FISHERIES IN MEXICO: RETHINKING RESEARCH AND POLICY

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Allocate:

1. To set apart for a special purpose; designate.

2. To distribute or assign a portion according to a plan; allot.

=> Designate spaces /species + set harvest rates

Fisheries in Mexico

- Aquaculture & fisheries average 1.53 million mt over the past 6 years.
- Aquaculture growing 5%/year. This sends messages
- Capture fisheries average 1.3 million mt

Major features

Species	mt	I	A	Conflicts	Concessions
Sardines	400,000	400,000	----	NO	YES
Tuna	200,000	200,000	----	NO	YES
J squid	60,000	10,000	50,000	YES(1)/NO	YES
Shrimp	60,000	30,000	30,000	YES (3)	YES/NO
Rockfish	100,000	50,000	50,000	YES (2)	NO
Benthic	80,000	----	80,000	NO	YES
Other	400,000	50,000	350,000	NO/YES (1)	NO
Total	1’300,000	740,000	560,000		

=> Concessions reduce interactions and prevent conflicts

Major features

A) Industrial

Fishery	Boats	Fishers	Landing sites
Sardines	75	825	6
Tuna	50	1,000	10
Shrimp	1,200	8,400	15
Other	200	1,000	20
Total	**1,525**	**11,225**	

B) Artisanal

All	**100,000**	**200,000**	**> 2,000**

=> Management entails caring for two sectors, the artisanal being most numerous.

Summary

- 10% fisheries need recovery plans
- 80% at or near MSY
- Excess fishing mortality
- Most (ca. 95%) fishers, artisanal
- 55% catches industrial; 45% artisanal
- Some 30 major ports for industrial; >2,000 landing sites artisanal
- Generally, run for the fish occurs where no concessions

What do we need?

- Maximize value of fisheries catch; reduce costs and minimize environmental impacts
- Develop and transfer technologies as soon as possible
- Alternative activities: Aquaculture & mariculture; others outside fisheries (Not easy)

Current policies

To control fisheries & increase value of landings, Mexico's marine fisheries management is moving from *mainly* input-controlled towards privileged access, output-controlled fisheries

FAO:
Input controls or fishing capacity controls. Restrictions on intensity of gear used to catch, i.e. number/size of vessels, number of hooks, fishing gears deployed, or fishers per boat.

Output controls. Limits on harvest in a period of time, i.e. TAC, quota landed, number of fish caught per day, limited bycatch. BEWARE OF DISCARDED CATCHES.

Instruments available in Mexico's fishing law to move towards privileged access, output-controlled management

- *Regionalized fisheries*. INAPESCA view adopted.

- *Concessions*: Not new; for single-species. Granted on a first-come-first served basis; no explicit conservation measures. Now, for resources within zone; preference to local communities; conservation measures required.

- *State committees & fisheries sub-committees*: Define management goals; empower fishers and local/regional bodies.

- *Product-system*. Value chain of several fisheries as basic administrative units (sound management and added value)

- *Management plans*: Management decisions & coexistence rules; accountability. They existed for a decade, now mandated by law

- *By-catch limits*: Potentially for all fisheries. First ever issued for billfishes in shark fishery (2007). Precedents: 1:1 by-catch ratio in shrimp trawl for upper Gulf of California (early 2000s)

- *TAC/quota*: Many benthic fisheries under quota system (abalone, urchins, clams, snails, octopus, cucumbers). Blue shrimp in Sinaloa, first time in 2009.

Challenges for rights-based fishing

1. *Ecosystem approach*. Need a basic framework with definitions, indicators and scopes
2. *Management plans*. Develop/implement, particularly for recovery purposes
3. *Regionalized fishing*. Privileged access needs to be strengthened in rulings of the fishing law
4. *State committees*. Install, implement management plans.

5. *Generalize concessions*. Hand in hand with regionalized fishing; need definitions of "turfs" & management units (species, stakeholders)
6. *Capacity building*. Biomass/TAC evaluations, quota allocations, market design of limited access privilege programs (purpose, products, transition, market for products)
7. *ITQ*. Define clearly in the law the possibility to transfer quota
8. *A specific policy* to generate incentives for sustainable fishing
9. *Markets*. Efforts to allocate must be accompanied by parallel efforts to find markets for sustainable fisheries. Otherwise, might discourage all parties.
10. *Quota transferability*. Might not be feasible for "outsiders" i.e. fishers or actors from other communities or not included in the concessions.

A CASE STUDY OF ITQs:

STRATEGIES AND CHALLENGES

Pacific shrimp

Management: Closed season (Apr-Aug) to protect spawning and growth. Fishing effort: 1,000 industrial boats; 25,000 pangas (artisanal). Status: overall stable (45,000 mt/y); blue and mainly white shrimp, need recovery plans.

Main concerns: high costs + decreasing trend of market price; by-catch. Competition between industrial-artisanal.

Current efforts: technological developments (environmental friendly + lower costs); ***ITQ pilot in Sinaloa*** for artisanal sector (ca. 10,000 fishers).

Challenges faced to allocate blue shrimp quota in 2009

1. First time
2. Competition between industrials and artisanal. Blue shrimp massively migrates from lagoons to adjacent coast given a combination of body size and strong tidal currents (full/new moon)
3. Both sectors agreed in principle
4. Only artisanal accepted at the end. Industrials challenged to first demonstrate effectiveness of ITQ system within artisanal sector

Challenges faced to allocate blue shrimp quota in 2009

Strategic actions

1. *Buy-in* and support from administrative branch: KEY
2. *Bottom-up*. Massive diffusion of concept: Field work by EDF was crucial
3. *Top-down*. Convince key actors: numerous meetings of administrative branch with one sector at a time. WWF-EDF.
4. *TAC setting*. Field data, models (recruitment, migration, growth). For five coastal lagoons and adjacent shallow coastal waters
5. *Quota allocation*. TAC was divided according to historical reports by cooperative in a given coastal lagoon; ca. grandfathering
6. *Transparency*, *reliability*. Massive monitoring by third party and scientific observers

Lessons

1. Against all odds, artisanal fishers understood the system and embraced it fairly quickly
2. Attachment to their turf may have facilitated artisanal sector to participate
3. We moved towards ITQs for the most crucial fishery in the most critical region in a record time (one year)
4. Need more arguments to convince industrial sector. Availability of information, technical studies not sufficient
5. Political momentum important
6. Coordination amongst partners was crucial; each played its role. NGOs were instrumental in grounds roots work: diffusion, capacity building, trust building

Concluding remarks

1. If it was possible with shrimp, it may be done for other
2. Allocate entails clear definition of access via concessions mainly, and use available information to set TAC and quota
3. Mexican law not oriented to ITQ; instruments do facilitate allocation of rights. Precedents: historical TAC system for benthic resources in addition to 2009 TAC for shrimp
4. Buy-in from fishers is crucial
5. Need mechanisms to accompany and build trust within fishers

Thank you