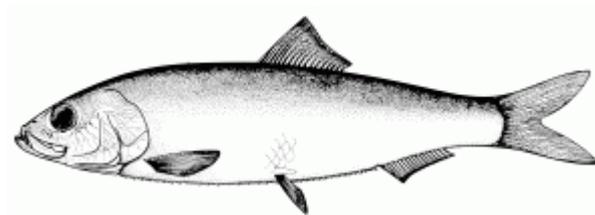


FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF
FISHMEAL AND FISH OIL



R1

FISHERY:	Common Sardine (<i>Clupea bentincki</i>)
LOCATION:	Chile – Small Pelagic Fishery Regions V – X
DATE OF REPORT:	June 2017
ASSESSOR:	Deirdre Hoare

1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME			
Name: Corpesca S.A; Camanchaca; Orizon S.A; Lota Protein S.A.; Blumar Seafoods			
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
Deirdre Hoare	Sam Dignan	2	Surveillance Yr 2
Assessment Period	2016 – 2017		
Scope Details			
1. Scope of Assessment		IFFO Global Standard for Responsible Supply – Issue 1	
2. Fishery		Common sardine (<i>Clupea bentincki</i> Synonym: <i>Strangomera bentincky</i>)	
3. Fishery Location		Chile – Small Pelagic Fishery Regions V-X	
4. Fishery Method		Purse seine	
Outcome of Assessment			
5. Overall Fishery Compliance Rating		Medium / High	
6. Sub Components of Low Compliance		None	
7. Information deficiency		None	
8. Peer Review Evaluation		Maintain approval	
9. Recommendation		Maintain approval	

2. QUALITY OF INFORMATION
Good; primarily government publications.
3. COMPLIANCE LEVEL ACHIEVED
Medium
Recommendation
Approve fishery
4. GUIDANCE FOR ONSITE ASSESSMENT
Based on HIGH compliance findings
Based on MEDIUM compliance findings
Based on LOW compliance findings
5. ASSESSMENT DETERMINATION
<p>Although there have recently been concerns expressed by scientists in relation to some Chilean small pelagic stocks, the sardine in regions V-X currently appears to be exploited at sustainable levels. As when Chilean fisheries have been assessed previously, the assessment team found a fully developed legal and administrative system in place which appears to be working towards the effective and sustainable management of the resource.</p> <p>This year it was again found that stock assessment reports are not freely available on-line to the assessment team which hindered the assessment of this species. The new management plan has been put in place with specific objectives and action plans. These include management measures to minimise the impacts of the fishery on non-target species, monitoring will continue to see if these actions are implemented.</p>
HIGH Compliance
A1, A2, A3, B2, C1, D1, D3, E1
MEDIUM Compliance
B1, D2, E2
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:

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><i>Determination: The 2015 reassessment described an extensive and robust fisheries management framework, which includes specific commitments to ensuring the sustainability of marine stocks. There have been no significant changes in the framework or fishery management organisations since that time.</i></p> <p>Primary institutional framework</p> <p>The Chilean institutional structure governing the fisheries and aquaculture sector centres around three key organisations, 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. • The Servicio Nacional de Pesca (National Fisheries Service, SERNAPESCA) is also based within the Ministry of Economy. • The Instituto de Fomento Pesquero (Fisheries Development Institute, IFOP) is the research arm of the institutional framework. <p>Fisheries councils</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.</p> <p>Legal instruments</p> <p>Since February 2013, the primary legal instrument for fisheries management in Chile has been Law 20.657 (LGPA).</p> <p>For more details on the fishery management in Chile please refer to the reassessment report.</p> <p>R2, 4-8</p>		H

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><i>Determination: The management unit reflects the biological stock, and the biology of the species is taken into account in the fishery management process. Monitoring of discards has been included in the management plan.</i></p> <p>This assessment focusses exclusively on the common sardine stock in regions V-X. Sardine is managed as a component of the multispecies small pelagic fishery, and in particular in parallel with the region V-X anchovy fishery. It is very difficult for both the industrial and artisanal components of the fishing fleet to catch one species without also catching the other. Although the sardine stock is considered by scientific organisations to be in good condition, one of the main challenges for fishery managers is to exploit the sardine resource without further damaging the anchovy stock, which is considered to be in poor condition.</p> <p>Stock assessments are carried out separately for each management unit. The management units reflect the current best scientific understanding of the biological stocks. Section 3.1.1 of the management plan covers the development and implementation of a discard reduction plan for the fishery and a code of good practice. The biology of the species is taken into account during assessments. IFOP utilises information associated with life history parameters, such as natural mortality, growth and maturity data. These are all factored into the modelling process for predicting potential future harvest rates. Since 2010, a bi-annual model is performed to include data from two surveys (RECLAS in summer and PELACES in autumn), stock vulnerability due to climatic phenomena (e.g. El Niño) and biological characteristics of the species. Updated assessment reports, based in each of the surveys are published (IFOP, 2015b).</p>	

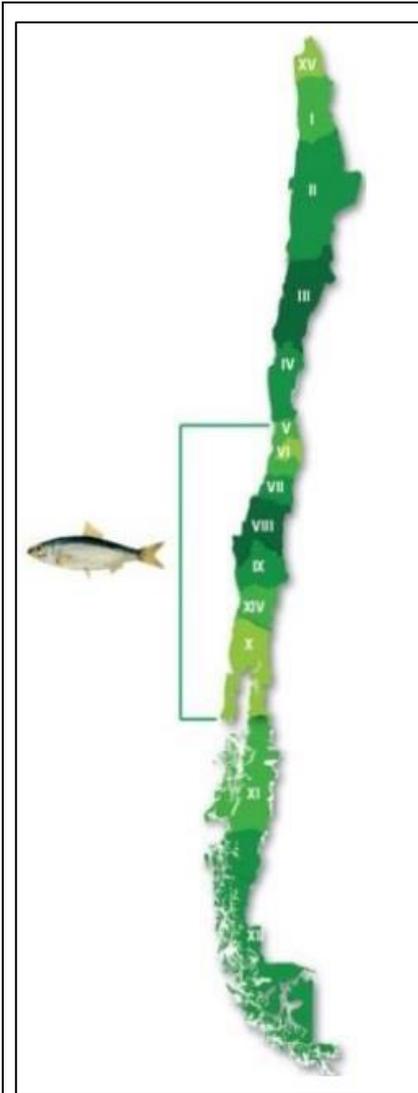


Figure. 1 Map of Chile, indicating the location of administrative regions V to X (R13).

R3

LEVEL OF COMPLIANCE		
<i>A3. Management actions should be based on long-term conservation objectives</i>		
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.	
<p><i>Determination: A management plan based on long term management objectives and science based has been approved by the government and brought into force.</i></p> <p>An explicit management plan has been put in place for the fishery. Article 5 of the LGPA states that the Sub-secretary should determine the Biological Reference points. These have been laid out in the SUBPESCA resolution No:291/2015</p> <p>The LGPA states that all stocks should be exploited around the MSY level, and that the MSY is the objective to be taken into account when quotas are established.</p> <p>Reference points for 2016 are very similar to the 2015 values;</p> <ul style="list-style-type: none"> • Biomass limit reference point B_{lim}: 27.5% of $SSB_0 = 444,500$ tonnes • Biomass target reference point, B_{MSY} proxy: 55% of $SSB_0 = 889,000$ tonnes • Fishing mortality target reference point, F_{MSY} proxy: $F_{60\%} = 0.26$. <p>R3</p>		H

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 and physical environment	
<p><i>Determination: 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 and physical environment. The most recent stock assessment (2016) was not available on-line.</i></p> <p>Fishery-dependent data Fishery-independent data collected from the small pelagic fishery includes total landings and age and size estimates from sampling. Information collected at landing sites and directly from fishing vessels includes location and time of catch, length, weight, sex, and age data, and size frequency distribution data.</p> <p>Indirect assessment is conducted using a statistical catch-at-age model allowing the incorporation of supplementary information, such as SSB, Catch Per Unit of Effort (CPUE), Fishing mortality (F), catch-by-age and year and recruitment indices. Since 2010, a bi-annual model is performed to include data from two surveys (RECLAS in summer and PELACES in autumn), stock vulnerability due to climatic phenomena (e.g. El Niño) and biological characteristics of the species. Two assessment reports, based in each of the surveys are published.</p> <p>Fishery-independent data Several fishery-independent surveys have been, and are still, carried out. These include spawning biomass surveys (2002-2010), summer (“RECLASS”, 2000-present) and autumn (“PELACES” 2003-present) acoustic surveys.</p> <p>The direct hydroacoustic surveys have been conducted biannually since 1999 by means of two cruises: in summer (recruitment period) and in the autumn. As this method does not take into account the stock reproductive dynamics, the assessment of the spawning stock biomass (SSB) of small pelagic fish with partial spawning – as is the case of the common sardine – is conducted through the robust ‘Daily Egg Production Method’ (DEPM). The resulting data allows the stock assessments to be reviewed and the annual quota to be modified in an adaptive way.</p>		M

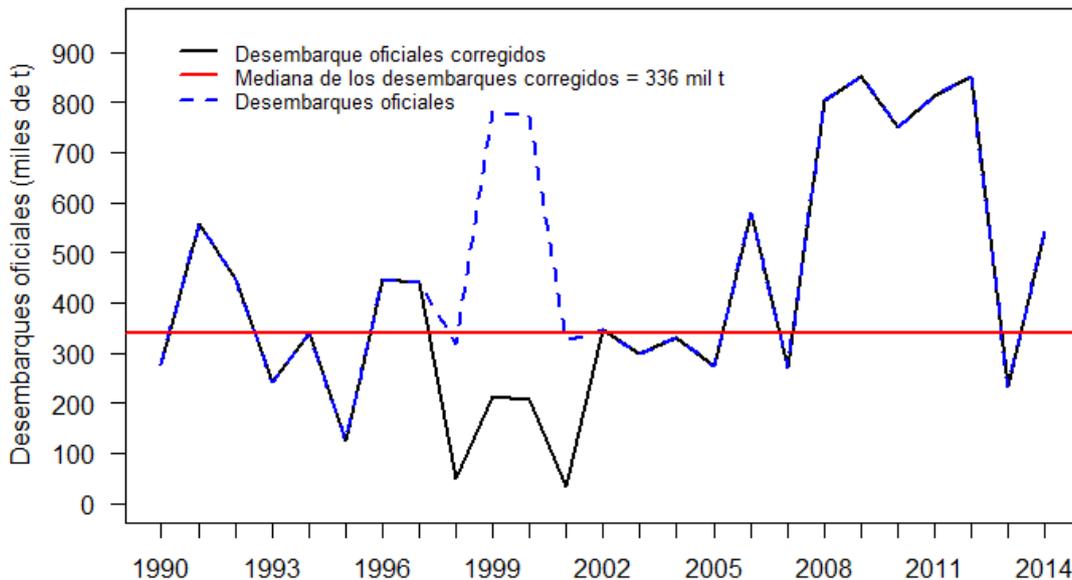


Figure 2. Landings (Desembarques oficiales) of common sardine (sardine común) and anchovy (anchoveta) in the Chilean south-central fishery. Source: IFOP.

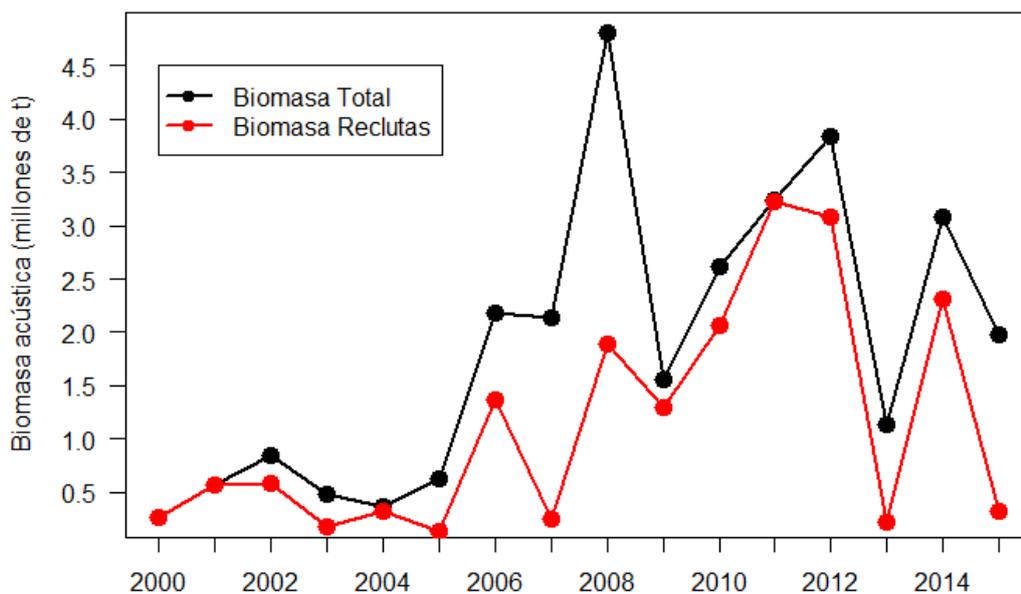


Figure 3. Estimated common sardine total biomass (Biomasa Total) and biomass of recruits (Biomasa Reclutas) 2000 – 2015. From the 2015 stock assessment report.

Ecosystem research

IFOP has a department devoted to Oceanographic and Environmental Research (Depto. Oceanografía y Medio Ambiente (DOMA)). This department is involved in the monitoring and understanding of the effect of natural and anthropogenic fluctuations in the population dynamics of fishery resources and biodiversity. The department has researchers and specialised technicians in the fields of Oceanography, Marine Biology, Marine Chemistry, Marine Ecology, socioeconomics and engineering, divers specialists and samplers.

R4, 10,12

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><i>Determination: Scientific advice is taken into account, when designing conservation and management measures, in a comprehensive manner.</i></p> <p>The main scientific advice for the fishery is the recommendation for the annual TAC, which is given in three stages each year. A pre-season recommendation is followed by an initial in-season recommendation, which makes use of landings data and a January survey. A third, final recommendation is made after a second survey is conducted in June; the results of the two surveys are also used to produce the pre-season TAC estimate for the following year. These three TAC recommendations are made by IFOP to SUBPESCA. For 2017, based on IFOP’s 2016 stock assessment, the CCT-PPP has recommended an initial Total Allowable Catch (captura biologicamente aceptable, CBA) in December 2016 between 218,400 tons and 273,000 tons (CCT-PPP, 2016). The mid-year TAC recommendation (based on the January survey) was not published at the time of this update. SUBPESCA then passes on its own recommendations, which are publically available, to the CNP and SERNAPESCA.</p> <p>Prior to the update of the fishery management legislation in 2013, quota recommendations made by IFOP and SUBPESCA had to be approved by a majority vote in the appropriate fishery council. The update to the LGPA made it mandatory for the management recommendations of SUBPESCA’s scientific/technical advisory boards to be adopted by fishery managers, including with regards to the setting of quotas.</p> <p>The LGPA also states that quotas should be established using MSY as the primary technical parameter.</p> <p>R 11</p>		H

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><i>Determination: A management plan has been put in place for this fishery. The focus of the new plan is the precautionary approach.</i></p> <p>According to Article 1 B of the General Law on Fisheries and Aquaculture (LPGA) which states that "The objective of this law is the conservation and sustainable use of aquatic resources by applying the precautionary approach and ecosystem approach in fisheries regulation and safeguarding the marine ecosystems in which those resources exist. "</p> <p>Similarly, in Article 1 ° C, letter b) states that when adopting conservation and management measures as the precautionary principle must be used, defined as: "i) There should be more caution in the management and conservation of resources when scientific information is uncertain, unreliable or incomplete, and ii) the absence of adequate scientific information, unreliable or incomplete, must not be used as a reason for postponing or failing to take conservation and management measures."</p> <p>Biological reference points (PBR) are established by the Scientific and Technical Committee on Small Pelagic Fisheries and are based on the best available stock assessment. Similarly measures and / or management actions contained in the management plan are binding with the mechanisms and procedures established by the LPGA, ie its provisions are mandatory.</p> <p>The specific objective in relation to sardine is to maintain a spawning biomass equal to 60% of the level if the stock was unexploited, with a risk of failing this to be not more than 10%.</p> <p>R2,3</p>	

H

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: In recent years, TACs have been set in line with the SUBPESCA advice, and have not been exceeded.</p> <p>The level of fishing in the south-central sardine fishery is restricted by annual quotas. Quota recommendations are initially provided by IFOP to the scientific/technical committees of SUBPESCA. These committees in turn make recommendations for the final quota, which according to the LGPA must be adopted by fishery managers. Small percentages are deducted from the total quota for research and non-commercial (i.e. direct human consumption) uses, and the remaining TAC is divided between the industrial and artisanal components of the fleet according to a fixed ratio described in the primary fisheries legislation. As of 2013, this ratio is 22% to the industrial fleet and 78% to the artisanal sector.</p> <p>The management plan details the 2017 sardine quotas:</p> <table border="1"> <tbody> <tr> <td>Total quota:</td> <td>273,000t</td> </tr> <tr> <td>Investigation:</td> <td>180t</td> </tr> <tr> <td>Excess:</td> <td>2,730t</td> </tr> <tr> <td>Human consumption:</td> <td>2,730t</td> </tr> <tr> <td>Remainder:</td> <td>267,360t</td> </tr> <tr> <td>Industrial:</td> <td>58,819t</td> </tr> <tr> <td>Artisanal:</td> <td>208,541t</td> </tr> </tbody> </table> <p>Since 2013, landings have fluctuated drastically, were 278,000 tonnes in 2013, around 530,000 tonnes in 2014 and 435,000 tonnes in 2015, to drop again to 280,000 in 2016. However, the combined TAC has not been exceeded since 2010. For 2016, based on IFOP’s 2015 stock assessment, the CCT-PPP has recommended an initial Total Allowable Catch (captura biologicamente aceptable, CBA) in December 2015 between 227,200 tons and 284,000 tons (Comité Científico Técnico de Pesquerías de Pequeños Pelágicos, CCT-PPP, 2015).</p>		Total quota:	273,000t	Investigation:	180t	Excess:	2,730t	Human consumption:	2,730t	Remainder:	267,360t	Industrial:	58,819t	Artisanal:	208,541t	H
Total quota:	273,000t															
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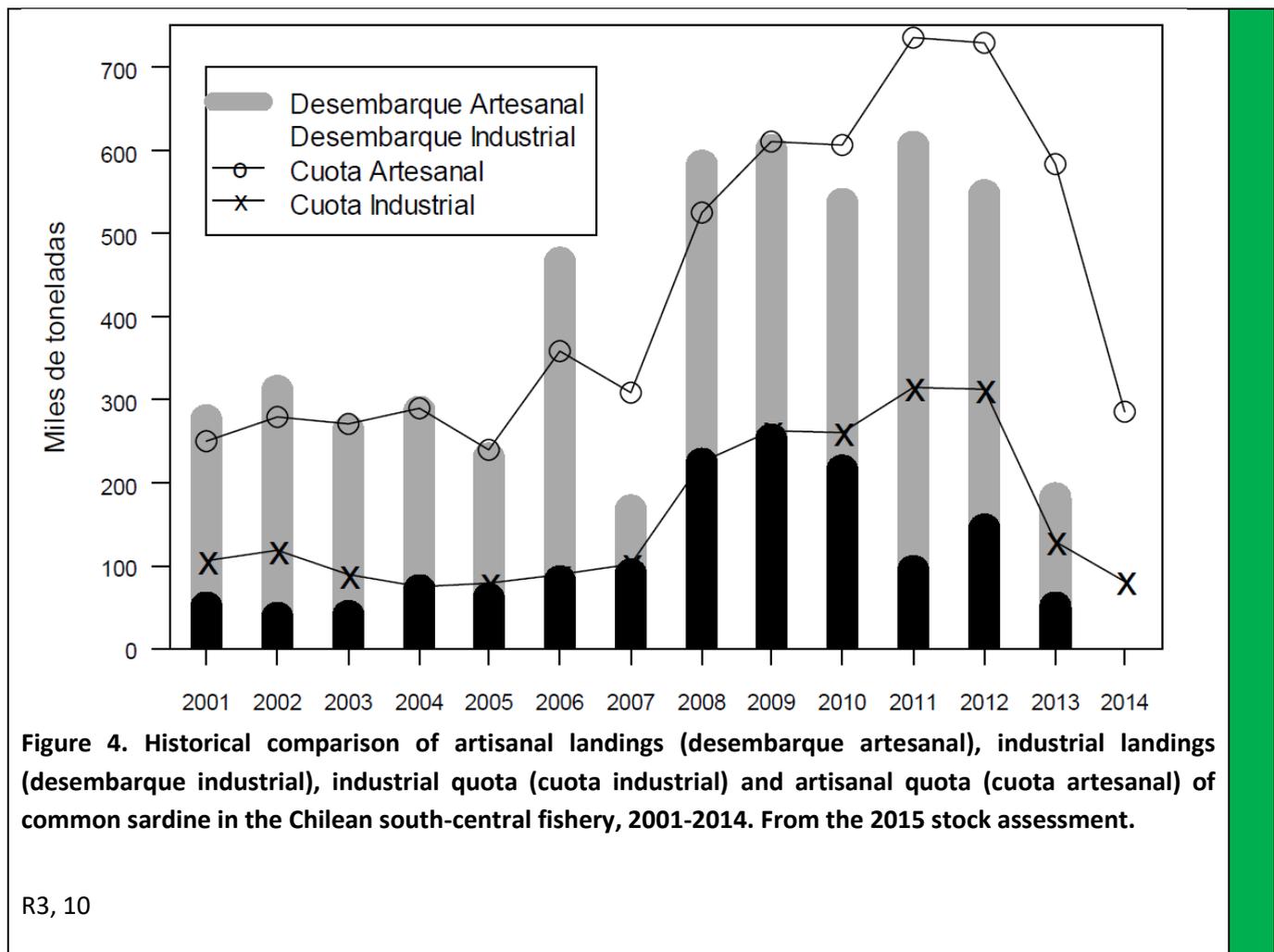


Figure 4. Historical comparison of artisanal landings (desembarque artesanal), industrial landings (desembarque industrial), industrial quota (cuota industrial) and artisanal quota (cuota artesanal) of common sardine in the Chilean south-central fishery, 2001-2014. From the 2015 stock assessment.

R3, 10

LEVEL OF COMPLIANCE		
<i>D2. Where excess fishing capacity exist, mechanisms should be in established to reduce capacity to allow for the recovery of the stock to sustainable levels.</i>		
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.	
<p><i>Determination: The management plan outlines actions to be taken as part of its objectives to reduce capacity. Medium compliance remains in place until such actions are implemented.</i></p> <p>There is clearly an excess of fishing capacity in the artisanal sector, which is effectively open-access and has exceeded its share of the TAC in every year since 2008. The majority of the resource is distributed in the artisanal-exclusive zone within five miles of shore, which goes some way to explaining the inability of the industrial fleet to fill its share of the TAC in many years.</p> <p>In theory the requirement for artisanal fishers to be registered on the National Registry for Artisanal Fishermen (NRAF) is used to control their number per regional area. However, although there is no evidence available to determine the extent to which, or even whether, such restriction occurs, it is clearly not effective at restricting the artisanal fleet’s effort to TAC-defined levels. There is an implementation error between the assigned quotas and the actual landings. The new management plan outlines in its objectives an action to develop a policy document that will allow freezing or reduction of effort in the fishery sector. In the artisanal sector the generation of new vacancies for inscription in the Registro Pesquero Artesanal by expiry of old ones will be stopped.</p> <p>Currently, new access to this fishery is prohibited; new fishing licenses cannot be awarded at the moment to the industrial sector (IFOP, 2015b). A Maximum Catch Limit per Vessel Owner regime has been established for the industrial sector as well as an Artisanal Extraction Regime for the artisanal sector of Regions V, VIII and X.</p> <p>R2,3</p>		M

LEVEL OF COMPLIANCE				
<i>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.</i>				
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.			
<i>Determination: The management plan details the measures in place to minimise the impacts of the fishery on non-target species. The measures are based on scientific information, however until reductions in bycatch can be seen a medium compliance rating is appropriate.</i>				
Non-target species				
Common sardine and Chilean anchovy are harvested as part of a mixed fishery, in the sense that these resources are caught during the same period and area by an artisanal and industrial fleet that fishes for both species using the same fishing gear (which is non-selective). In the management plan, objective no 3 details the development and implementation of a plan to reduce discards and a code of good practice. In the management plan according to the Law D. Ex. No. 39 of 2015 the proportion of bycatch and the corresponding annual reserve associated with the fishery for sardine and anchovy was established.				
Table 1. Bycatch quota of common sardine and anchovy artisanal fisheries 2015.				
Target	Bycatch	Region	% Bycatch	Annual reserve
Sardina Austral	Anchovey	V – X	5%	40
	Common sardine			70
Others	Anchovey	X	5%	60
	Common sardine			80
Bycatch information is systematically collected for the fishery with weekly monitoring by IFOP in some regions.				
The MEFT has been authorizing distinct research programmes to quantify and identify non-target species and discarding of the artisanal sector in the different regions where the fishery takes place (e.g. MEFT, 2014 for region VIII). According to IFOP there are no official studies about discarding (IFOP, 2015).				
Additionally, even when the TAC of one species has been filled but quota for the other remains, 20% bycatch of the species with no remaining quota is permitted per trip.				
Ecosystems				
The stock is highly dependent on recruitment which in turn changes with environmental conditions and oceanographic conditions in the important Chilean upwelling ecosystem, like the El Niño and La Niña (Cury et al., 2000; Gatica et al., 2007; Gómez et al., 2012). The availability of sardine and anchoveta as a prey species is considered to be one of the major threats to Humboldt Penguin. Chile has implemented five marine reserves, with the objective of conserving natural banks of scallop, oyster and mussel, but also dolphins and penguins. Additionally, the introduction of the five-mile artisanal-exclusive zone near the shoreline has provided significant protection to spawners and other shallow-water organisms from industrial fishing activities.				
ETP species				
The incidence of dolphins in catches is considered to be minimal, with the majority of marine mammal interactions involving sea lions (which are not categorised as at risk by the IUCN). Seabirds also interact with the fishery, including the kelp gull, Peruvian pelican and Franklin’s gull (all either Least Concern or Near				

M

Threatened). Overall there is limited evidence available on the extent to which these species, and other ETP species, are impacted by the fishery.

Physical environment

The impact of purse seine nets on the physical and biological environment of the sea floor is considered minimal, as nets are generally used at depths considerably greater than their size. Common sardine is distributed at water depths ranging between 50 and 70 m during the day and between 5 and 15 m at night. In Chile, artisanal purse seines can reach dimensions of 30 fathoms depth by 240 fathoms length (approx. 55m x 249m) while industrial purse seines can reach up to 60 x 500 fathoms (approx. 110m x 915m). Also, to protect the first nautical mile fauna, the use of purse seines with nets of mesh size equal to or larger than 38 mm knot to knot and greater than 20 fathoms depth (approx. 37m) is prohibited between the coast and the first nautical mile offshore.

R2,3, 13,14

E. IMPLEMENTATION		
LEVEL OF COMPLIANCE		
<i>E1. There should be a framework for sanctions of violation of Laws and regulations.</i>		
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.	
<p><i>Determination: There is a framework allowing for the application of sanctions ranging from monetary fines to revocation of licence.</i></p> <p>The LGPA defines a range of sanctions for offences including fishing with an unlicensed vessel, discarding, incorrect logbook use, failure to report landings, fishing in a region or fishery other than the one for which the vessel is licenced, and for industrial vessels which land more fish than they have quota for. Depending on the offence, sanctions can include one or a combination of monetary penalties dependant on tonnage; suspension of fishing licence; and revocation of licence entirely. Punitive proceedings are the responsibility of the regional SERNAPESCA director. In 2005, a national action plan was approved with the aim of preventing, deterring and eliminating IUU fishing. There is no evidence available to determine the level of success this plan enjoyed.</p> <p>R7,8</p>		H

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.	
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><i>Determination: There is evidence of a fisheries control and enforcement regime in place in Chile, but limited information to determine how effective this regime is.</i></p> <p>The guiding instrument of fisheries management in Chile is the General Law on Fisheries and Aquaculture (LPGA). No. 18.892 of 1989 Act, as amended (Decree 430) plus other intermediate laws, regulated the activities of fisheries and aquaculture until February 9, 2013 when the new Law on Fisheries and Aquaculture No. 20,657, was published in the Official Journal amending the previous one in the field of sustainability of aquatic resources, access to industrial, craft and regulations for research and monitoring fishing activity. Article 10 of Law 19713 states that industrial vessels must submit information on capture by fishing trip in Article 63 of the General Law on Fisheries and Aquaculture, certified by concerns an Audit Institution accredited by the National Fisheries Service. The way, conditions and procedures of certification and accreditation of audit entities, shall be established by resolution of the Service.</p> <p>Enforcement of fisheries legislation is the responsibility of SERNAPESCA. Industrial vessels operate under mandatory VMS monitoring.</p> <p>R7,8</p>		M

7. KEY STAKEHOLDERS

8. REFERENCES

- R1.** Image of *Stranomera bentincki* <http://www.fao.org/fishery/species/2913/en>
- R2.** IFFO Common Sardine Chile reassessment report 2015 <http://www.iffonet/files/iffoweb/approved-raw-materials/whole-fish/chile-sardine-regions-v-x-re-assessment-june-2015.pdf>
- R3.** Plan de Manejo para la pesquería de Sardina Común y Anchoqueta V a X Regiones: <http://www.subpesca.cl/prensa/601/w3-article-94523.html>
- R4.** SUBPESCA home: <http://www.subpesca.cl/>
- R5.** SERNAPESCA home: <http://www.sernapesca.cl/>
- R6.** IFOP home: <http://www.ifop.cl/>
- R7.** Fisheries Law 20.657: http://www.subpesca.cl/normativa/605/articles-764_documento.pdf
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