CENTRO DE conservación marina NÚCLEO MILENIO

CHILE: PAST, PRESENT & FUTURE

FISHERY GOVERNANCE, ALLOCATION OF RIGHTS AND THE SUSTAINABILITY OF RESOURCES

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SENADO DE CHILE
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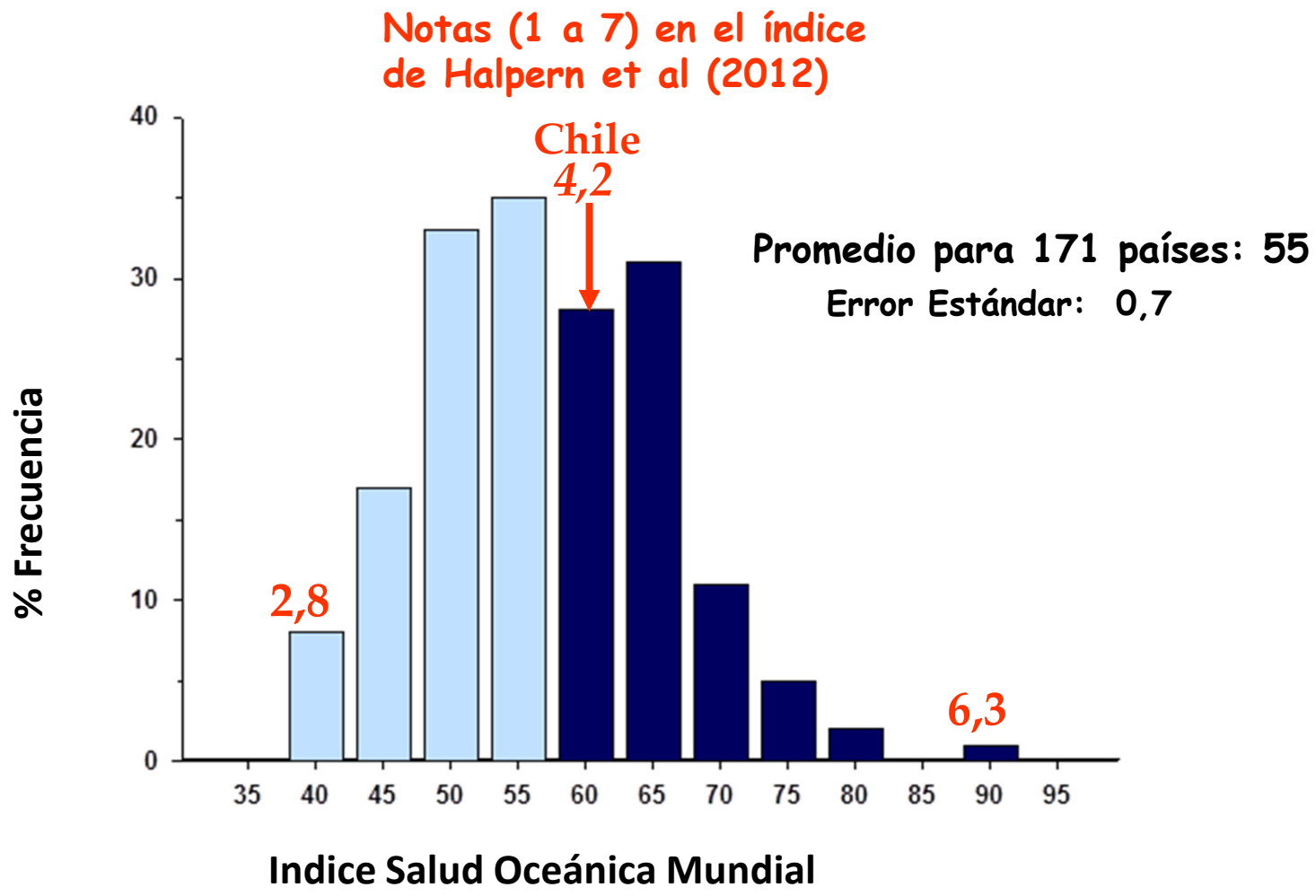


Indices de Salud Oceánica promedio (171 países) para los 10 objetivos.

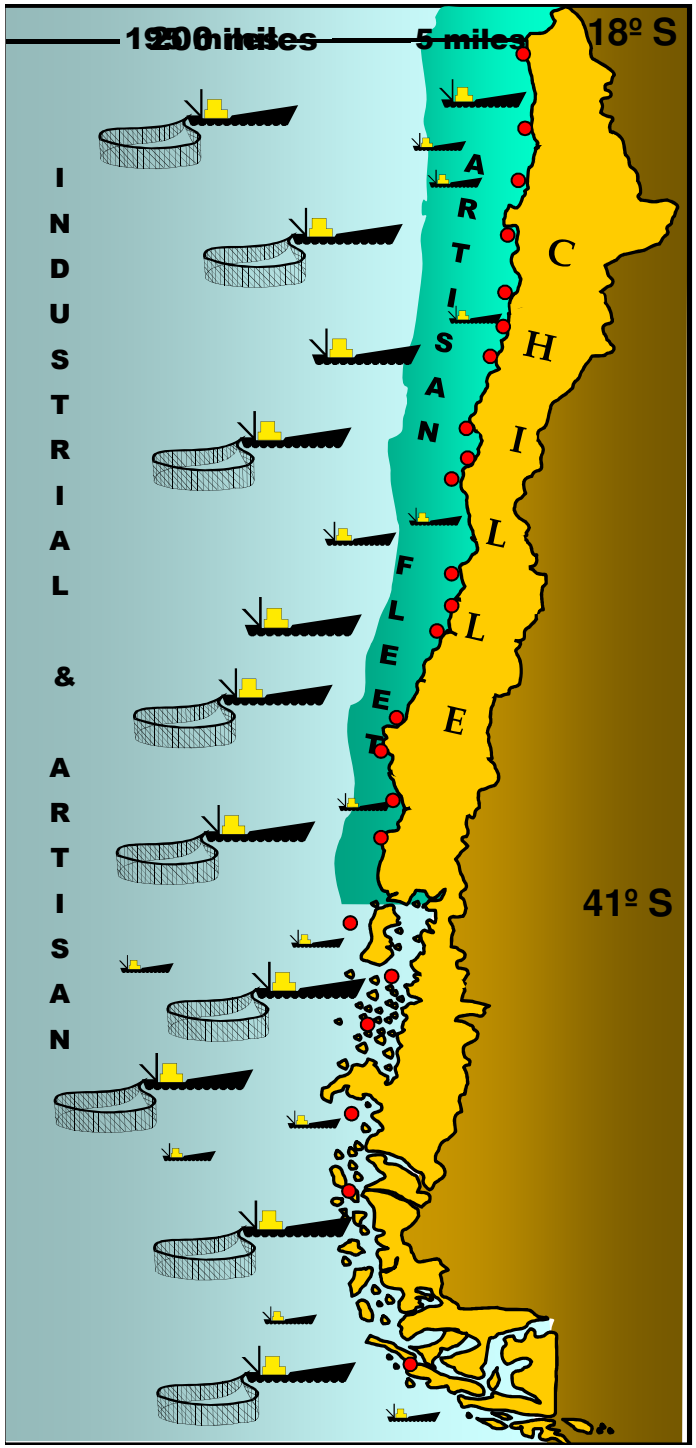
Outline

CHILE: 1991- 2012

<u>An overview on fishery policies</u>

- ✓ **20 years of fishery governance transformations: from open access to sea-zoning and national scale Territorial User Rights for Fisheries, Co-management and marine sustainability policies**
- ✓

Fishery Legislation 1991



<u>Pesca en Chile</u>: Miremos el "*pasado*"... para entender el "*presente*" … y proyectarnos al "*futuro*"

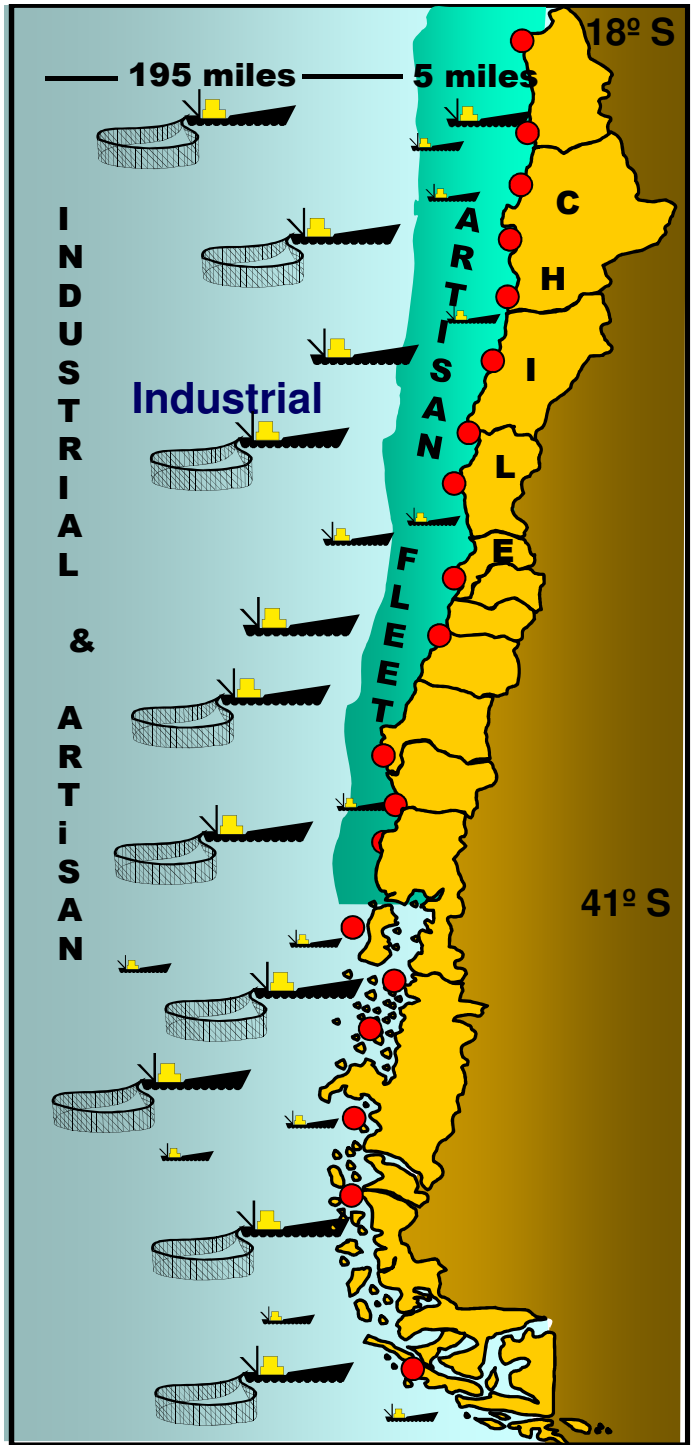
FISHERY GOVERNANCE IN CHILE
Maritime space (territories) allocations and fishery rights

<u>Before 1991</u>: **Fishery Open Access System**

<u>After 1991</u>: **Zonification of the Ocean and allocation of fishery spaces**

Allocation of Exclusive Fishery Rights

Community Co-management in inner-inshore waters for benthic resources (Caletas)



1991 CHILEAN FISHERY LEGISLATION
4 KEY GOVERNANCE AND MANAGEMENT RULES

1. Definition of 2 fleet units and Official Registers:
   (a) Artisan Fleet (small and mid-scale) < 18 m
   (b) Industrial Fleet (large), vessels > 18 m length and 50 gross tons

2. First 5 miles (■) between 18ºS to 41ºS and around oceanic islands: ca. 30 000 km^2 for the EXCLUSIVE USE of the artisan fishery fleet unit **(A MACRO-TURF for <u>all fisheries</u>**

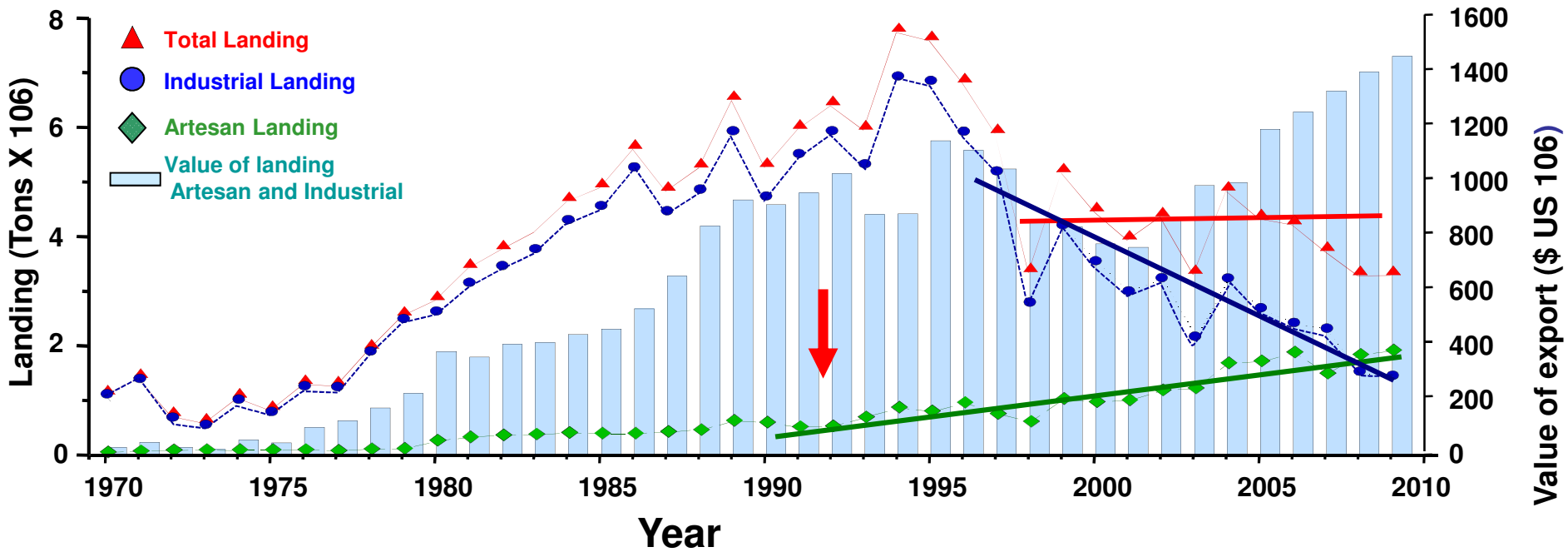
3. Territorial User Rights for Fisheries of Benthic Resources (●): Benthic-TURFs; 1110 km^2) resources allocated exclusively to local organized communities as Management and Exploitation Areas for Benthic Resources **(MEABRs or MICRO-TURFs <u>for benthic species</u>)**

4. For 13 **"fully exploited species"** (sardine, anchovy, jack mackerel, shrimps) management based on stock assessment and allocation of QUOTAS. There exist no quota transferability inside the artisan fleet and very reduced transferability inside the industrial fleet. <u>Historical rights</u>. <u>No auction policy</u>!

Legislation was revisited in 2012. **ADAPTIVE**

Chile: An Overview (1970-2010) of Total Fishery Landing

Did the 1991 legislation work ?



Jurel
Trachurus symmetricus

42.6%

Caballa
Scomber japonicus

9.4%

Merluza
Merlucciidae

4%

Anchoveta
Engraulis ringens

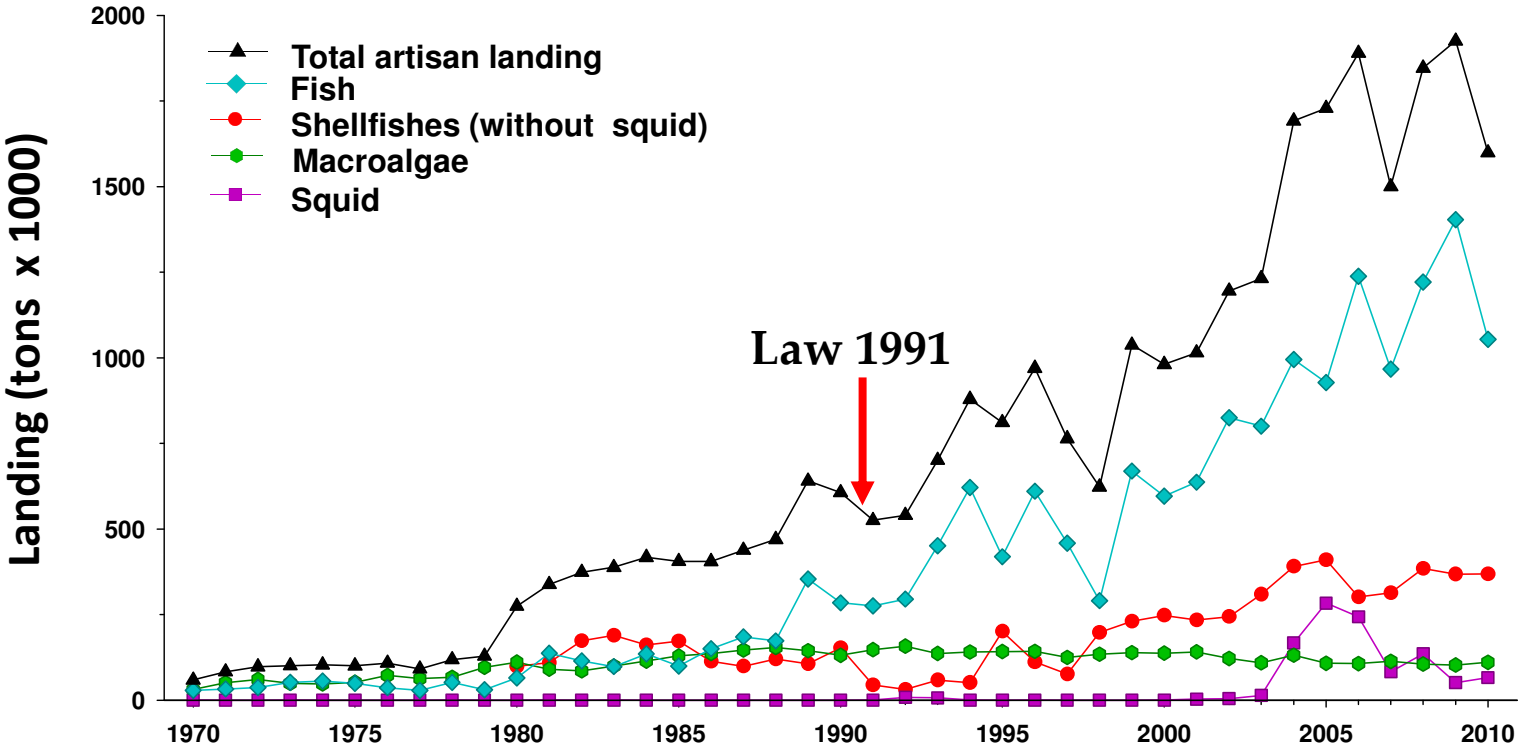
37.7%

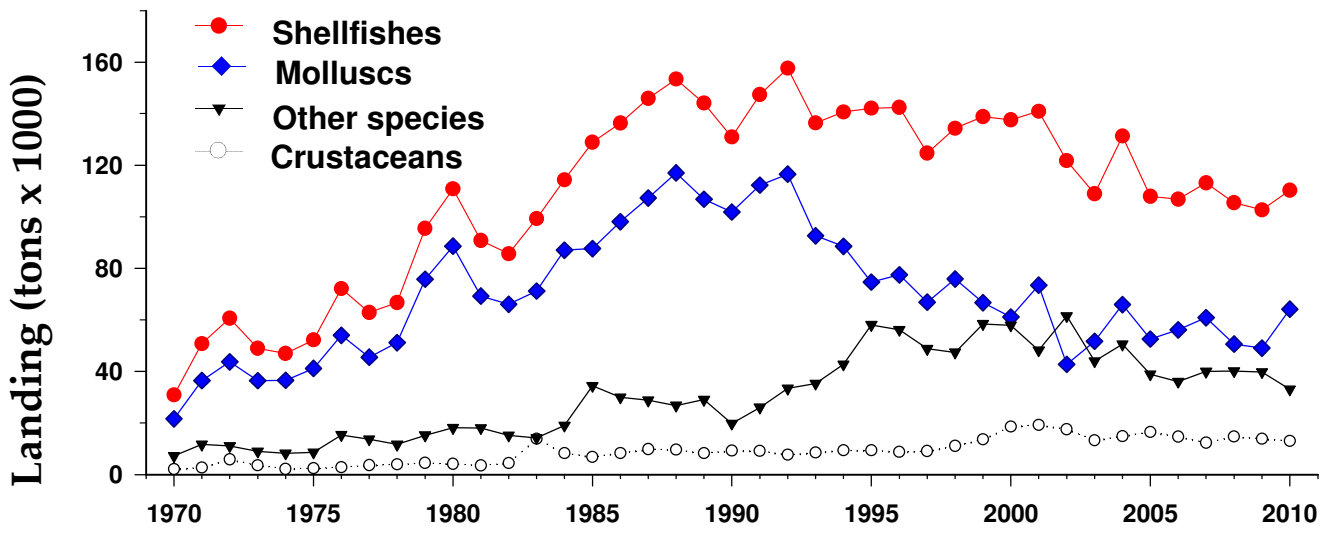
Sardina común
Strangomera bentincki

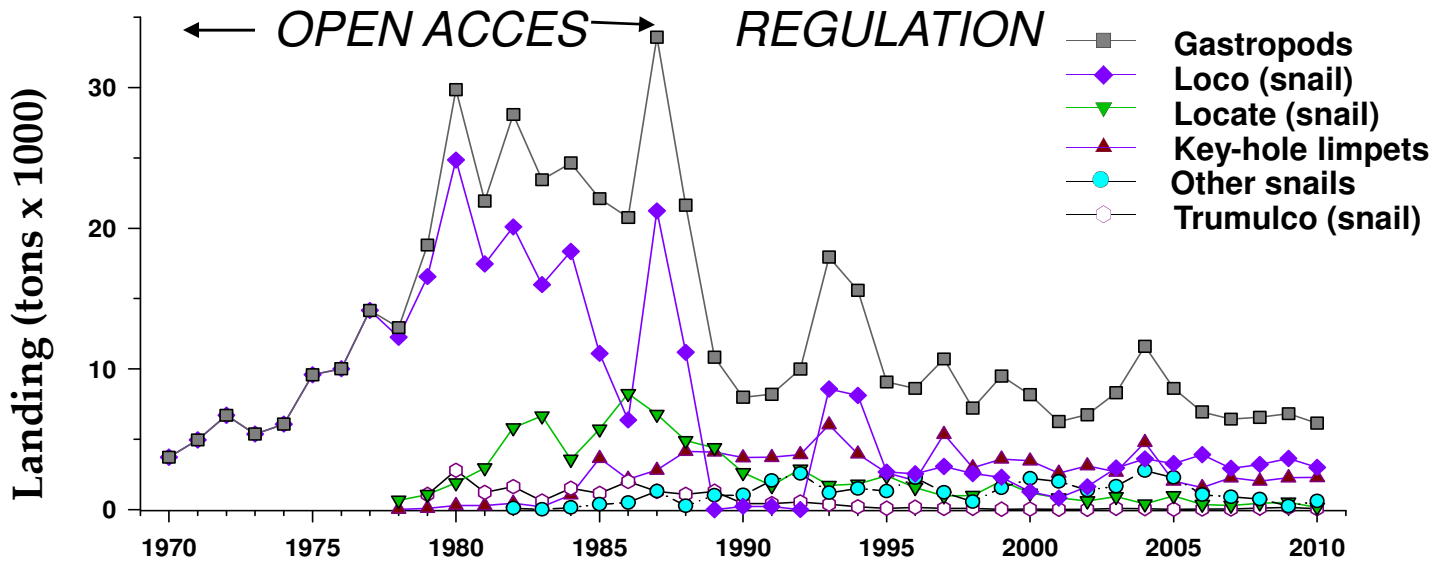
5.4%

Industrial Fleet Landing: Mean (2005-2008) & spp contribution

Artisan Fleet Landing: 1970-2010




Shellfishes
Molluscs
Other species
Crustaceans
Landing (tons x 1000)
0
40
80
120
160
1970
1975
1980
1985
1990
1995
2000
2005
2010


OPEN ACCES
REGULATION
Gastropods
Loco (snail)
Locate (snail)
Key-hole limpets
Other snails
Trumulco (snail)
Landing (tons x 1000)
0
10
20
30
1970
1975
1980
1985
1990
1995
2000
2005
2010

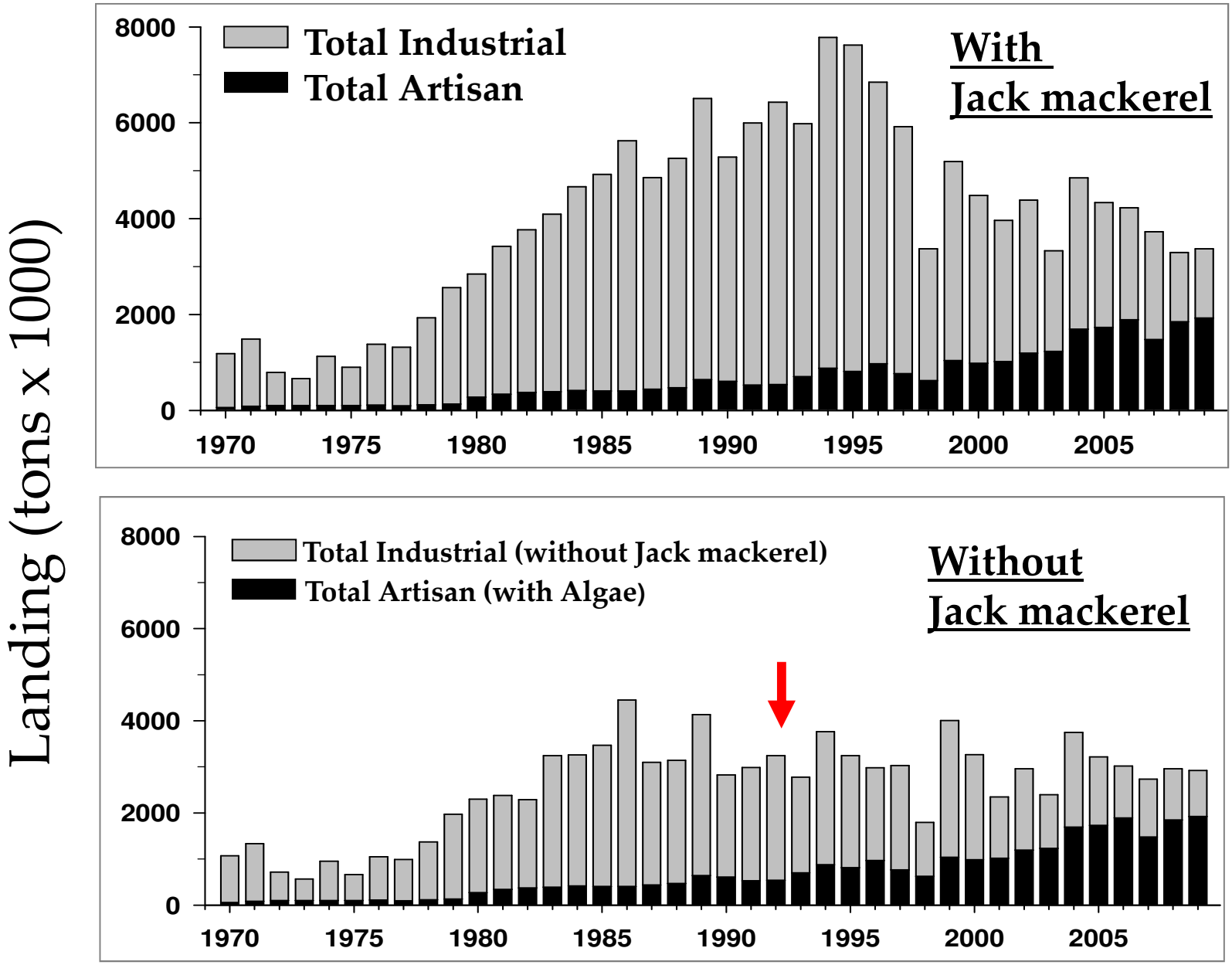
Main industrial and artisan fisheries managed via Global Quota allocations

1. Jurel: ***Trachurus symmetricus***

2. Merluza de cola: ***Macruronus magellanicus***
3. Merluza común: ***Merluccius gayi gayi***
4. Merluza 3 aletas: ***Micromesistius australis***
5. Congrio dorado: ***Genypterus blacodes***
6. Anchoveta: ***Engraulis ringens***
7. Sardina común: ***Strangomera bentincki***

8. Besugo: *Epigonus crassicaudus*
9. Alfonsino: *Splendid alfonsino*
10. Rays
11. Camarón naylon: H*eterocarpus reedii*
12. Langostino col.: *Pleuroncodes monodon*
13. Langostino amarillo: Cerv*imunida johni*

Chile: Total Fishery Landing



Consejo Nacional de Pesca: AUMENTOS de porcentajes de los TACs propuestos por los Reportes Técnicos de la Sub-Pesca

Table 5
Increments (%) over the TACs proposed by the Undersecretary of Fisheries (USF; reports based on scientific advice) voted for by the NFC between 2001 and 2006. Blank spaces correspond to missing data. [a] The TAC was increased in the meeting at which the quota for the next year was established (generally held in November–December). [b] The TAC was increased during the year when the original TAC was applied; the modification was supported by a new technical report provided by the USF.

Resource	2001	2002	2003	2004	2005	2006	Average
Splendid alfonsino					74.62 [a]		
Anchovy (northern stock)			106.46 [b]		19.42 [b]	0	
Anchovy (central-southern stock)	5.63 [b]	58.8 [b]	32.87 [b]		61.59 [b]	35.00 [b]	
Cardinalfish					52.22 [a]		
Chilean nylon shrimp	13.64 [a]	0	0	0	19.30 [b]	0	
Pink cusk-eel	0	0	0	6.00 [a]	1.79	26.70 [a]	
Jack mackerel	85.63 [a], [b]	35.42 [a]	13.46 [b]	5.36 [a]	14.12 [a]	16.67 [a]	
Yellow squat lobster	79.17 [a], [b]	0	0	84.58 [a], [b]	39.95 [b]	0	
Squat lobster	12.66 [b]	6.39 [b]		0	0	0	
Southern blue-whiting		23.33 [a]	12.00 [b]	0	0	0	
Patagonian grenadier; hoki	23.08 [a]	9.02 [a]		0	0	413.33 [b]*	
Chilean hake	17.26 [b]	1.59	4.10		0	9.52 [a]	
Southern hake	0	1.51		0	5.26 [b]	9.71 [a]	
Skate	0	0	0		0	0	
Common sardine	5.48 [b]	40.00 [b]	29.56 [b]		5.24 [b]	100.75 [b]	
N only considering cases in which the TACs were augmented more than 5%	8	7	5	3	9	7	32.32**
N [a]	2	3	0	2	3	4	22.81
N [b]	4	3	5	0	6	3	31.35**
N [a], [b]	2	0	0	1	0	0	83.13

Jurel

* Particularly excessive TAC increment (proposed provisory TAC: 30,000 ton; TAC approved by NFC: 30,000; final TAC: 154,000).
** Excluding TAC hoki 2006.

<u>Ejemplo</u>. JUREL **2001: Aumento TAC en 85%**
2002: Aumento TAC en 35 %
2003: Aumento TAC en 13%
2004: Aumento TAC en 5%
2005: Aumento TAC en 14%
2006: Aumento TAC en 17%

THE PRESENT LEGISLATION

In Chile, during 2012, we deeply discussed the new fishery (2013) legislation
It seems to me we have learnt from past experiences and governance/technical modifications will, in the future, improve fishery management and conservation

Main fishery governance law´s improvements:

1. Marine resources belong to the State of Chile and main objective of the new legislation is the "conservation and sustainable use of the resources"

2. Duty of the The National Fishery Board for determination of the Global Quotas is switched to 8 Scientific Committees, for 8 key species to be managed based on Global Quotas. Committees will establish a range for Global Quotas and final Quota can not be greater than the maximum of the determined range

3. Management of those species will be based on "Biological Reference Points" and on precautionary principles.

4. Management Plans for species in recuperation or new fishery developments

5. Much stronger regulations for bottom dredging

6. Notorious increment in transparency regarding public access to fishery data bases

THE PRESENT LEGISLATION

Some of the law new technical improved aspects

1. The declaration of the first mile for the exclusively use of the small-scale boats (less than 12 m) and forbidden all together any bottom dredging in it. Also, a very initial regulatory step to conserve rock fishes

2. The closure of registrations for new Management and Exploitation Areas for Benthic Resources for 3 years

3. The regulation by which the Artisan Register of Eastern Island will be independent. This is much needed

4. The compulsory use of Vessel Positioning System (VPS) not only for the industrial fleet but also for the middle-scale artisanal fleet (boats > 12 m)

Some socio-political new law improved aspects

JUST ONE: The more equitable shearing of Global Quotas for fully exploited resources among artisan and industrial fishers

and yet pending: the recognition of fishery historical rights for our original "etnias"

IN THE FUTURE LEGISLATION

1. It will be a need to ***improve/refine*** the concept of Biological Reference Points. The present legislation is too anchored in MSY as a "*limit reference point*". This is dangerous since it has been widely demonstrated that management of many marine resources based just on this limit have collapsed. We will need to use more efficiently "*target reference points*"

2. It will be a need to separate the so called "artisan fleet" into two groups: ***small-scale (< 12 m) and middle-scale fleets (> 12 m)***

3. It will be a need for improvements regarding the zonification of the ocean, and/or the ***expansion of the 5 miles*** offshore or further to the south

4. It will be a need to incentive more basic and apply research on the ***"aquaculture of native species"*** and connections with the artisanal sector

5. It will be a need "***add economical value***" to small-scale marine resources (mostly shellfishes and algae). ***<u>This is critical</u>***

6. It will be a need to revisit and increase the concept of "fish for human consumption"

ONE OF THE MAIN FUTURE CHALLANGERS OF OUR FISHERY LEGISLATION

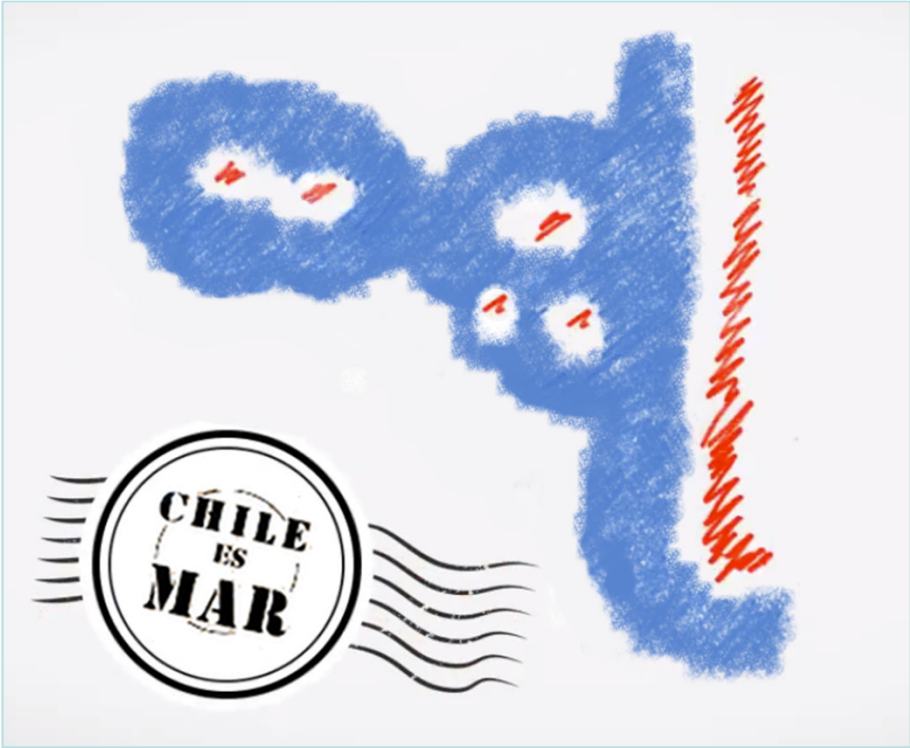
Worldwide there is **very little** knowledge and experiences about the so called "*Ecosystem Management Approach*".

It sounds nice !!... and yes, the concept and recommendation for use is in FAO documents and in the actual Chilean law…….but, *we can not fool ourselves:*

So far, that concept is mostly a paper concept. We have to learn and improve significantly on that. We need more basic science on it

In Chile, we can not rely just on a fishery legislation based on the unknown … let us start first managing and conserving our marine resources based on what we know relatively well, and, at the same time, explore and investigate the unknown(= Ecosystem Management)

A refined fishery vision **and financial resources for basic and apply oriented research will be needed in the future**

THANK YOU FOR THE INVITATION
AND FOR LISTEN

MUCHAS GRACIAS