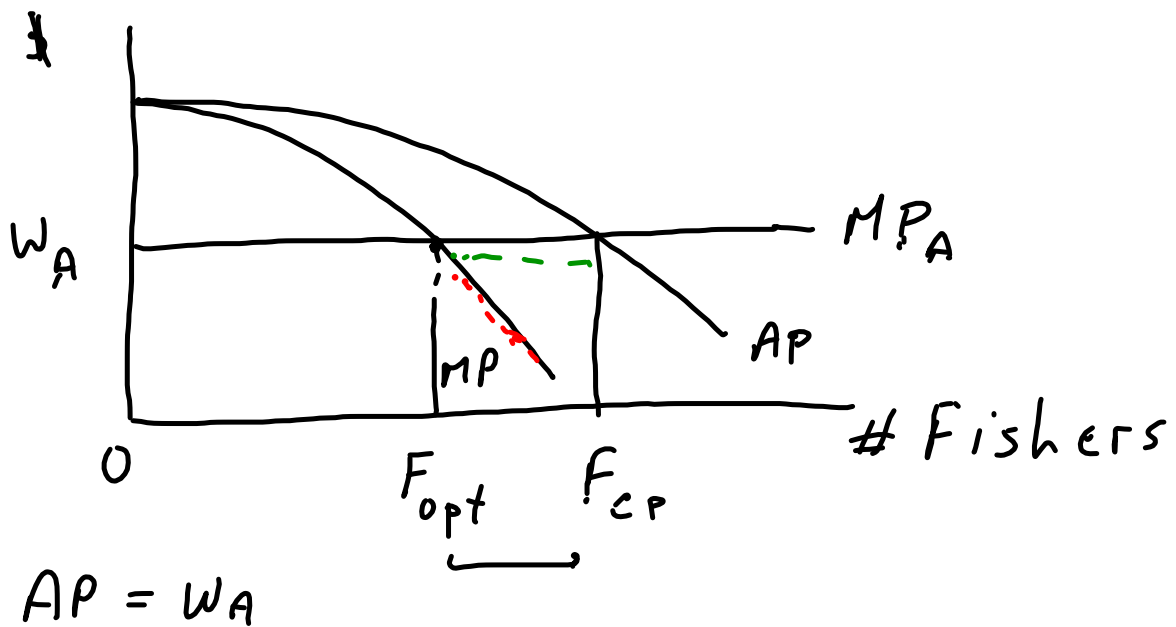


Open access - no exclusion right



Overuse

↳ cod fishery Atl. Atlantic

↳ grazing in U.S. West

BLM

↳ Bureau of Land Management
fec - Animal Unit Cow/Calf

↳ ration - BLM right to exclude

Seville Long Term Ecological
Research

Policy → exclusion → assign
property rights - enforced.
how enforced?

Limits on total catch

{ - quantity -
- season

Payoff → first - quick catch
race → bigger fishing boats
spending → rent seeking

$$\pi_F = TR - TC$$
$$P \cdot Q - AC \uparrow \cdot Q$$

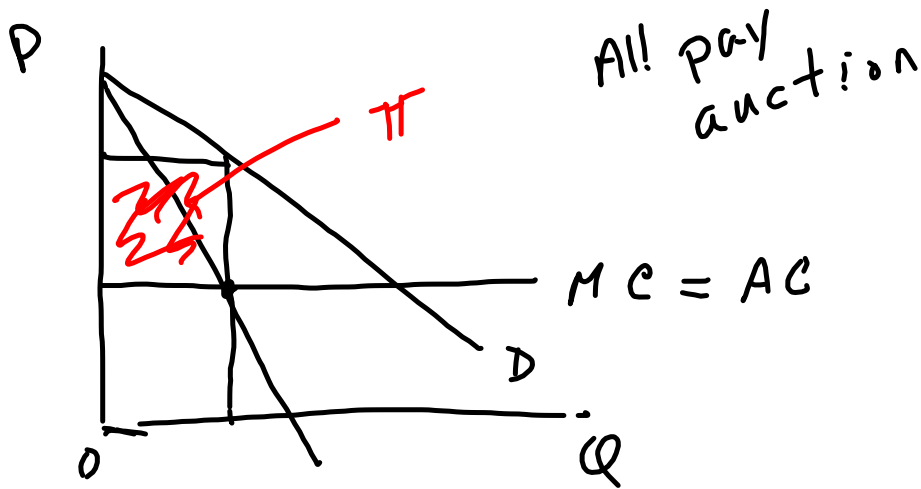
Rent seeking - contest

Fixed prize

No limit on effort (cost) to
win prize

spend on faster catch

↳ bigger boats



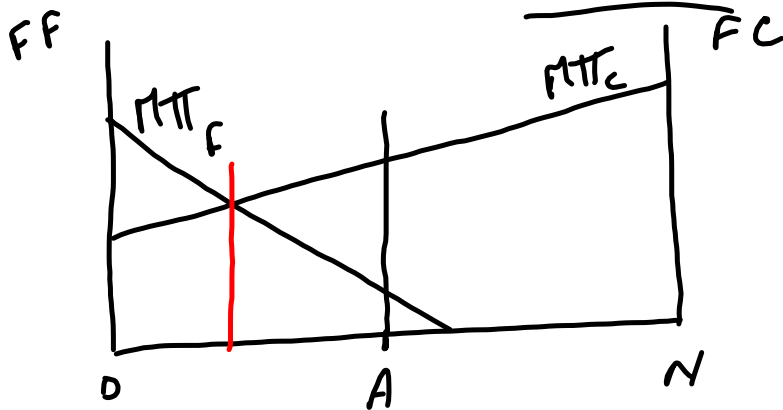
patent race - 10 competitors
 $\pi = 1$ million

R + D $P_W = 0.1$ $P_L = 0.9$

W \rightarrow \$1mm $EV = P_W \cdot \$1mm$

L \rightarrow \$0 $= \$100,000$

Individually Tradeable Quotas ITQs



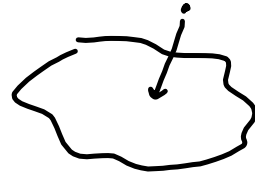
Trade
 Frank - sell
 Charlie - buy

voluntary actions CPR

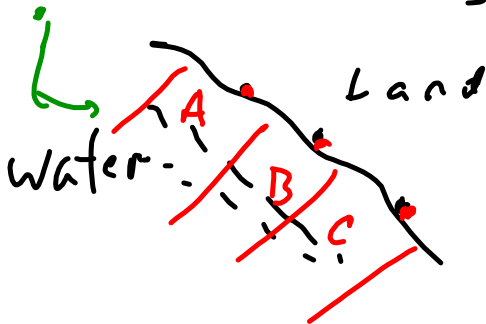
Elinor Ostrom -

- small numbers.
- closed resource

Horizontal drilling



Turkish Fishing - rotation & total catch



open not closed
open access