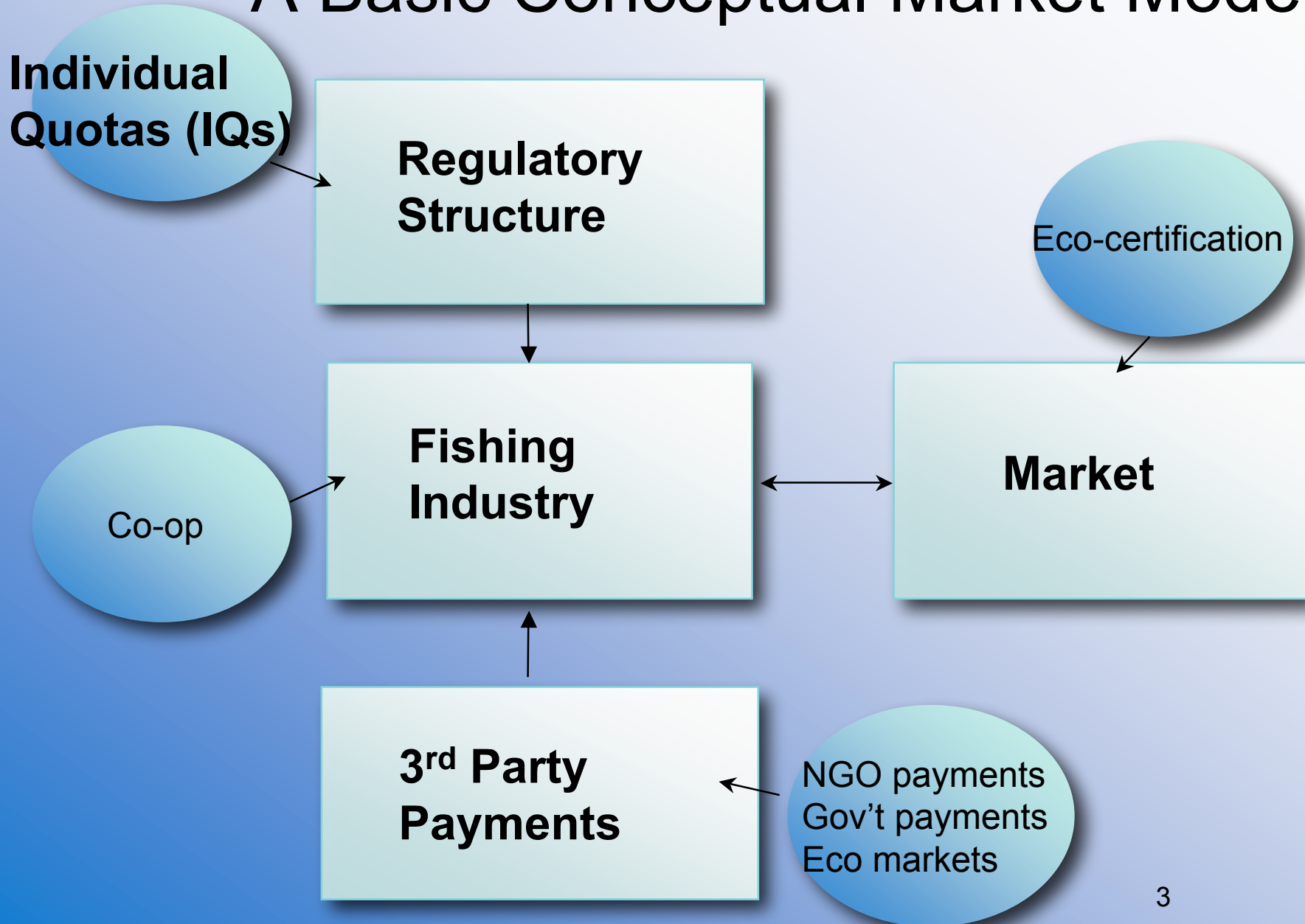


Business Opportunities for Sustainable Salmon Fisheries

Exciting opportunities are being used to improve fishery sustainability and economic performance around the world

- Individual Quotas (IQ's)
- Cooperatives/Private Harvest Agreements
- Eco-certification
- Bringing 3rd party non-commercial value for salmon into the market

A Basic Conceptual Market Model



INDIVIDUAL QUOTAS: STRUCTURE

- Fishery managers assign to each stakeholder a right to fish a certain percentage of the total allowable catch
- Each year, the total allowable catch is set by scientists and managers
- Each stakeholder's allowable catch is equal to his/her quota percentage of the total allowable catch
 - *Example:* If the total allowable catch is 14,000 tons of snapper, and Blue Sky Fishing Company has a 0.2% quota, Blue Sky may harvest up to 28 tons of snapper
- Optional: Allow for transfer of quotas among stakeholders

INDIVIDUAL QUOTAS: BENEFITS

- Ensures sustainability by first setting an absolute cap on fishing levels and giving each fisher the assurance that he/she will have a right to catches in future years
- Eliminates race for fish
- Improves quality of fish
- Increases price for fish
- Protects safety of fisher by undercutting dangerous races for fish
- Creates voluntary, self-imposed monitoring efforts since each fisher has an incentive for others to follow the law
 - Helps compliance
 - Provides detailed information through required reporting measures
- Increases economic efficiency as quotas eventually end up in the hands of fishers who value them the most

AN INCREASINGLY POPULAR BUSINESS MODEL: INDIVIDUAL QUOTAS

1986 – New Zealand groundfish

1991 – British Columbia halibut

1995 – Alaska halibut

2007 – Gulf of Mexico red snapper

Others:

Atlantic Surf Clam, Iceland herring, Australian Blue Fin Tuna,
Netherlands flatfish

AN EXAMPLE BY THE NUMBERS: BRITISH COLUMBIA HALIBUT

	No Individual Quotas	Individual Quotas
Fishing season	6 days	245 days
Percentage of catch sold fresh	42%	94%
Price per pound	\$0.22	\$0.99

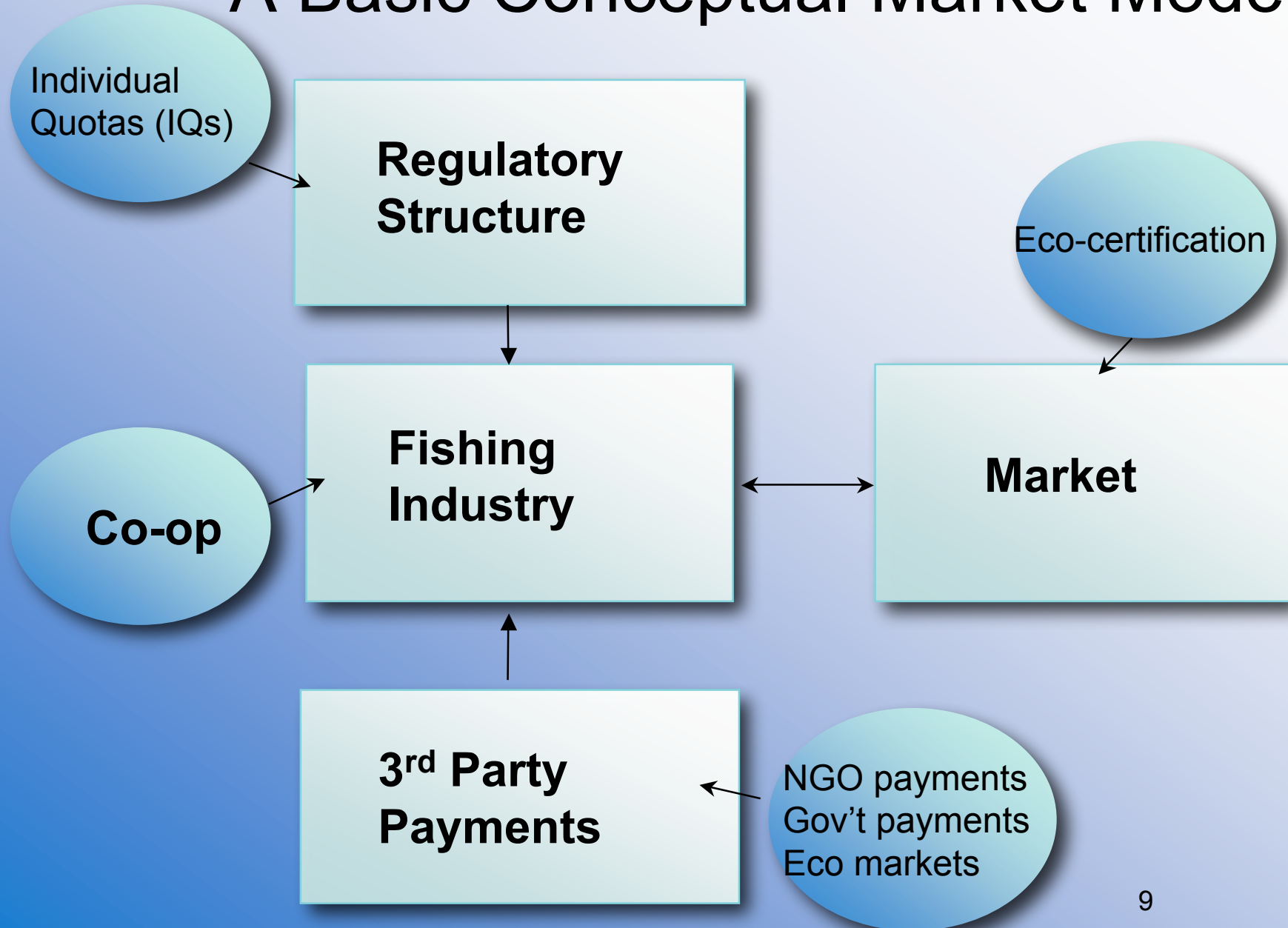
INDIVIDUAL QUOTAS: CHALLENGES

- Allocation of quotas is politically difficult
 - Allocation by catch history – avoids extracting fees from fishers but antagonizes those with inaccurately low figures and cuts out new entrants
 - Allocation by auction – avoids favoring particular fishers but imposes controversial costs and antagonizes established players
- High grading – smaller fish are discarded and may die

Potential solutions: Monitoring at sea

Differential landing fee

A Basic Conceptual Market Model



Cooperatives have important differences from IQ's but have also been used effectively in practice

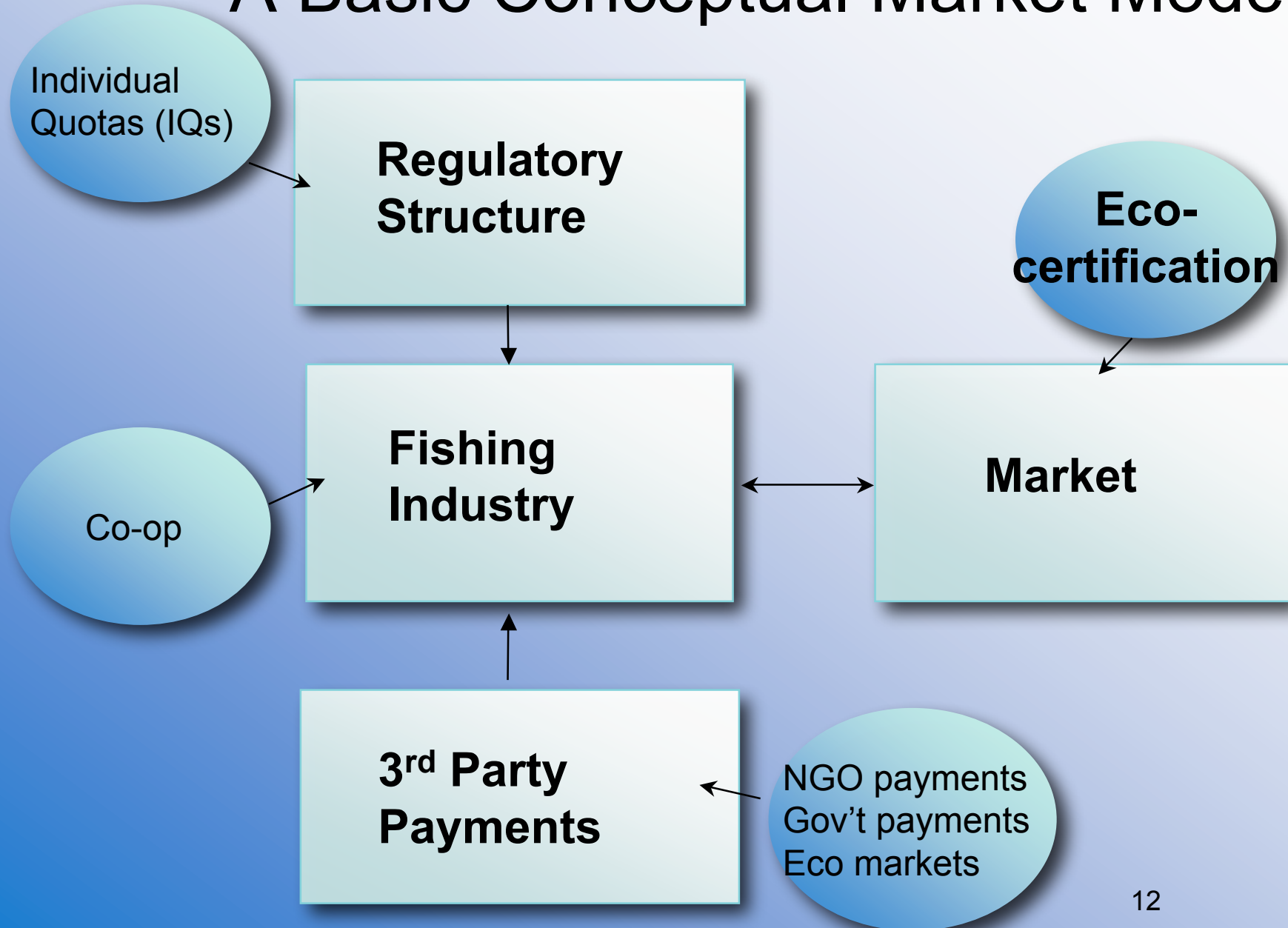
	Individual Quotas	Coops
Share Allocation	Government allocates shares	Individuals allocate shares
Rights Transferability	Unrestricted-can transfer to anyone	Restricted-can only transfer to group members
Rights Duration	Multi year / perpetual	Typically 1yr Renewable

- What makes a successful co-op?
 - Must have a way to allocate
 - Days Share
 - Sector Share
 - Catches can be measured & monitored
 - Punishment mechanisms exist
 - Every party in the value chain must see profits – Aligned incentives

Cooperatives are another vehicle that can help create property rights and aligned incentives

- Challenges to forming Co-ops
 - Better fishers don't have an economic incentive to join
 - How to allow new entrants is often an problem
 - May have sunset clause
 - → overcapacity due to anticipation of race once co-op disbanded
 - Antitrust may overturn (legal constraints)
- Pacific Whiting Cooperative
 - Harvest waste fell 60% from 2.5kg / metric ton to 1kg / metric ton
 - Recovery of Surimi (used for imitation fish products) increase 24%
 - Daily Catch dropped & higher quality resulted from slower pace
- North Pacific Pollock Cooperative
 - Alaska vessels dropped from 28 to 16
 - Season length doubled to 149 days
 - Approximate production gain of 30%
- Oregon Herring Sac Roe
 - Increased value of catch by 25%
 - Increased season length from hours to months

A Basic Conceptual Market Model



Eco-Certification: Jury still out; could hold future potential

- Seafood eco-certification currently exists: Marine Stewardship Council (MSC)
 - Alaska Salmon fisheries
- Benefits of certification have yet to be clearly demonstrated for the Alaska salmon fishery
- Yet awareness, demand are currently growing quickly
 - (Wal Mart)
- Going forward, MSC holds potential to help:
 - differentiate product,
 - maintain/expand market share,
 - raise product price, especially in niche markets



Further incorporating the (often non-commercial) values of 3rd parties into the market is an additional opportunity

- Salmon provide significant cultural, recreational, aesthetic and ecosystem value to society outside of their commercial harvest
- How could we to better incorporate society's non-commercial value for salmon into resource allocation, to improve outcomes for all parties involved?
- ex: side-payments of North Atlantic Salmon Fund (NASF)

Fishery Business Opportunities

- Not offered as panaceas, but as real opportunities to create increased value in fisheries, aligning incentives precisely with the protection or enhancement of sustainability.
- Requires entrepreneurial creativity in policy making and management to unlock this potential value