SHARING THE CONSERVATION BURDEN

Steven Martell[†], Ian Stewart, Catarina Wor, Bruce Leaman, and James Ianelli [‡]

[†] International Pacific Halibut Commission, [‡]NOAA National Marine Fisheries Service

Objectives

1. Explore options for developing index-based PSC limts.
2. Under fixed allocation agreements, explore the conservation incentives for each sector.
3. Create the necessary quantitative tools for analyizing harvest policy options for joint managmenet.

Key Points

- Fixed PSC limits create a perverse conservation incentive.
- NPFMC is interested in developing an indexed based PSC limit.
- Joint management requires an allocation agreement.
- Allocations can be based on yield per recruit (**YPR**), or mortality per recruit (**MPR**).
- MPR allocations provide net benefits to all sectors for any given conservation effort.
- YPR allocations provide net benefits only to the sector that participates in the conservation effort.
- Yield equivalence compares the pound for pound loss or gains between two or more sectors.
- Constant exploitation rate policy does not imply the same life-time mortality per recruit (MPR) in each of the regulatory areas.

Perverse Conservation Incentives

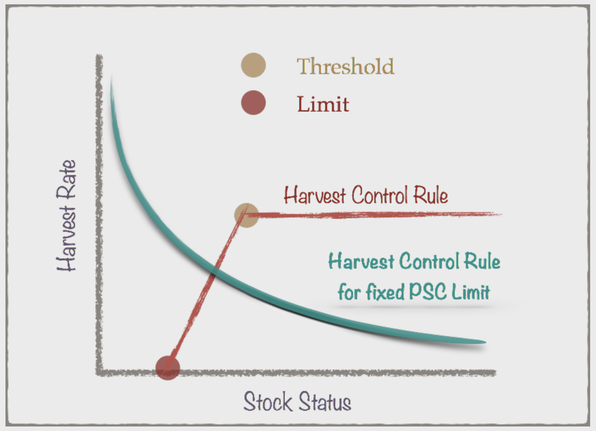

Fig. 1: General harvest control rule used for setting ABC and OFLs. Overlaid is the harvest rate calculation necessary for calculating a fixed PSC limit; **harvest rate increases as abundance decreases**.

Joint Management

- A harvest policy for joint managment requires an allocation agreement.
- 72.6% of the total removals removed by the commercial fishery which accounts for 35.7% of the MPR.
- 16.5% of the total removals in the form of bycatch, accounting for 54.2% of the MPR.

Sector	Removals (Mlb)	YPR proportion	MPR proportion
Commercial	59730	72.6%	35.7%
Bycatch	13298	16.5%	54.2%
Sport	8285	10.4%	9.1%
Personal	1051	1.3%	0.8%

Fig. 2: Average removals between 1990 and 2014, proportion yield removed, and the precent of the .