

Managing Halibut for the Future

The total allowable catch (TAC), or catch limit, for a fishery is based on estimated stock **abundance**. Managers establish catch limits to promote fishing while protecting the reproductive value of the fishing stock.

Managers must take into account:

- How much fish is removed
- Size and maturity of fish removed

Halibut Management Now

- ◇ The International Pacific Halibut Commission (IPHC) sets catch limits for the directed fishery. The IPHC adjusts catch limits annually in response to changes in abundance.
- ◇ The North Pacific Fishery Management Council (NPFMC) manages halibut bycatch with a fixed cap, measured in pounds. This cap does not change as abundance changes.
- ◇ In the past decade, the abundance of mature halibut (>26 inches) has declined by **close to 50%**.
- ◇ The IPHC deducts bycatch from the TAC before directed fishery catch limits are set. The result has been a *de facto* reallocation of halibut from the directed the bycatch fisheries. In effect, bycatch receives priority.

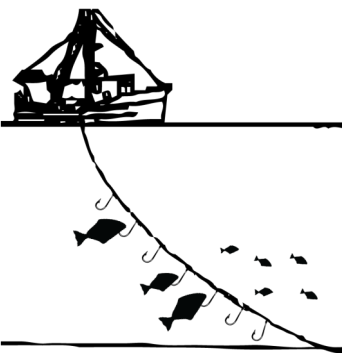
Reproductive Value

At the beginning of its life, a fish has full reproductive value: a lifetime of reproductive potential. Removing a fish at this point has the greatest impact on the spawning potential of the stock.

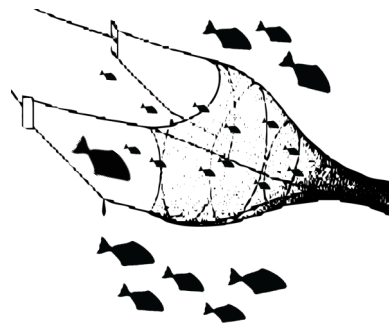
This impact is also often described by the terms **Mortality Per Recruit** and **Fishery Footprint**.



The trawl fishery has a proportionally greater impact on the future reproductive value of the halibut stock than the directed fishery. Why?



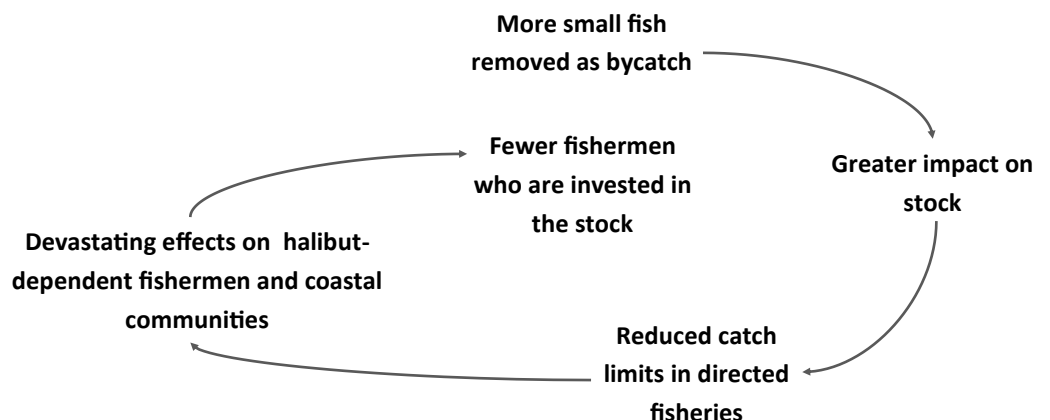
Female halibut are 50% mature at age 11.
The directed fishery captures primarily 8-16 year old fish. Younger halibut are unable to bite longline hooks.



Halibut are caught in trawl nets by age 2-4 years, long before reaching maturity.
Because bycatch caps are set in pounds, there's more incentive to avoid or release large halibut.

The Result

The average halibut taken as bycatch is younger and has more reproductive value than the average halibut taken in the directed fishery:



Managing Halibut for the Future: Abundance–Based Management

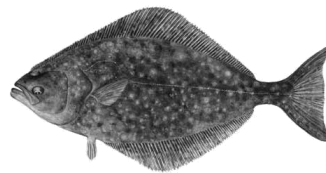
The current system places the burden of conservation on the directed fisheries and imperils the future of the stock.

The IPHC is moving towards a harvest strategy that explicitly includes the mortality of young halibut in the annual calculations of abundance.

Going forward, managers must work together to implement a policy that links both catch and bycatch limits to *halibut abundance levels*.

The IPHC can only control the actions of the directed fishery. The NPFMC needs to commit to protecting the spawning capital—and rebuilding potential—of the halibut stock.

Approaches to Abundance–Based Management



Fixed Percentage

Abundance-based management could divvy up the percentage of the total allowable catch that would go to each group— but has to take into consideration that bycatch and directed fisheries remove different components of the stock.

This would move management away from a fixed bycatch cap, independent of the status of the stock, and would prevent the directed fishery’s portion from evaporating in times of lower abundance.

However, this management framework would do nothing to de-incentivize the removal of small or juvenile halibut.

Fixed Impact

Under a new management framework proposed by IPHC staff, each sector would be apportioned a fixed fraction of the reproductive value, or “fishery footprint,” rather than the yield.

- ◇ Each sector would be responsible for minimizing its overall impact on the future of the halibut stock (not just minimizing pounds of fish caught).
- ◇ This would change harmful incentives in the bycatch fishery, and allow the directed fishery to maximize its yield within conservation metrics.
- ◇ This framework takes into account the fact that bycatch and directed fisheries are catching different components of the stock, and adjusts their apportionments accordingly.

A fixed impact approach is responsive to the size of the fish caught by each sector:

A sector catching disproportionately smaller fish would have to catch fewer to stay within the allowed fishery footprint.



VS.

A sector catching larger fish would be able to catch more fish and maintain the same fishery footprint.



The Bottom Line: Small Fish are Our Future. Both catch AND bycatch must be tied to abundance.

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