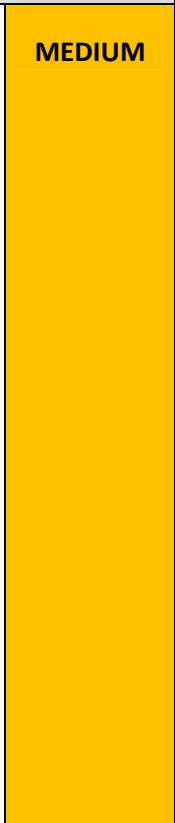
Determination: *This fishery has virtually no direct negative impact on the physical environment due to the nature of the fishing gear. There are management measures to prevent the impact of the fishing methods and fishing practices on some non-target species. However, very little information is available to assess the impact of fishery by-catch. Onsite assessment shall verify the type of by-catch data collected by SERNAPESCA when fishing vessels land their catches.*

Usually deployed in the upper levels of the water column, purse seine gear has virtually no impact on the benthic habitat.

The National Action Plan for the Conservation of Sharks, approved by the Government of Chile in 2006, includes among its objectives to seek full utilization of sharks caught and detained. For compliance with that order, Chile set a target to abolish the "finning" of sharks, leading to the landing of the entire animal. A 1993 Regulation protects sea turtles, and reports suggest that marine mammals are rarely caught in Chilean nets.

SERNAPESCA holds the landing records of each fishing vessel but these reports are not publicly available, and so it is difficult to verify how frequently large marine animals are captured. As previously noted, the lack of information on by-catch represents a considerable gap in knowledge, and severely limits what conclusions can be reached about the impact of this fishery on the marine ecosystem as a whole.

References: R5, R6, R14-R17.



E. IMPLEMENTATION

LEVEL OF COMPLIANCE

E1. There should be a framework for sanctions of violation of Laws and regulations.

LOW	A framework for sanctions of violation of Laws and regulations do not efficiently exist.
MEDIUM	A framework for sanctions of violation of Laws and regulations do exist but do not work efficiently.

HIGH	A framework for sanctions of violation of Laws and regulations exists and is proven to be efficient.	HIGH
<p>Determination: <i>A framework for sanctions of violation of Laws and regulations exists and is proven to be efficient.</i></p> <p>Fishery sanctions, crimes and expirations are codified in the law 18.892 which was enacted in December 1989. The law resulted in the creation of the dual structure of SUBPESCA and SERNAPESCA. Formerly, sanctions were dealt with by local Police judges at a communal level. Under the new law, these matters go before Civil Judges in normal Civil courts, a fact that assigns higher importance to these issues.</p> <p>In regards to discards and overfishing the assigned quotas, Law 19.713 states that any owner or group of owners who land and do not report their catches will be subjected to a 30% reduction on their maximum catch limit during that fishery calendar year. If the owner or group of owners has exhausted their maximum catch limit for that year, they will be deducted the following year. Owners of vessels which fish without a license, or fish in unauthorised areas, are subject to a quota reduction of 10%.</p> <p>Crimes are penalized with proportional pecuniary payments and can be imposed by Police, Marine personnel and SERNAPESCA. In 2005 a national action plan was approved with the aim of preventing, deterring and eliminating illegal, unreported and unregulated fishing.</p> <p>References: R1, R12.</p>		
LEVEL OF COMPLIANCE		
<i>E2. A management system for fisheries control and enforcement should be established.</i>		
LOW	A management system for fisheries control and enforcement is not established.	HIGH
MEDIUM	A management system for fisheries control and enforcement is established but do not work efficiently.	
HIGH	A management system for fisheries control and enforcement is established and work efficiently.	
<p>Determination: <i>A management system for fisheries control and enforcement is established and work efficiently.</i></p> <p>At present there is 100% Vessel Monitoring System (VMS) monitoring of catches in the industrial fleet and the number of violations that have been prosecuted by the service has declined from 150-200 per year in the late 1990s to three or four per year now. SERNAPESCA recruited 250 staff in 2009 to further improve monitoring and surveillance of catches, accompanied by a 22% budget increase.</p> <p>In the Artisanal fishery, SERNAPESCA requires data on landings per boat, per species and per fishing ground. This information is usually supplied by fishers and is the base on which historic fishing rights are established, raising concerns over the incentives for fishers to supply accurate data. From 2005 onwards, the AES has incorporated certifying officers that have to duly register catches per boat. These certifying officers are members of consulting companies that have won SERNAPESCA's public bid to carry out this mission.</p> <p>In practice, compliance is checked by Intertek Caleb Brett Chile SA, acting on behalf of SERNAPESCA.</p> <p>References: R1.</p>		HIGH
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