Can a California Abalone Fishing Cooperative be Economically Viable and Sustainable?

Heather Hodges · Ariel Jacobs · Dan Ovando · Josh Uecker · Kristen Bor / Advisor: Dr. Chris Costello / Client: California Abalone Association

Background

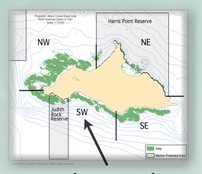
Red Abalone





Abalone populations declined in the 1900s due to fishing pressure, environmental variability, lack of data, and an inappropriate scale of management.





A recovering population exists at the southwest zone of San Miguel Island, and the California Fish and Game Commission is considering opening a small-scale commercial fishery. In response, the California Abalone Association (CAA) has developed a plan for a fishing cooperative.

FISHERS AS STEWARDS

A cooperative is a group of fishers who are given dedicated access to a marine resource, as well as greater responsibility in harvesting decisions, data collection, and monitoring.

Two options for allocating harvest between the cooperative and the recreational sector

Commercial 90% / Recreational 10%

Commercial 50% / Recreational 50%

Methods & Economic Viability Model

General Approach

- ✳Examine cooperative's costs and benefits over 15 years
- ✳Incorporate environmental and economic uncertainty
- ✳Make recommendations for cooperative structure

Benefits

Market Value



Fishing



Research & Monitoring



Costs

Harvest Labeling



Administrative

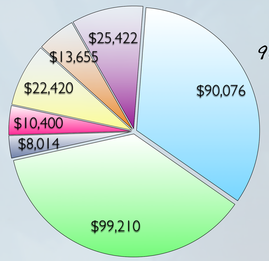


Marketing



Enforcement & Taxes

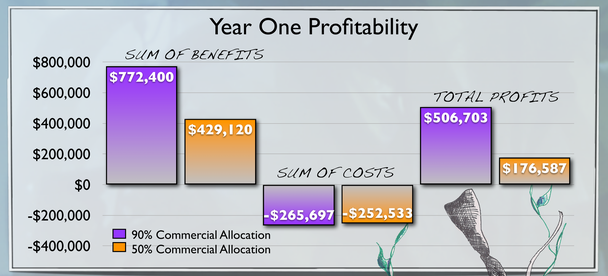




Summary of Costs

90% Commercial Allocation

- Labeling Costs
- Fishing Costs
- Data Collection and Monitoring
- Enforcement Costs
- Taxes
- Marketing and Transport
- Administrative Costs

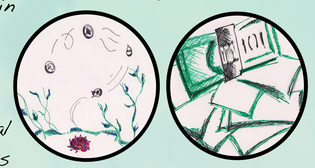


Long-term Results & Recommendations

UNCERTAINTY

Cooperative's long term success depends on environmental and economic uncertainty which were both incorporated into the Economic Viability Model

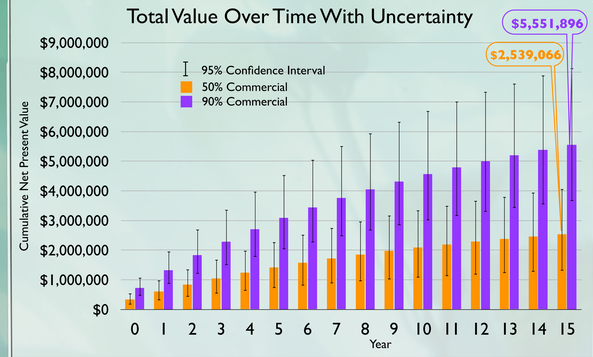
Uncertainty in future population due to environmental fluctuations



Uncertainty in values for different costs and benefits

YES - Cooperative is Economically Viable

Total Value Over Time With Uncertainty



There are other elements that will contribute to cooperative's success

- ✳ Closely monitor population and adjust harvest based on adaptive management approach
- ✳ Cooperate with enforcement to minimize poaching
- ✳ Spatially isolate recreational and commercial sectors
- ✳ Collaborate with government and universities
- ✳ Keep an open dialogue with community
- ✳ Reduce membership size
- ✳ Coordinate marketing

CONCLUSION

This CAA abalone cooperative is economically viable.

Properly implemented, this could be a tool for sustainable management of California red abalone.



Acknowledgements: The Bren School of Environmental Science and Management, the Sustainable Fisheries Group, the James S. Bower Foundation, the California Abalone Association, Dr. Chris Costello, Dr. Robert Deacon, Dr. Hunter Lenihan, Chuck Cook, Dr. Bruce Kendall, Dr. Jenn Caselle, Sarah Valencia, Jono Wilson, Tal Ben-Horin, Matt Kay, and PISCO

Website: This is a partial summary of our results. Please visit our website at http://fiesta.bren.ucsb.edu/~abalone to download our final paper "Economic Viability and Sustainable Management of a California Red Abalone Fishing Cooperative"