

Yes Chile Can!

An approach to evaluate, reduce and monitor discards and bycatch



Luis Cocas

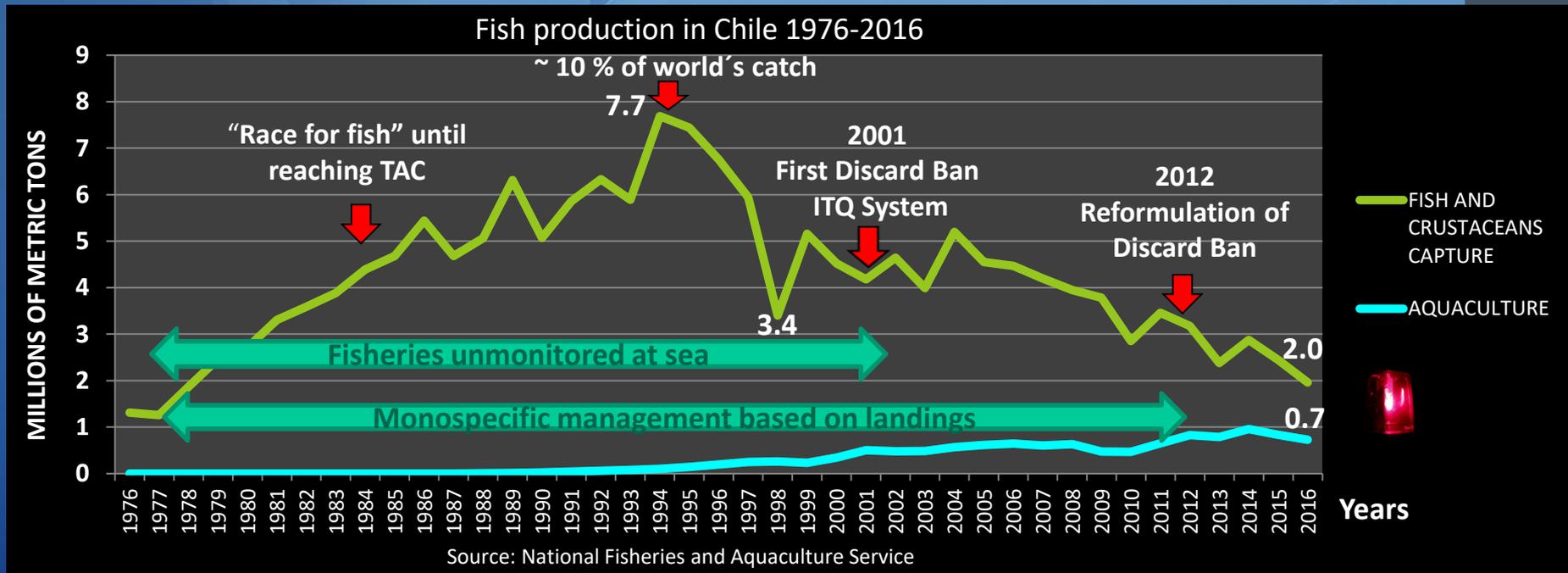
Fisheries Management Division
Under Secretariat for Fisheries and Aquaculture
Government of Chile



Undersecretariat
for Fisheries
and Aquaculture

Chilean Government

Why the concepts of discard and bycatch were introduced in Chilean legislation?



Management with a focus on target species not considering the wider ecosystem impacts of fisheries



Discards were not effectively addressed as a source of fishing mortality (target and non-target sp.)

On 2012 the discard ban was reformulated broader fisheries management policy

Concepts of bycatch and discard were integrated along with sanctions to offenders and modern mechanisms for compliance control and scientific monitoring

REPÚBLICA DE CHILE
Ministerio de Economía,
Fomento y Turismo

DEFINE EL DESCARTE DE
ESPECIES HIDROBIOLÓGICAS Y
ESTABLECE MEDIDAS DE CONTROL
Y SANCIONES PARA QUIENES
INCURRAN EN ESTA PRÁCTICA EN
LAS FAJINAS DE PESCA.

LEY N° 20.625

Teniendo presente que el H. Congreso Nacional ha dado su aprobación al siguiente proyecto de ley originado en una Moción de los Honorables Senadores señores Antonio Horvath Kiss y Guido Prokurica Prokurica, y del ex Senador señor José Ruiz De Giorgi.

PROYECTO DE LEY:

"Artículo 1°.- Introdúcense las siguientes modificaciones a la Ley General de Pesca y Acuicultura, cuyo texto refundido, coordinado y sistematizado está contenido en el decreto supremo N° 430, del Ministerio de Economía, Fomento y Reconstrucción, de 1992:

1. Modifícase el artículo 2°, de la siguiente forma:

a) Sustitúyese el número 14 bis) por el siguiente:

Sub. 7.

MINISTERIO DE HACIENDA
OFICINA DE PARTES
RECIBIDO

CONTRALORIA GENERAL
TOMA DE RAZON
25 SET. 2012
25 SET. 2012 - 10:15 AM

RECEPCION

DEPART. JURISCO
DEPART. CONTABIL.
SUB. DEPART. C. CENTRAL
SUB. DEPART. D. COORDINAD.
SUB. DEPART. BIENES NACION.
DEPART. AUDITORIA
DEPART. VOP. UYT
SUB. DEPART. MUNICIPAL

REFRENDACION

RES. POR \$
IMP. POR \$
ANOT. POR \$
IMP. POR \$
DEDUC. DTC

26 SEP 2012

TOMADO RAZON
25 SET. 2012
Contralor General de la República
26 SEP 2012 - 10:44 AM



OVERARCHING GOALS

- ✓ Evaluate and reduce discards and bycatch
- ✓ Achieve high mandatory levels of monitoring (observers/EM)
- ✓ Accuracy of catch and discard data
- ✓ Achieve transparency of fishing operations to change regulations and match fishing opportunities with real catches
- ✓ Involve fishers and stakeholders in policy development



How the ambitious goals of the new discard and bycatch regime would be achieved?

progressively through three key steps



A

UNBIASED RESEARCH

To understand and evaluate the problem case by case



B

PROGRESSIVE REDUCTION

Through compulsory fishery specific reduction plans



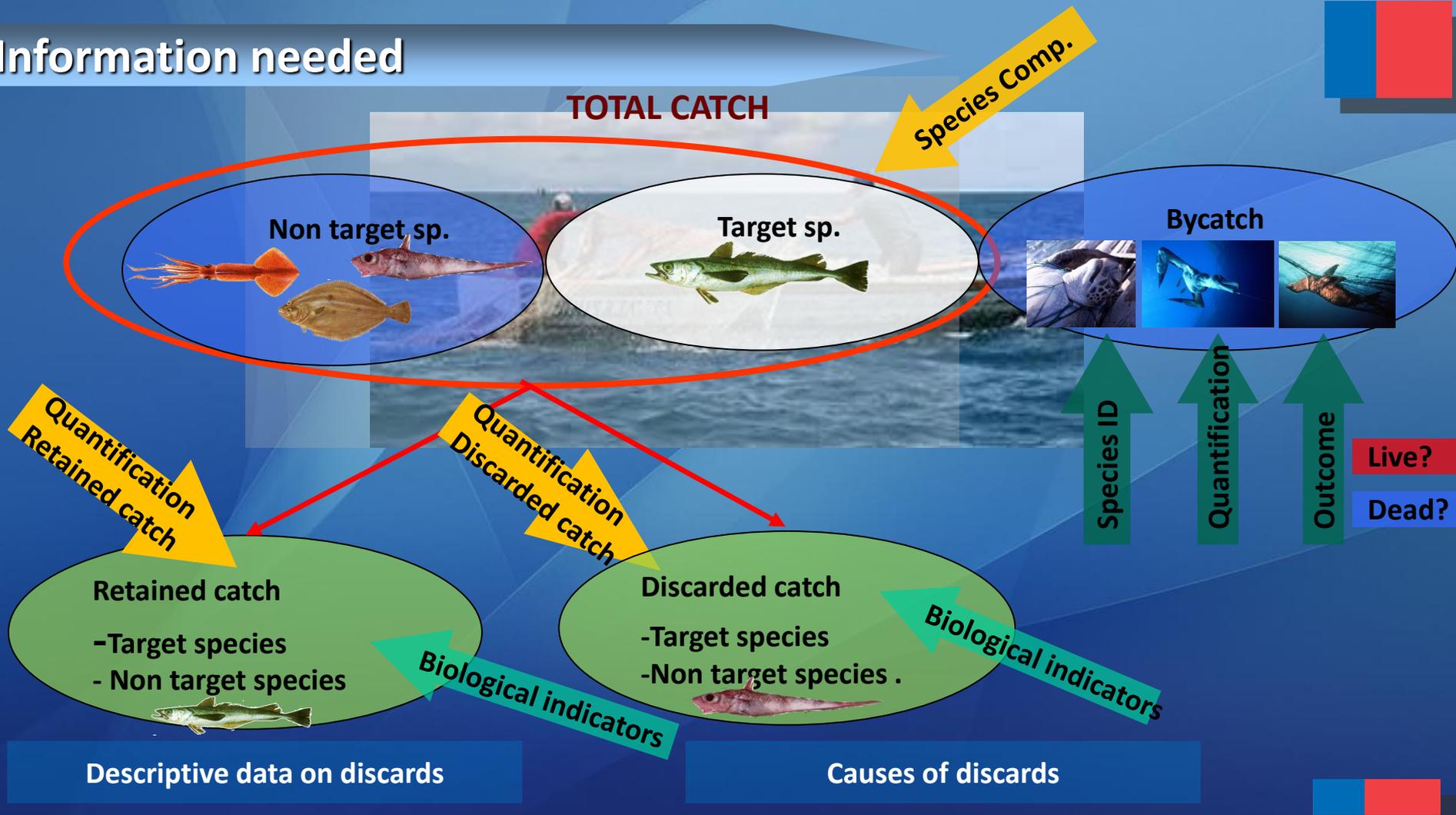
C

EXTENSIVE MONITORING BY OBSERVERS & EMS

For accountability, compliance and scientific purposes



Information needed



A

Observer programs: focused entirely on scientific data collection

Existing from the late 90's, were extended but with the sole objective of collecting data to be used in scientific advice for management. They have no jurisdiction with compliance.

New rights and obligations were included



- ✓ Observers must be trained and certified by Government
- ✓ Mandatory embarking in designated vessels
No observer → No fishing.
- ✓ Up to 2 observers per vessel (industrial fleet)
- ✓ Vessel owners must ensure
 - Full access to equipment and catch
 - Sampling stations
 - Safe working conditions
 - Adequate accommodations and treatment

- ✓ fines for obstructing the work of observers
USD 250-25000
- ✓ Information collected by observers is managed by the Government but is of public access





DEVELOPMENT PROGRAM 2014-2017 59 target fisheries, 69 fleets

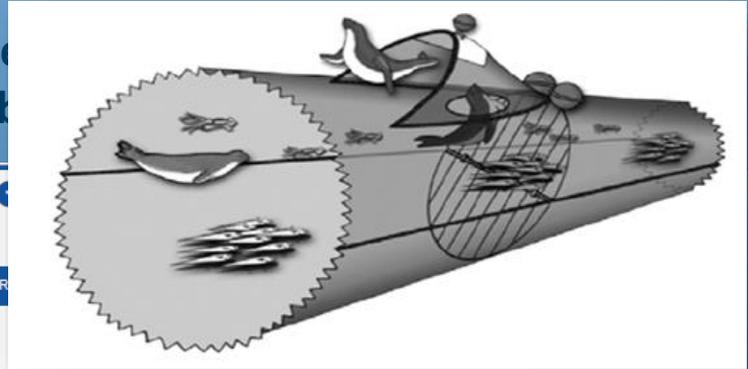


Some voluntary mitigation strategies adopted voluntarily by the industry



Excluder grids for jumbo squids and sea lions in hake fishery

h programs are
www.ifop.cl/en/



Excluder devices for sea lions in trawler fleet

Project reports Search

This listing includes completed projects, executed between August 1963 and November 2018.

Esto, en cumplimiento con la Ley General de Pesca y Acuicultura, N° 20.657, y su artículo 156 bis y 156 B, cuya vigencia es del 9 de febrero de 2013.

Research Divi



Project Type :

Seguimiento

Publication year :



<http://www.unitep.cl>



Flow scales for accurate accountability of discards
factory trawler fleet

the

Varea sportneads
<http://www.unitep.cl>

Allowed industry and stakeholders' voluntary recognition of the

New products made from previously discarded catch
Campaigns to increase fish consumption



RESULTS AND CONCLUSIONS OF THE PROGRAMS

- **Significant and highly variable levels of discards** of both target and non-target species, as well as incidental catch (seabirds and mammals).
- **Main causes for discard and bycatch:**
 - The regulation itself is inflexible and in some cases inconsistent with what is actually caught or with the restricted selectivity of the fishing gears (**choke species**)
 - Regulation was established with mono-specific approach using incomplete or biased information
 - Market conditions or lack technology on board produce that various species are discarded because they have no commercial value. Catch damaged by depredation (artisanal fleets)
 - Bad fishing practices (high-grading) produce discards and bycatch
 - Fisheries occur in areas where seabirds and marine mammals inhabit or transit and fishers don't use mitigation measures.
- **Transparency of fishing operations**
 - became an opportunity to change obsolete fishing regulations and match fishing opportunities with real catches

B

Specific plans for progressive reduction of discards and incidental catch

Once the research programs were finished, the discard ban required the enactment compulsory fishery- based reduction plans

Plans must include:

- ✓ **Management measures and technological means** to reduce discard and bycatch
- ✓ **A continuous monitoring program** (science and compliance) to evaluate and improve the Plans
- ✓ **A training program** for fishermen
- ✓ **A dissemination program** for fishermen and the community
- ✓ **A code of conduct:** good fishing practices
- ✓ **Government incentives** for innovation in systems aimed to reduce discards and bycatch



B

How the Reduction Plans were built?

RESEARCH INSTITUTION



FISHING MANAGEMENT COMMITTEE

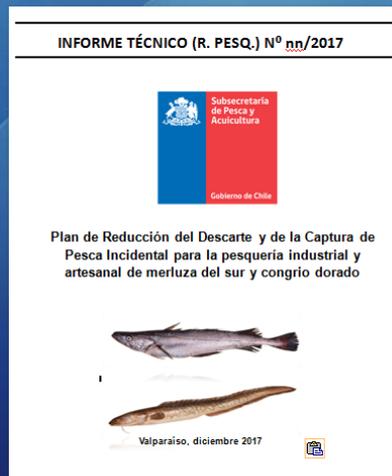


MANAGEMENT AGENCY



Consultative process

- ✓ Top-down factors were balanced with bottom-up factors
- ✓ Involvement of stakeholders in policy development
- ✓ Agreed and well-understood measures. Progressive application.
- ✓ Plan must be improved based on results
- ✓ Discards not authorized by plans are penalized



- 10 Reduction Plans enacted by 2018
- 4 Reduction Plans in preparation for 2019-2020
- 3 Research Programs starting in 2018-2019



Once the research phase is finished the discard ban becomes fully operative



Discarding is banned unless is authorized by the specific Reduction Plans

Fines applicable to vessel owners and skippers and vary depending on fault and fleet (artisanal/industrial)

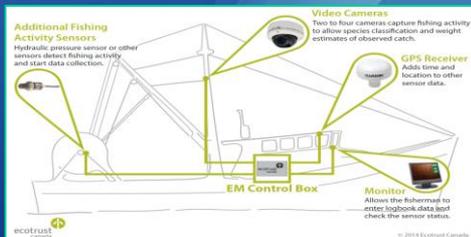
- | | | |
|--|--------------|-----------------|
| ✓ Any prohibited discard | | 75000 U\$D |
| Fines may increase depending on species and weight discarded | | |
| ✓ Owner of the vessel that discarded | | 2500-25000 USD |
| ✓ Captain/skipper that discarded | | 2500-25000 U\$D |
| ✓ For operating without EMS (cameras) | | |
| | VESSEL OWNER | 1500-25000 U\$D |
| | SKIPPER | 250-2500 U\$D |
| ✓ For omitting or giving false information on discards | | 250-25000 U\$D |



MONITORING, CONTROL AND SURVEILLANCE (MCS) OF THE REDUCTION PLANS

Monitoring of compliance by cameras onboard (EMS) and entirely independent of observer coverage

- ✓ Vessel owners must inform: total catch, discards and bycatch (electronic or paper logbooks)
- ✓ Vessels > 15 m shall install cameras (EMS) to detect, register and quantify discards & bycatch
- ✓ Discards & bycatch must be handled using approved protocols, functional to EMS
- ✓ Collection and processing of images held by the National Fisheries Service or certified external agencies
- ✓ Regulations on EMS make distinction by fishery, fleet, gear



Recording

EMS in the entire Industrial fleet in 2019
EMS in the artisanal fleet > 15m. in 2020



Withdrawal



Monitoring

Besides technical challenges there are cultural aspects that must be addressed

Dissemination and socialization of the problem



Species identification manuals for observers and fishermen



Dissemination of the observer's roles



Training of fishermen in self-report logbooks



EL OBSERVADOR CIENTÍFICO

Un nuevo compañero de viaje

CUANDO LA TOMA DE DATOS SE REALICE EN UN PUNTO DE DESEMBARQUE, COMO SERÁ EL PROCEDIMIENTO?

- Informar la procedencia de las Capturas y los contenidos generados desde el desembarque.
- Caracterizar el ingreso a los biólogos o temas de sacado para la toma de muestras.
- Preservar en todo momento una amplia documentación.
- Caracterizar la temporalidad y regularidad del observador durante el desarrollo de las actividades.

¿QUÉ ACTIVIDADES REALIZAN LOS OBSERVADORES S. B. Y BIODOT?

- Observar, registrar y reportar los resultados de las actividades de pesca.
- Registros de las operaciones pesqueras generadas de los arroyos y aguas de pesca.
- Operaciones de las especies sustentables.
- Registros de abitos de captura y pesca sustentable.
- Registros de captura.
- Realización de muestreo para permitir análisis.
- Realización de inventarios y registros adicionales.

¿CÓMO SON LAS RESPONSABILIDADES DE LOS ARRIADOROS DE LAS EMBAJADORAS COMERCIALES DE LAS EMBAJADORAS COMERCIALES?

Debido a que el observador científico debe registrar tanto el estado del buque y equipo de las embarcaciones, como el estado de las operaciones de pesca, de los logros de captura y el estado de las actividades pesqueras.

Respetar cualquier actividad y seguir para la toma de información, además de los requerimientos y procedimientos de los Arriadores.

Realizar fotografías de desembarcos, abarrotamientos, embarcaciones y registros pesqueros.

Reservar: Arriador, Muestra, el Arriador, Muestra.

Acknowledgment to Chilean Agencies Involved in the process



Research



Founded in 1964
Private corporation
Provides information
used for
management
decisions
www.ifop.cl

Regulates



Founded in 1976
Government agency that
regulates and manage
fisheries and aquaculture
www.subpesca.cl

Enforces Law



Founded in 1978
Government agency in
charge of monitoring
compliance
www.sernapesca.cl

And cooperative fishermen!!

