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# Commercial Allocation Issues

## Sharing the Fish 06

- Allocation Issues in Fisheries Management -

Fremantle, Perth, Western Australia

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# Topic

The impact of fishing rights allocations on:

1. Economic efficiency

- The flow of total benefits from the resource

2. Distribution of benefits

- Who gets what?

(Bearing on equity and fairness)

Analyze and describe – avoid value judgments

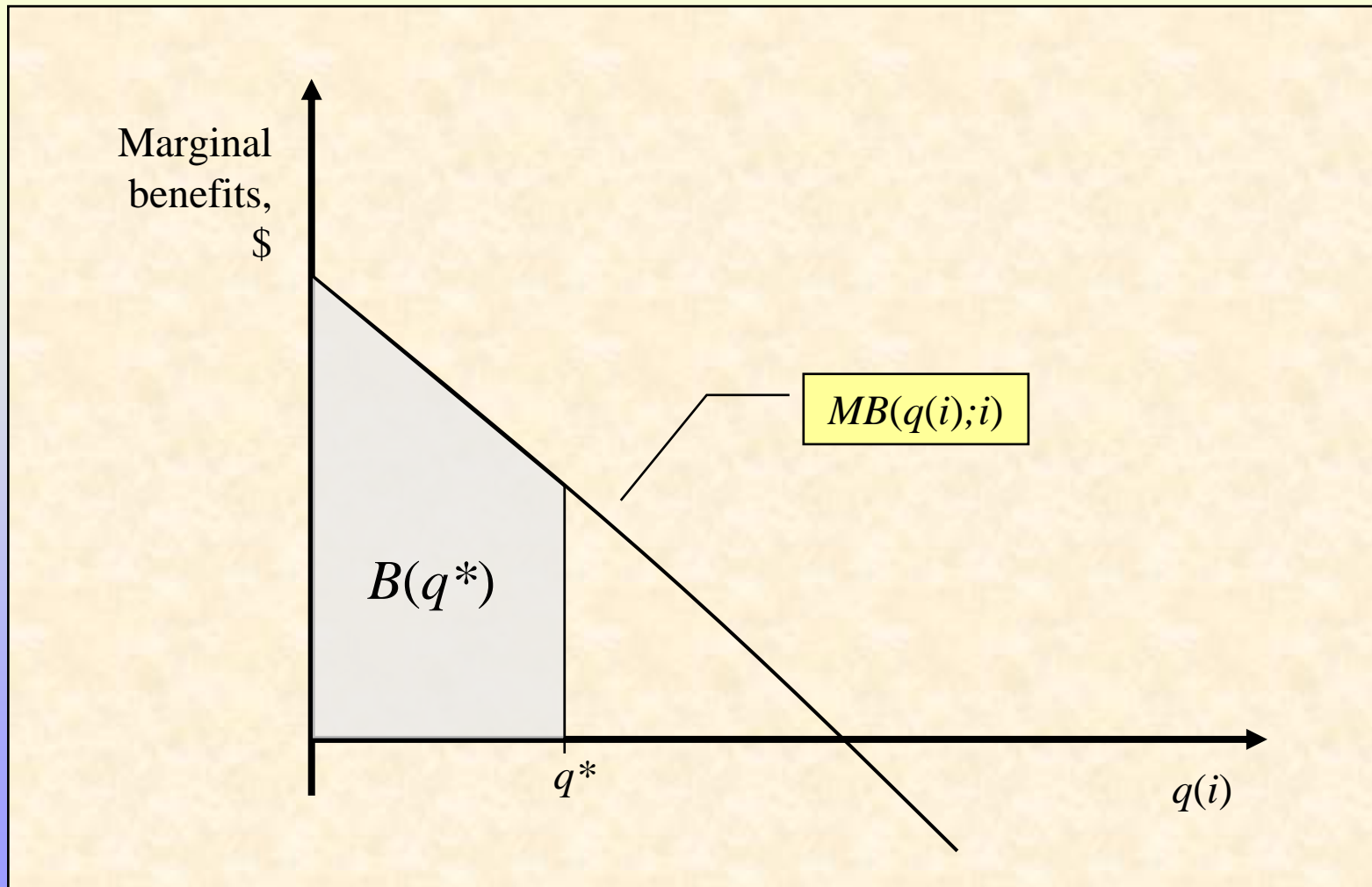
# Generality/limitations of analysis

- Applies to any valuable fishing right
  - Access licences, effort rights, gear rights, investment rights, harvesting quotas, TURFs etc.
- Formally restricted to commercial allocations
  - But basic approach can be extended to incorporate
    - (i) Recreational fishing
    - (ii) Conservation demand
  - Many of the results carry through to these

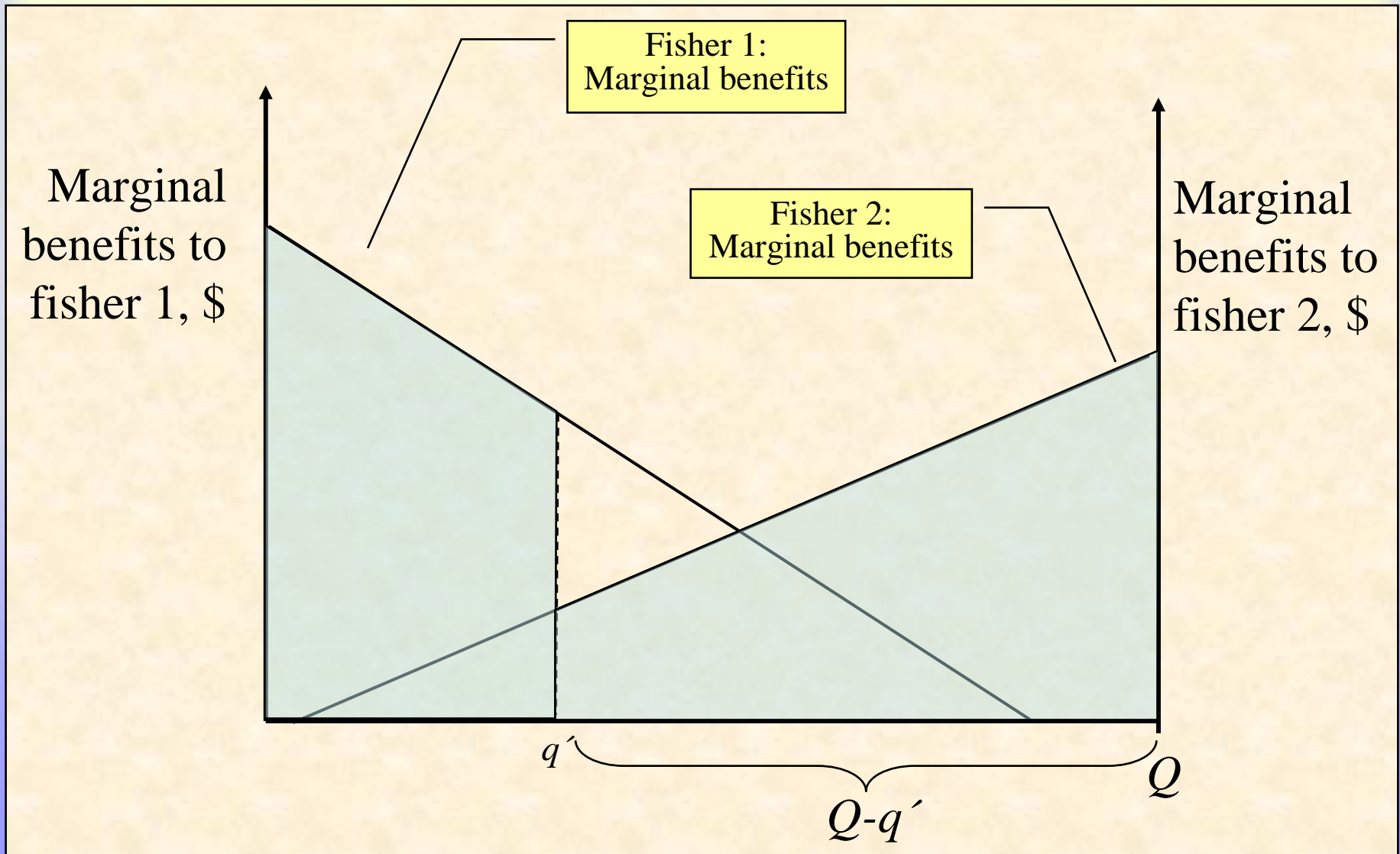
# Subject is:

- Inherently complicated
  - Dynamic nature of resource
  - Heterogeneous fishers
- But, key results can be deduced and explained in relatively simple terms
  - Only need two fishers (...at a time)
  - Consider benefits in PV-terms ( $\Rightarrow$  static)
  - Measure benefits in a common unit (..unrestrictive)

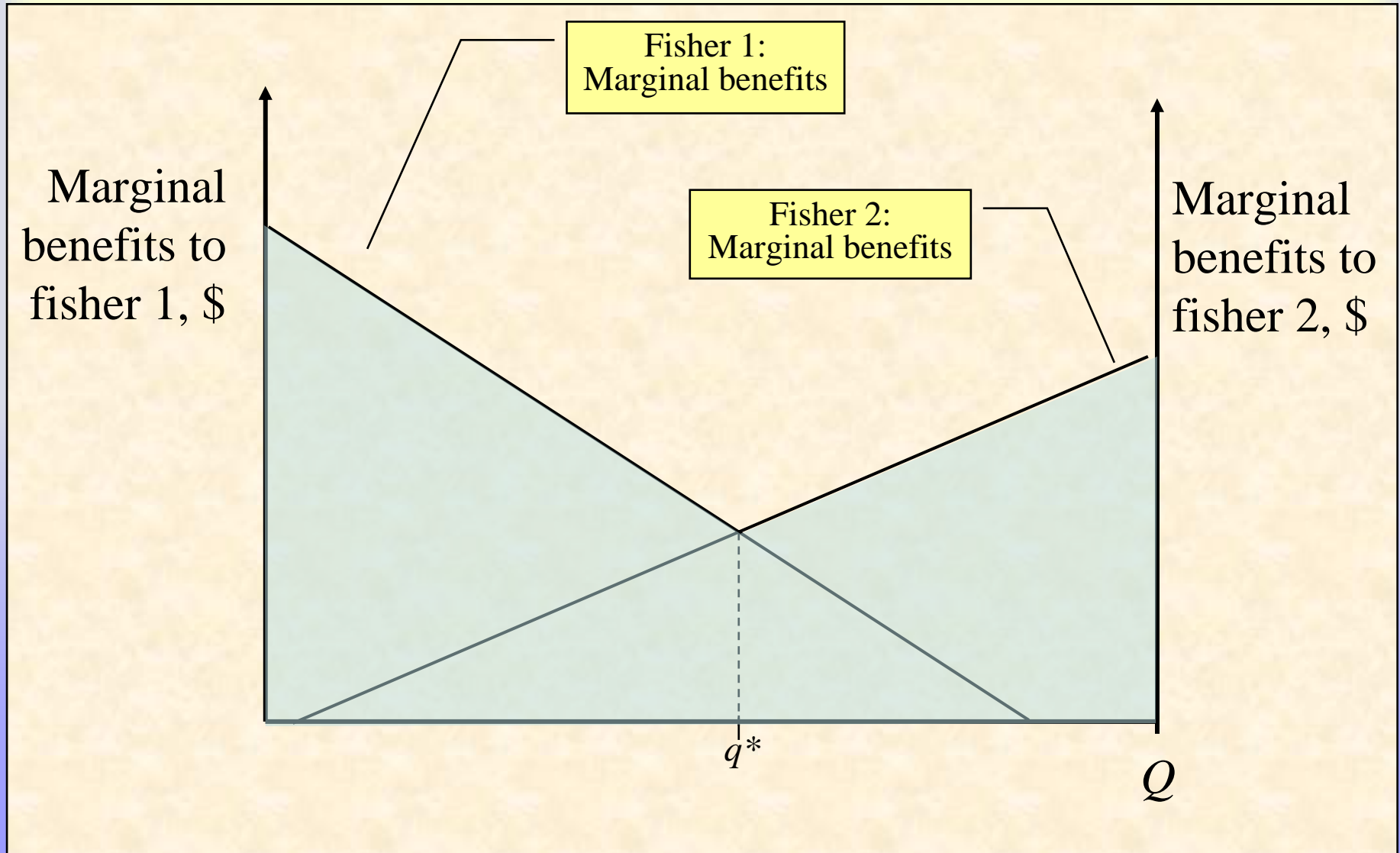
# One fisher: Benefits of rights use



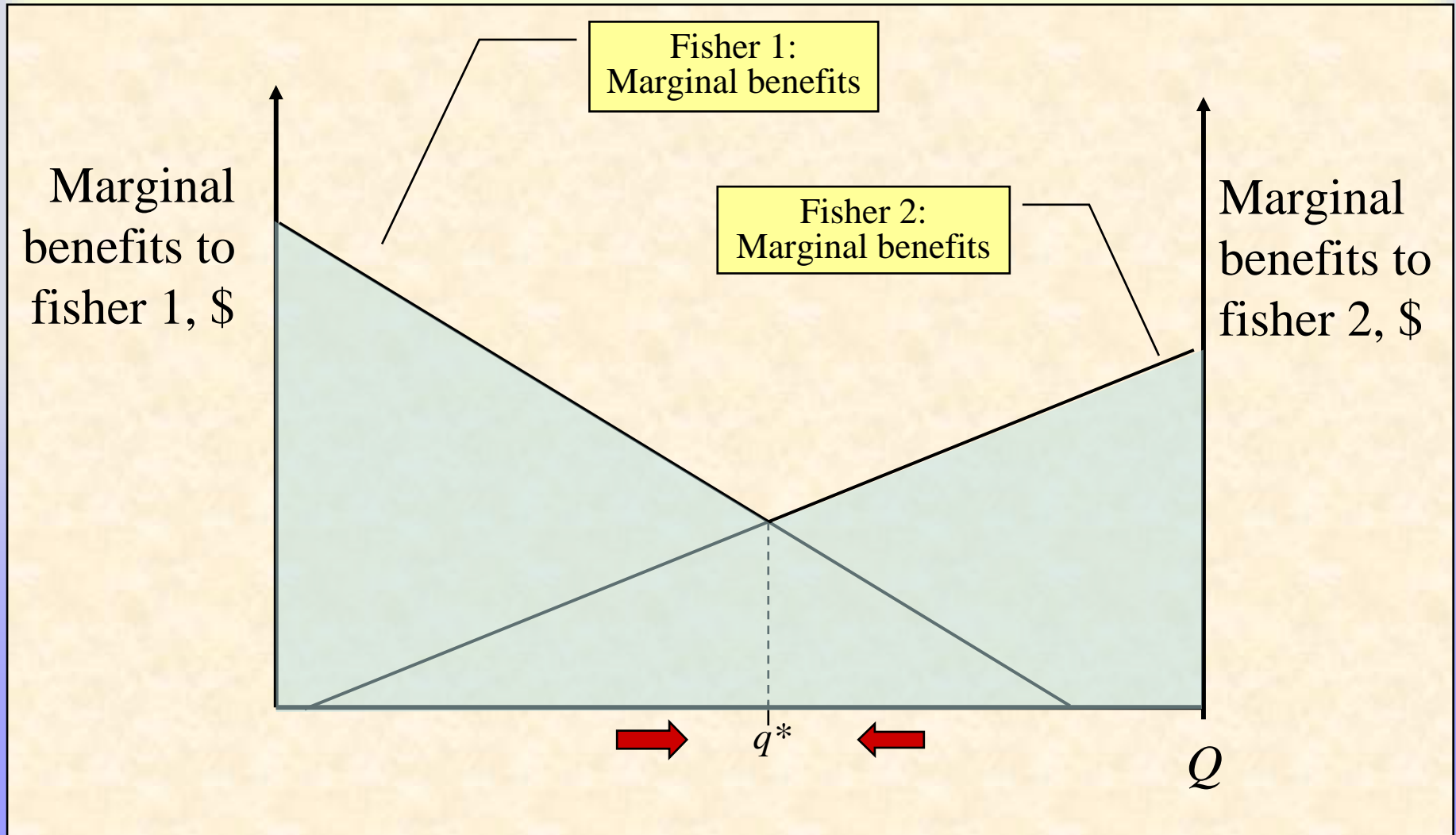
# Two fishers: Division of rights use



# Optimal division of rights use



# Free trade leads to optimal division in rights use

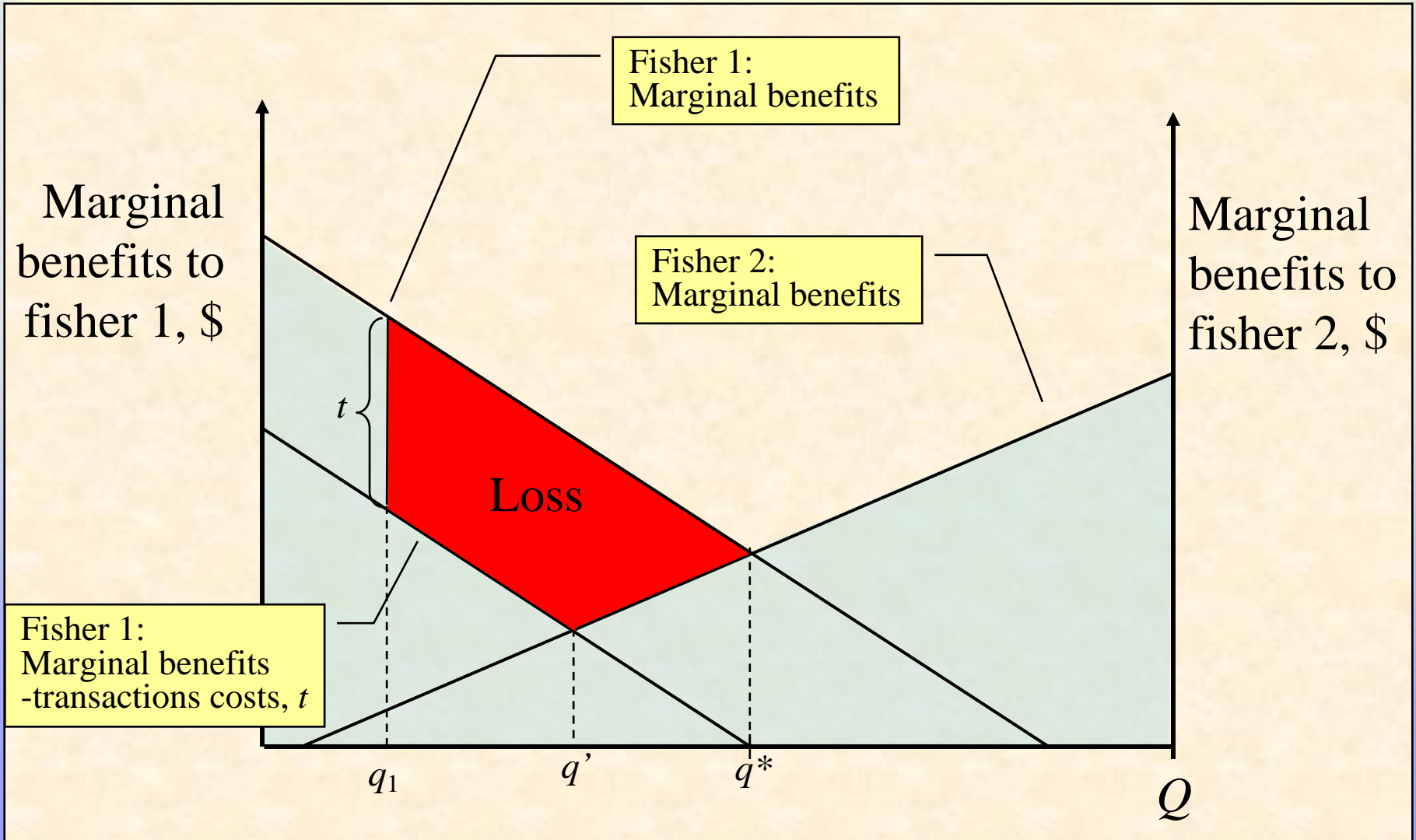


## Result 1

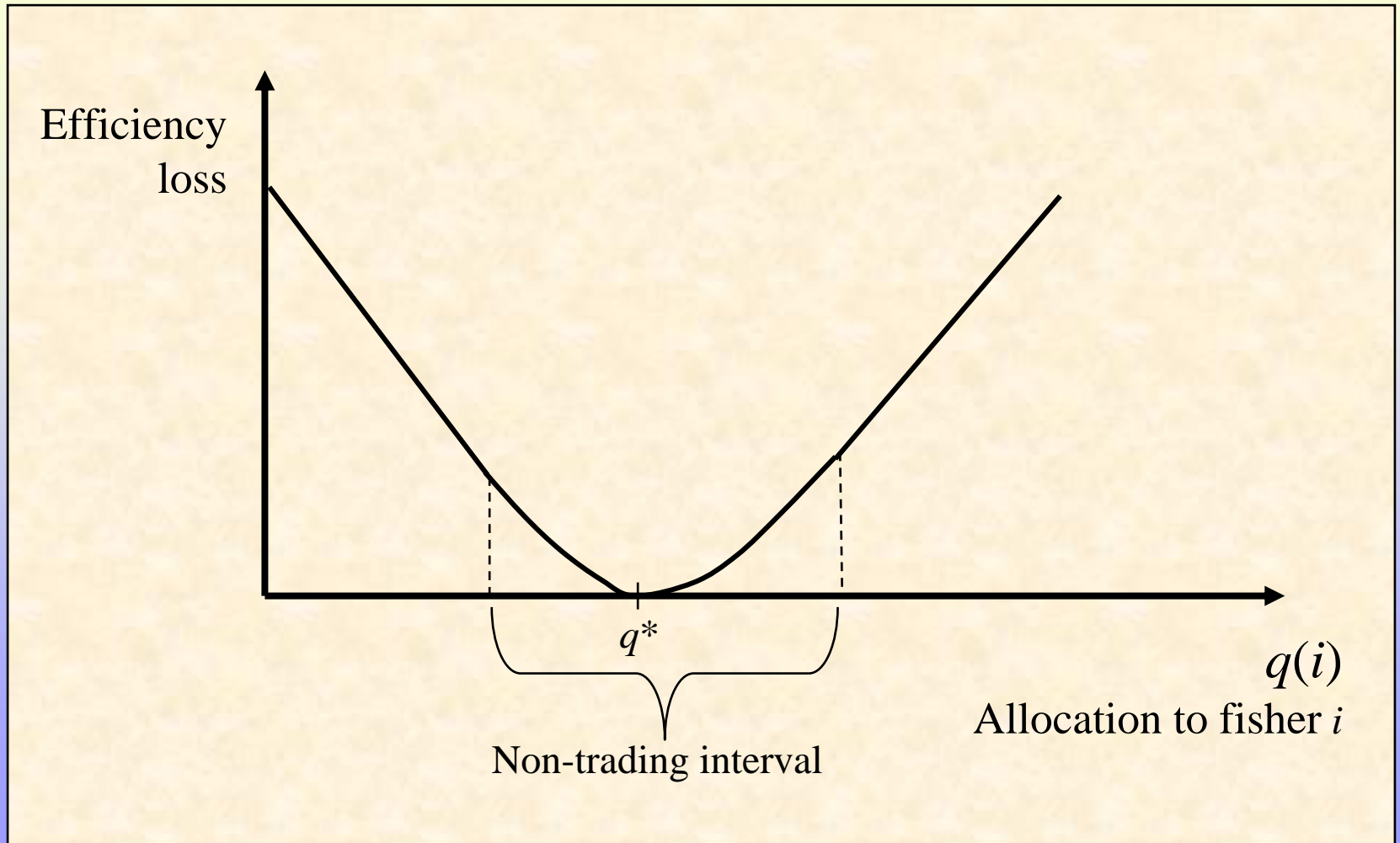
If (i) perfect tradability and  
(ii) no transactions costs

then allocation of rights has no impact on  
efficiency in resource use

# Transaction Costs



# Efficiency loss as a function of allocation

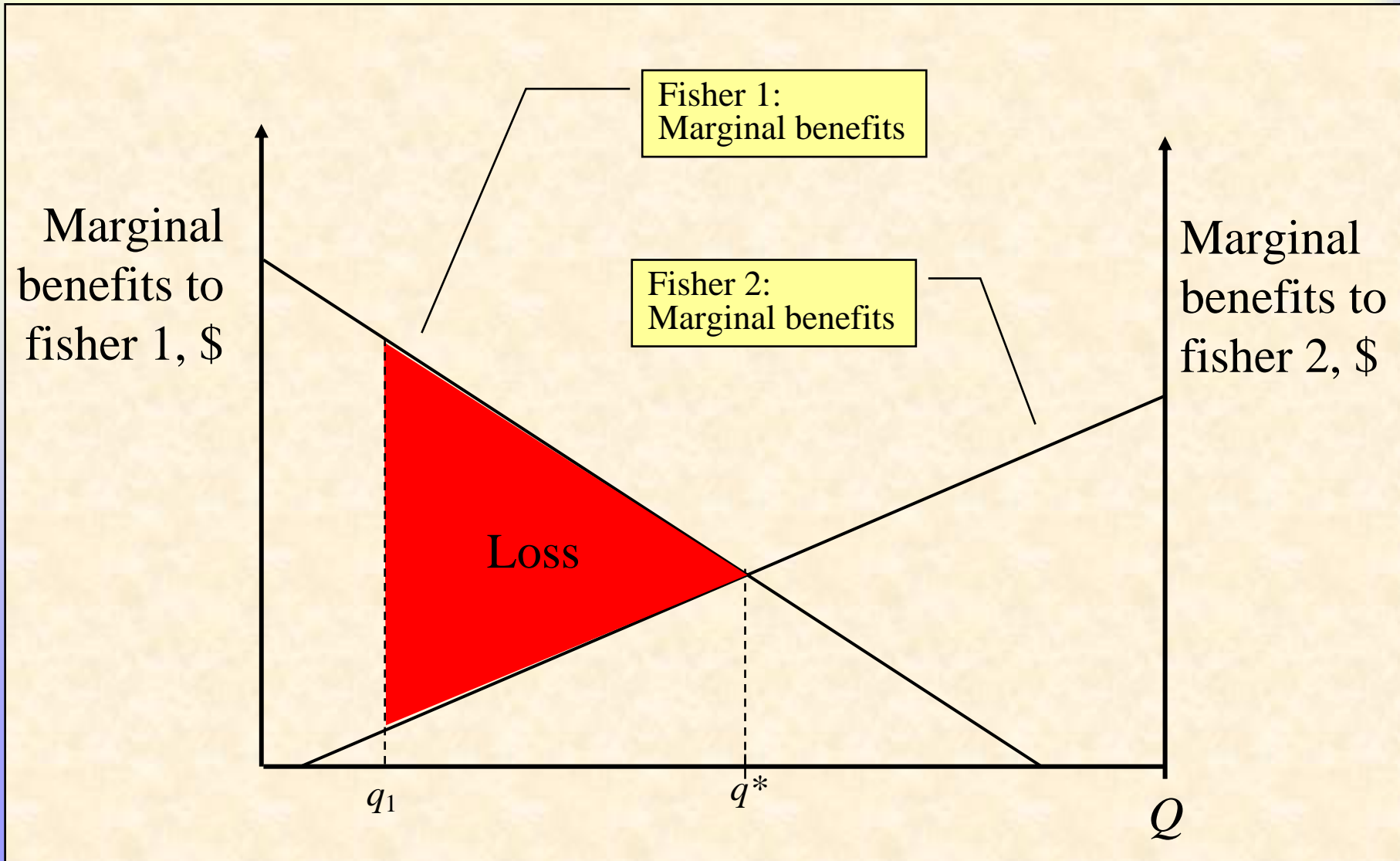


## Result 2

If there are transaction costs, allocation of rights has an impact on efficiency in resource use

- Anything but the optimal allocation reduces efficiency
- Efficiency loss increases with the allocation 'error'

# No tradability



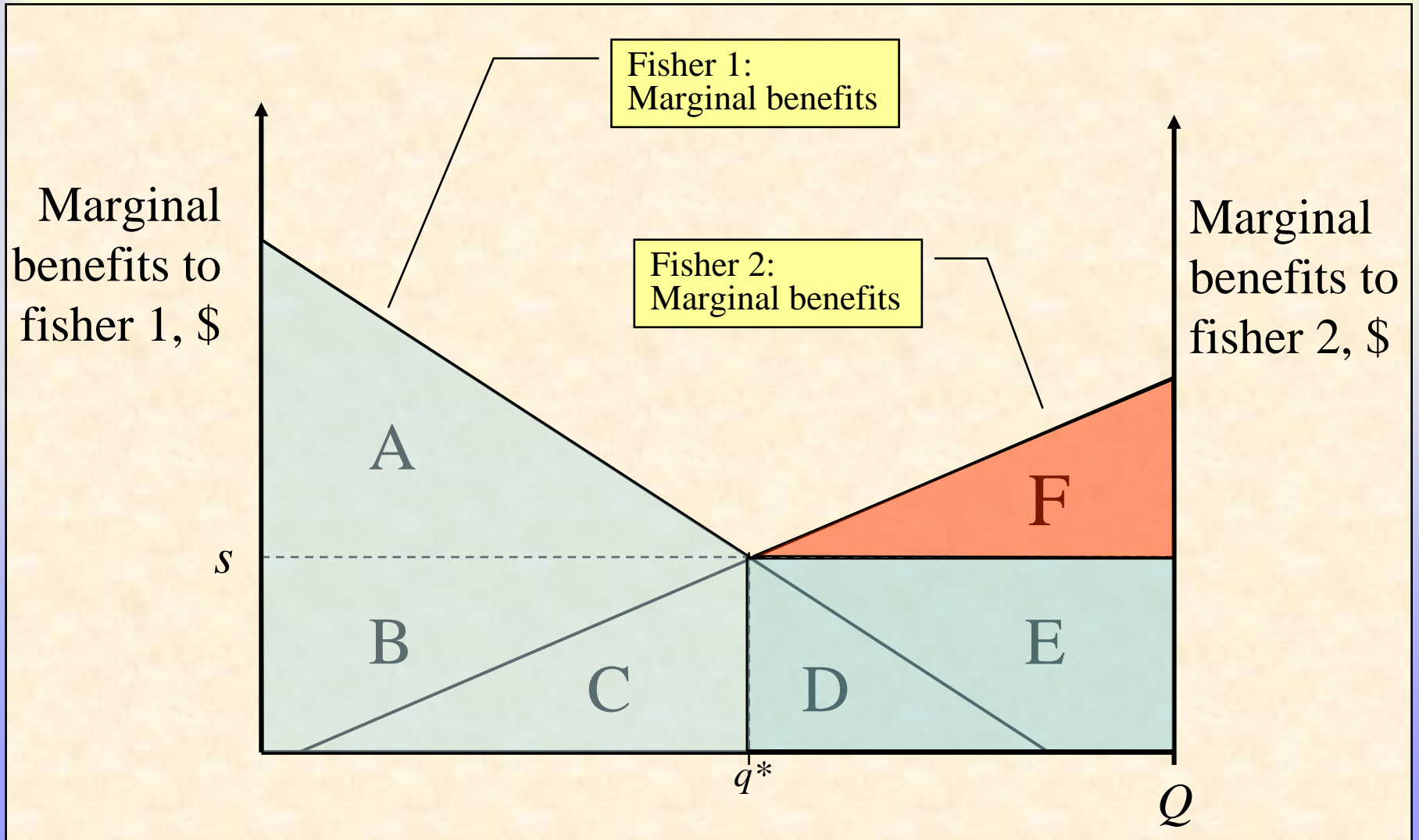
## Result 3

If there is no (or limited) tradability, then allocation of rights has an impact on efficiency in resource use

- Anything but the optimal allocation reduces efficiency
- Efficiency loss increases quadratically with the allocation 'error'

# Allocation and distribution

- All allocation to fisher 1, free trade -



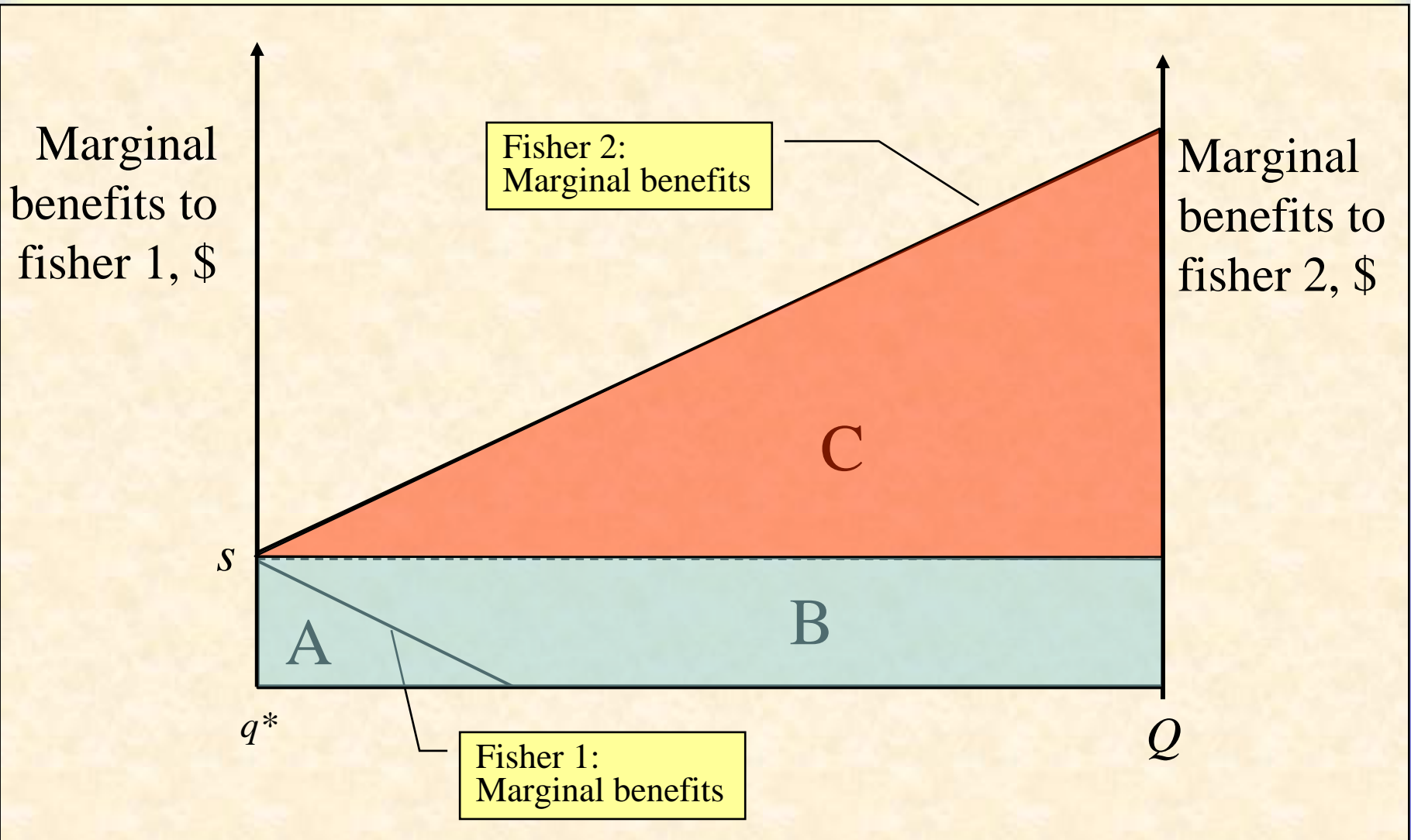
## Result 4

The receivers of fishing rights allocations do not generally get all the benefits from using these rights

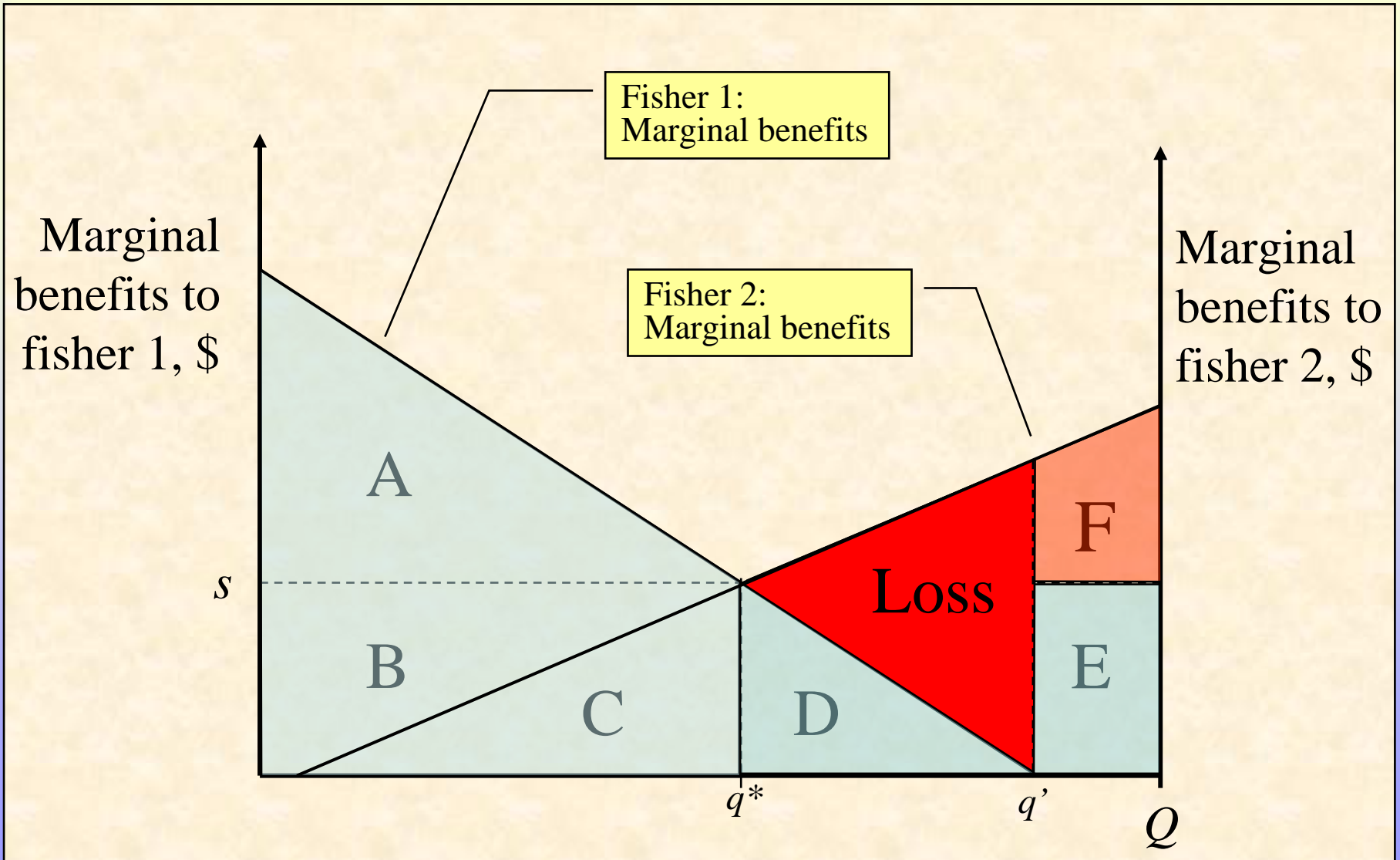
How much they get depends *inter alia* on their relative efficiency

# Receivers of rights get less

- An example (fisher 1 gets all the rights) -



# Restrictions on trade and distribution



## Result 5

Restrictions on trade will

- (i) Generally reduce overall benefits
- (ii) Generally reduce benefits to the ‘disadvantaged’
- (iii) Possibly lead to a more inequitable outcome

# In conclusion

Have found:

(1) If rights are not freely transferable:

- Wrong allocations lead to a loss in efficiency
- This loss increases with allocation ‘mistakes’

(2) Restrictions on trade:

- Will generally harm the ‘disadvantaged’
- May lead to a more unequal distribution

# Suggested policy principles

1. If allocation is needed, try to allocate to the most efficient operators
  - Minimizes the need for trade
2. Do not restrict trading in rights
  - Restrictions lead to efficiency losses
  - May lead to increased inequity
3. Contemplate measures to reduce transaction costs and facilitate trades in other ways

END

