

Recreational and Artisanal Fisheries

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Session Outline

- Small-scale fisheries overview
- Management challenges
- Case studies

What is a small-scale fishery?

- Artisanal fisheries:
 - >90% of fishing jobs worldwide
 - Almost a quarter of world's catch
 - Provides critical income and protein to hundreds of millions
- Recreational fishing:
 - Involves 100 million people in N. America, Europe, Oceania
 - 15-20% of Australians fish
 - Supports 90,000 jobs direct and indirect in Australia
 - Related industries worth \$3 billion
 - May be a significant portion of the catch for some species

Artisanal fisheries

- Low level technology and requiring minimal infrastructure
- Up to half the global fisheries landings
- Most of the harvest is for local consumption or sale within the community
- Usually harvest many different resources, mostly close to shore, many sedentary species
- May involve isolated communities
- Communities may have limited alternatives for food or employment

Fisheries management tools

Catch



Effort



Total Allowable Catch (TAC) for the fishery



Licences and restrictions (access or capacity)



Landing fees



Technical restrictions (gear or fishing practice)



Individual quotas (shares of the TAC)



Subsidies / taxation of inputs (Fuel; support for modernisation)



Selectivity criteria (age / size / sex)



Limit number of fishing days (days at sea; closed periods)

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Case study: Chilean loco fishery

- Carnivorous snail, eaten by local people for over 1000 years. Harvested by diving in shallow water or walking on the coast at low tide.
- Pre-1974, small fishery for local consumption
- In the 1970s, Chilean government policy changed to encourage exports, subsidies granted for boats and processing plants



Concholepas concholepas

Case study: Chilean loco fishery

- Prices grew rapidly, new markets were opened up (esp. in Asia), the catch grew 4-6x by 1980
- Conflicts erupted, and the fishery declined through the 1980s
- Traditional management measures failed, and the fishery was closed in 1989
- Research clearly showed fishing caused the decline



Case study: Chilean loco fishery

- Along 4100km of coastline, Chile has 425 small fishing communities called *caletas*
- Traditionally they sell to a local market, and only fish their local resources
- May harvest over 20 types of fish and shellfish, but the loco was a major income
- Other employment is hard to find



Case study: Chilean loco fishery

- Chilean fisheries management was very “top-down”
- Data collection, research, regulation, compliance, etc are all handled centrally
- Top-down works well for a large-scale fishery with controlled access that targets a single stock
- Chilean caletas are different:
 - Many access points, many different fleets
 - Many of the target species (e.g. loco) are sedentary
 - Biology (growth rates, size at maturity) vary regionally
 - Coastline is too long for effective management, monitoring, or enforcement

Case study: Chilean loco fishery

- In 1991, Chile formed MEABRs (Management and Exploitation Areas for Benthic Resources)
- Caletas could apply for exclusive access to harvest benthic resources on their coastline
- Each can do their own resource inventory and make their own management plan
- The central government evaluates these plans and monitors their implementation
- Caletas also have the legal right to exclude any outsiders from fishing in their area

Case study: Chilean loco fishery

- It works!
- There are now 547 registered MEABRs, covering 103,000ha
- Loco in the caleta areas are much more abundant
- Overall harvest has increased, incomes have also increased
- Caleta members feel empowered and in control of their own future



Artisanal fisheries: lessons

- Controlled access is vital
- Most common management tool is TURFs (Territorial Users Right to Fish)
- Mostly useful for sedentary resources
- Allow for data collection, management planning, and enforcement at very fine scales
- Almost always community based (e.g. caletas)
- Social and political leadership are needed

Group activity

- Consider a small-scale fishery that you are familiar with.
- How is the fishery managed at present?
- Identify what data are currently collected, and how the fishery is being assessed (if at all).
- What are some other ways that the fishery could be managed?



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