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# Co-management of reef fisheries: general features

Chile

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Tahiti



Rapa Nui



Chile







**Ca 50 benthic resources exploited: mussels, clams, snails, crabs, sea urchins, tunicates, algae, etc..**





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# TURFS IN CHILE



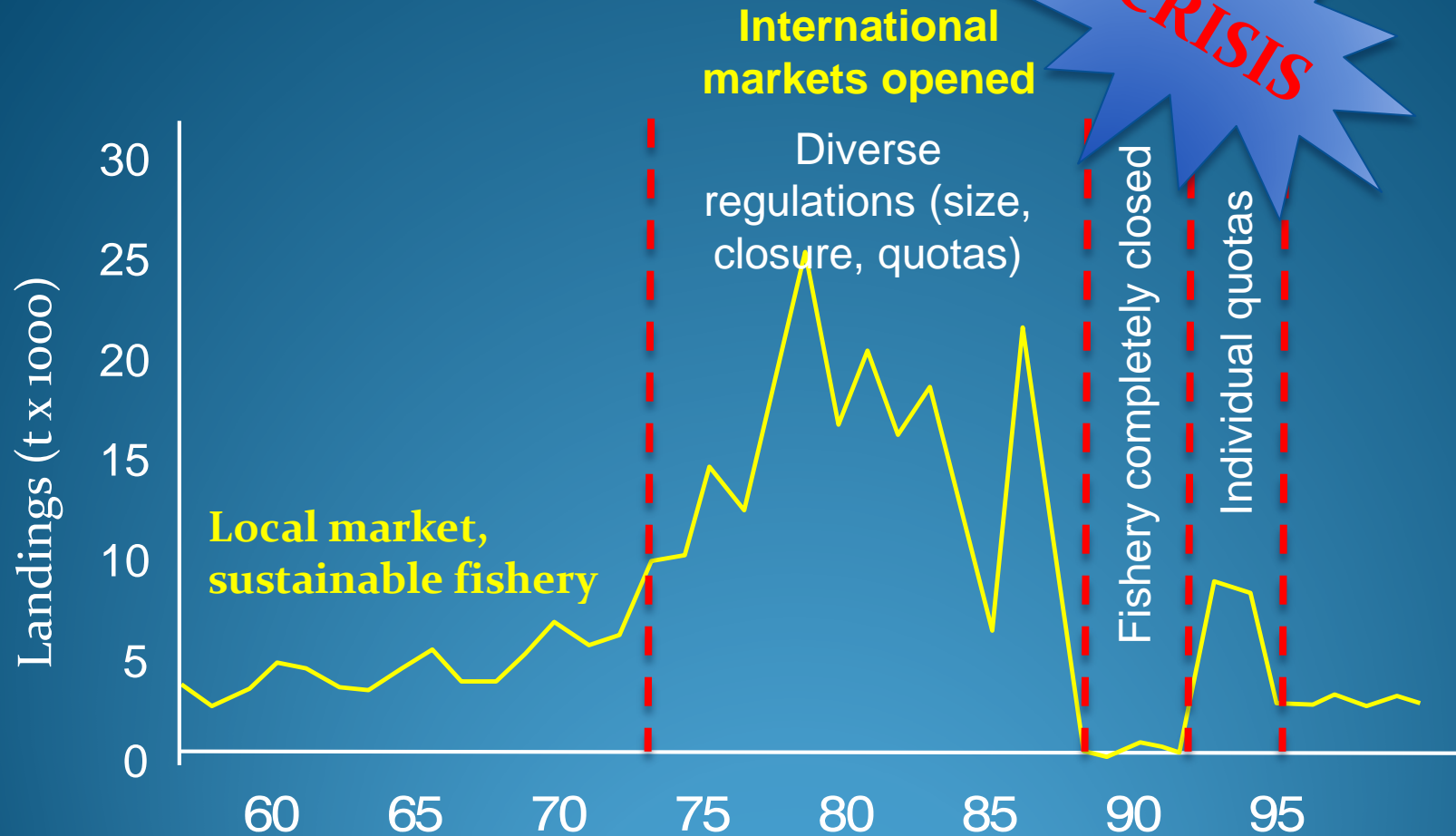
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**The most important benthic resource in Chile is the loco (Chilean abalone)**



# Fishery of loco

(and most of the resources!)

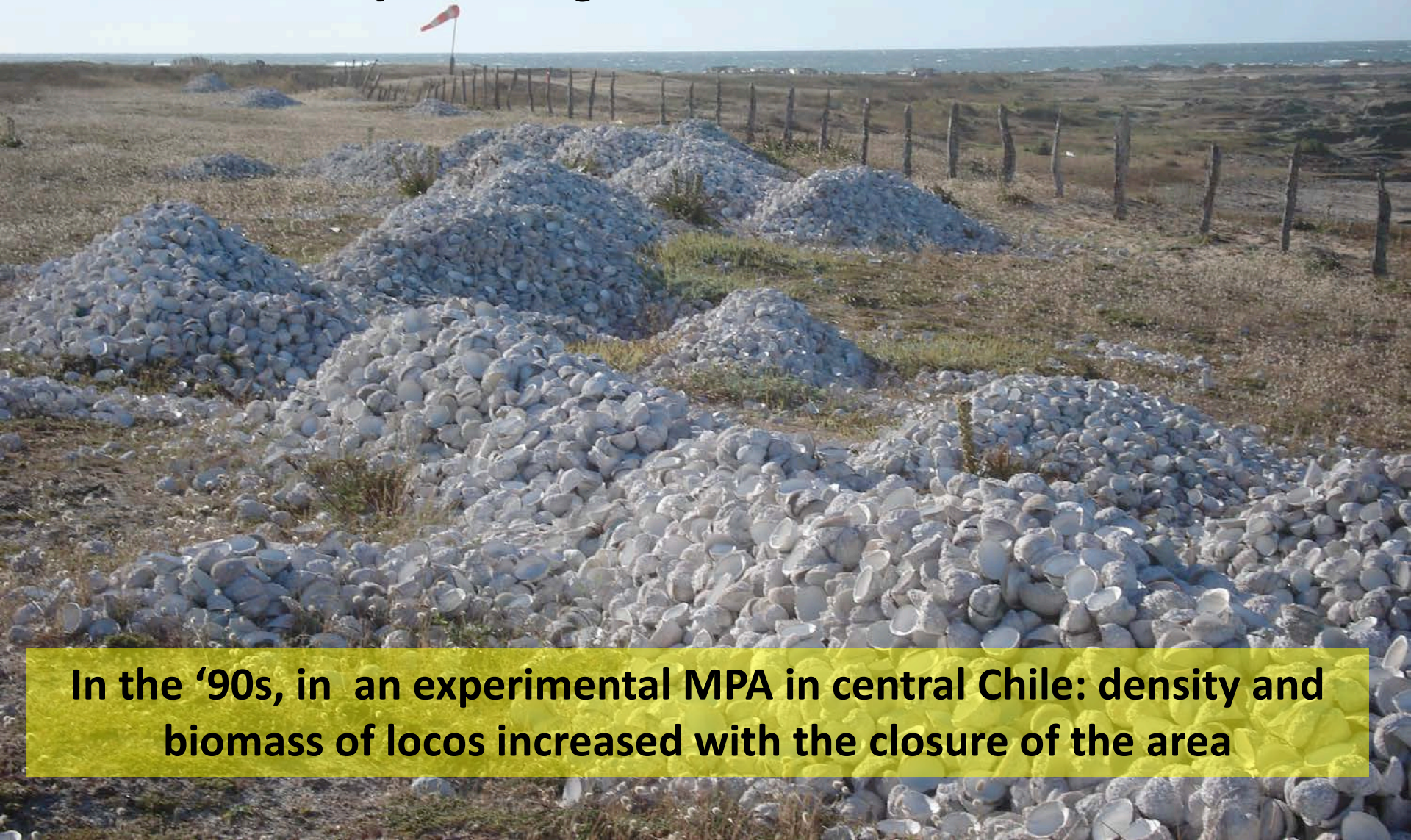




- Landings increased, stocks declined

There was a problem with fisheries.

It was necessary to manage the resources.



**In the '90s, in an experimental MPA in central Chile: density and biomass of locos increased with the closure of the area**



# As a solution to the crisis and to manage benthic resources



Chile implemented a “Management Exploitation Area for  
Benthic Resources” (AMERB)

**(Territorial User Rights for Fishery, TURF)**





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# TURFS IN CHILE



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Top-down and de novo access regime. Actively fostered by the authorities. Assigns exclusive fishing rights for the exploitation of **benthic resources**, in defined coastal stretches, to **legally constituted fisher organizations**.



But it was applied without considering either the differences in the kind of benthic resources or the particular features of the fishers communities





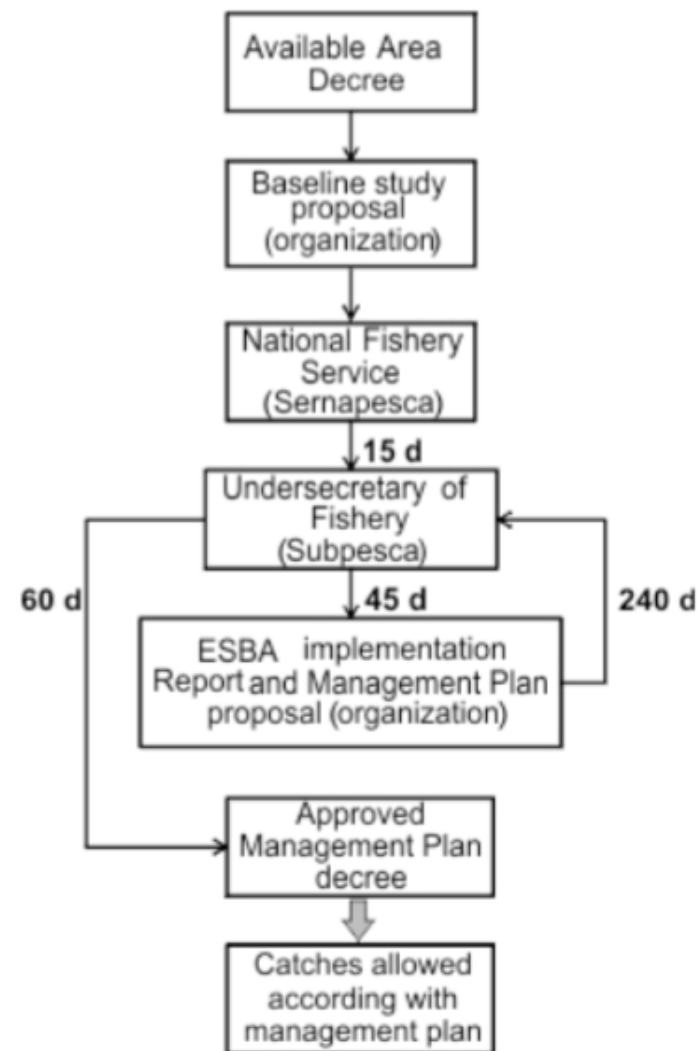
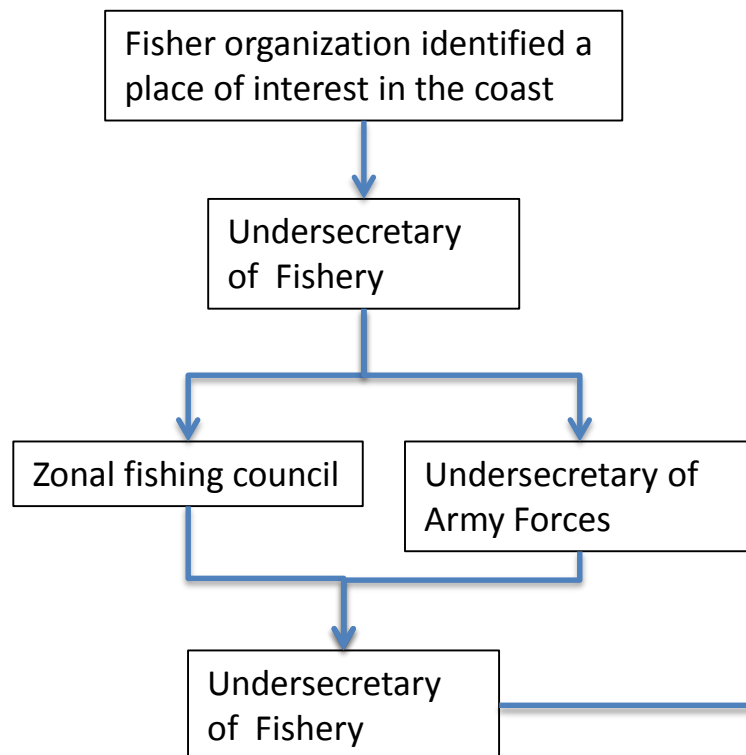
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# WHERE, WHO? / OU, QUI?



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2. List who is the lead partner and collaborators for the co-management of coastal fisheries



**Fishers organization, Undersecretary of Fishery, Consultants**  
**Very expensive and time consuming process**



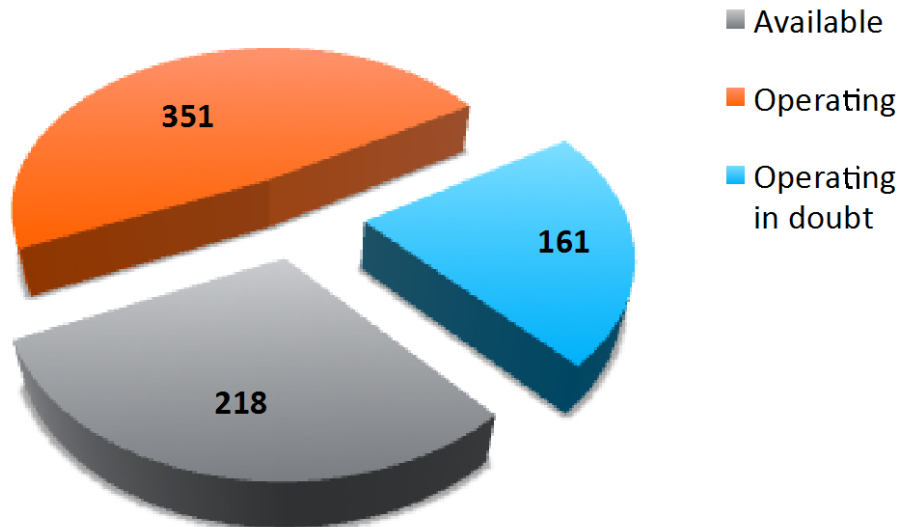


# WHERE, WHO? / *OU, QUI?*



Chile has led the way with the implementation of a contemporary TURF at a large scale.

Officially, as of March 2013, there were more than **700 TURFs decreed, 512 are decreed and assigned to an organization** (SUBPESCA 2013)



**Cost: about US\$15.000-20.000 baseline/Area**

**Annual report: US\$3.000 – 4.500/Area**

  
**Government**





# ISSUES AND THREATS / *ENJEUX ET MENACES*

- Problems with enforcement
- Poaching
- Natural variability (Uncertainty and unpredictability in fishery) => size matters!
- Productivity varies along the coast => **inequity**
- Stopped migrations along the coast (fishers must struggle with resource variability)
- Undermine traditions
- Lack of flexibility
- No continuous harvest (most of cases, twice a year)
- Not enough open access areas to work the rest of the year
- Low income
- Access to benthic resources to non-divers fishers
- Entry of non traditional fishers (conflicts)

**We didn't know this before its implementation!!!**



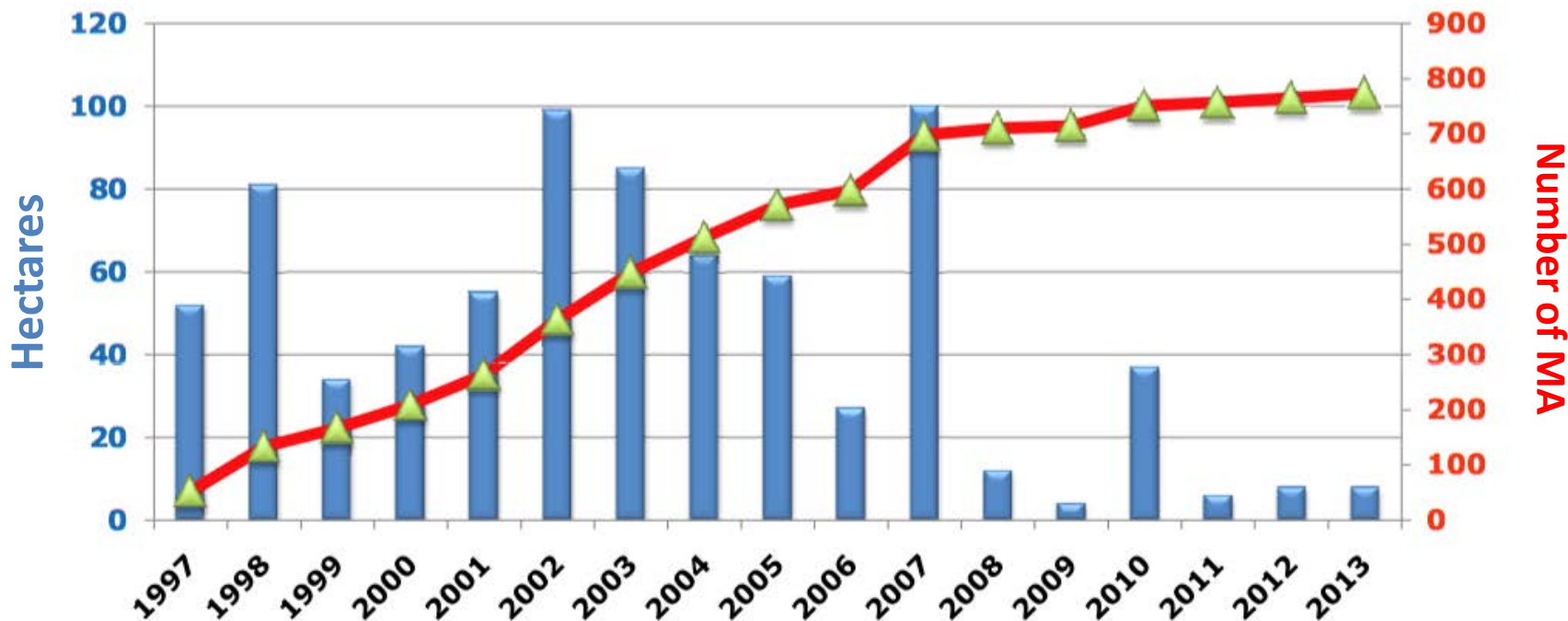
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# TIMELINE



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Since Turf implementation...



Number of Turf increased quickly, however the process to request an Management Area did not change. Nobody stopped the system



**We didn't know this before its implementation!!!**







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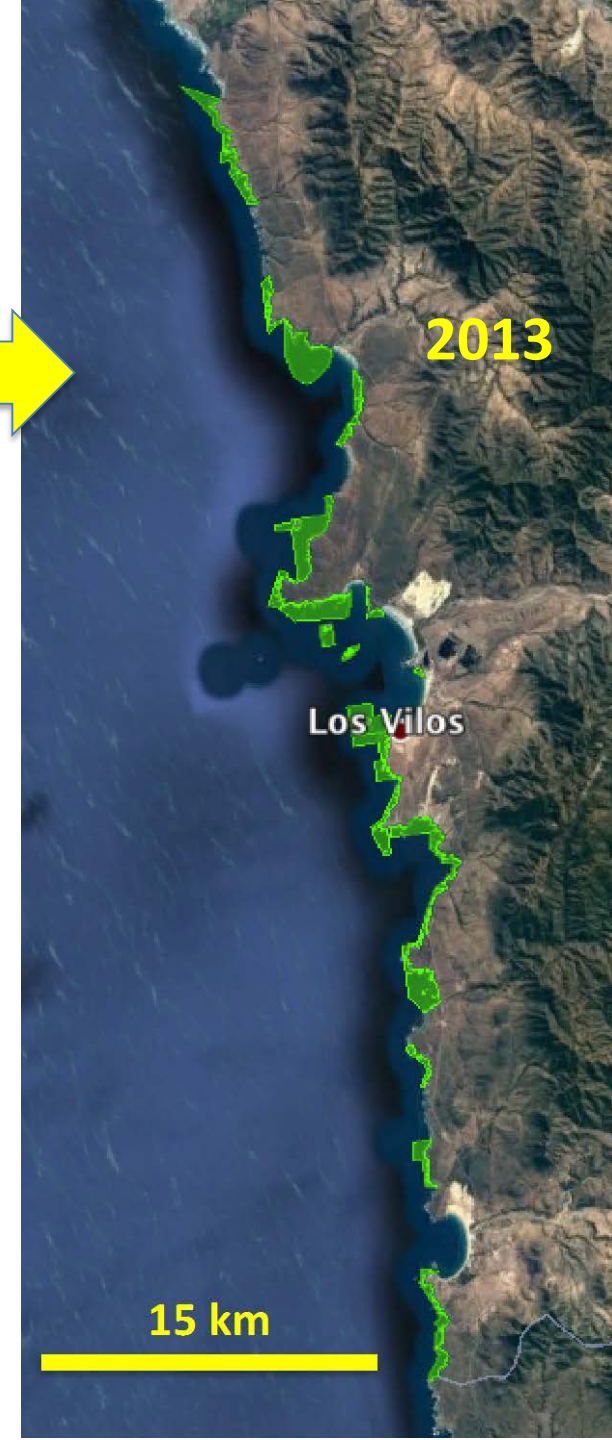
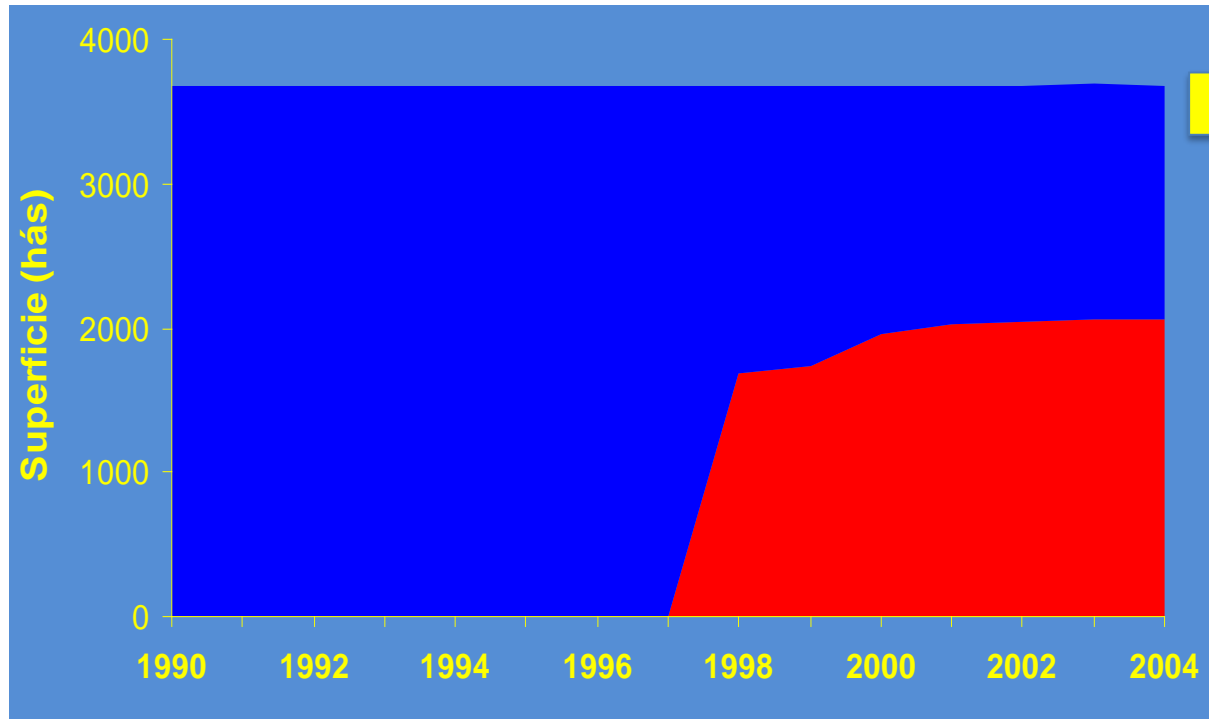
# WHERE, WHO? / *OU, QUI?*



Open access



TURF



2013

Los Vilos

15 km

In less than 10 years, **more than 50% of the rocky shore was under Turf regime**. The fishing effort were re- distributed in open access areas

**Race for fish**  
**Race for Turfs!!!**



# OUTCOMES AND RESULTS

- Benthic fishery are regulated
- Populations are recovering
- Well organized fishers associations, with a good governance system
- Better incomes with lower catches
- Increase of the capacities for management through better local governance



## **In the academic and authorities' world!**

At present, existing parallel worlds. The one the authorities and literature talk about, and the reality which very often do not match very well.



At the beginning the system was strongly focused on resources, **not on fishers livelihood.**

The Turf approach needs a better understanding of the fishery system in all of its complexity, human included. **Before its implementation!!!**

One of the main problems, **were no pilot areas to test the system. Managed Area were implemented at large scale.**

Turfs are not a silver bullet, each case is unique. **Analyze case by case.**



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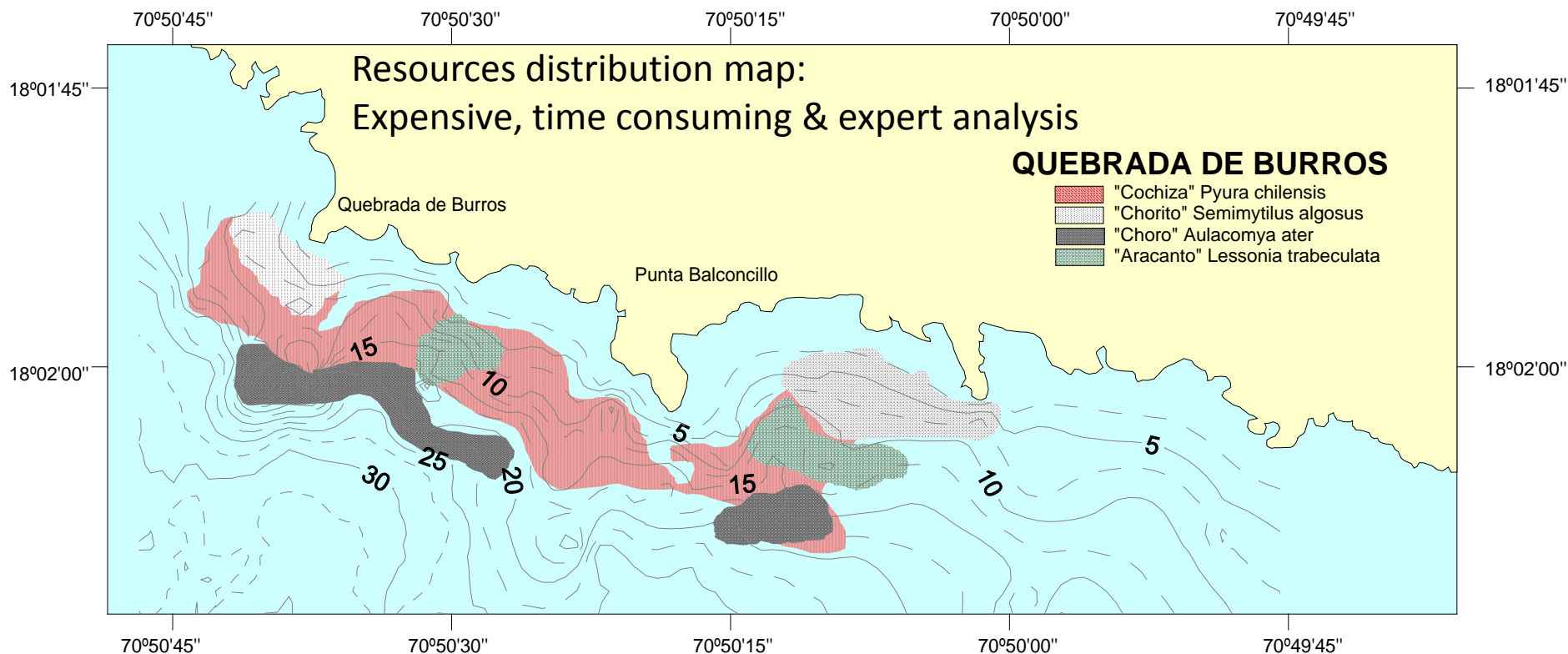
# HOW IT COULD BE DONE BETTER?



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## KEEP IT SIMPLE

More focus on traditional knowledge than in science based knowledge.







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# HOW IT COULD BE DONE BETTER?



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## KEEP IT SIMPLE

Participatory resources mapping: better results with less money



GRE





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# Thanks for the attention!



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