Ch 17 Public Goods and Common Resources

- Characteristics of Goods

  - <u>excludable</u> : suppliers can prevent people who do not pay from consuming it

  - <u>rival in consumption</u>: same unit of the good cannot be consumed by more than 1 person at the same time

Public Goods

More examples
  Disease prevention
  National Defense
  Scientific Research

Nonexcludable - free rider
                      problem

Private firms unwilling to
produce them

Nonrival in consumption -
inefficient to charge people
for consuming them

- Nonexcludable goods suffer from inefficiently low production

- Goods that are excludable and nonrival in consumption like Netflix on-demand movies
  - suffer from inefficiently low consumption

- Generally, markets can only supply **private goods** efficiently - excludable and rival in consumption

- If a good is nonexcludable, self-interested consumers will not be willing to pay for it - "free ride" on anyone who does pay

- free rider problem

Some possible solutions for Public Good

- voluntary contributions — private donations for scientific research — may be hard for large basic research projects

- supplied by self-interested individuals — make money indirectly broadcast television via ads

- but can skew content

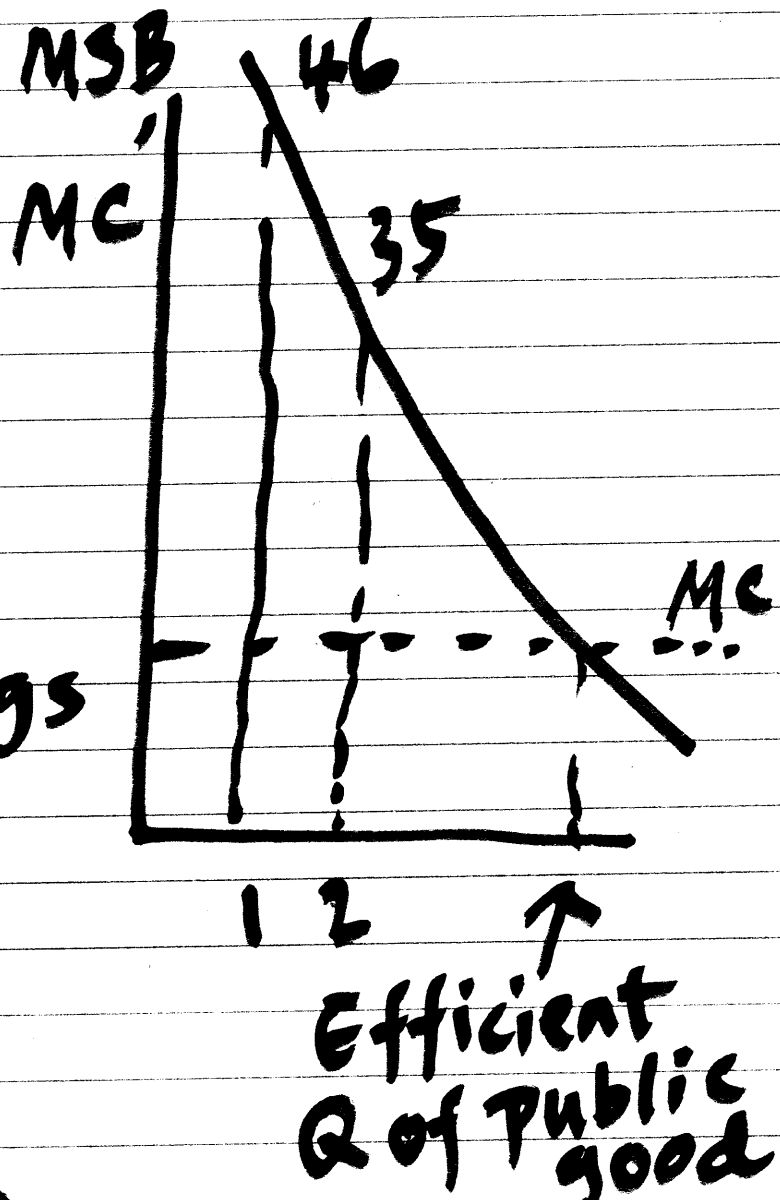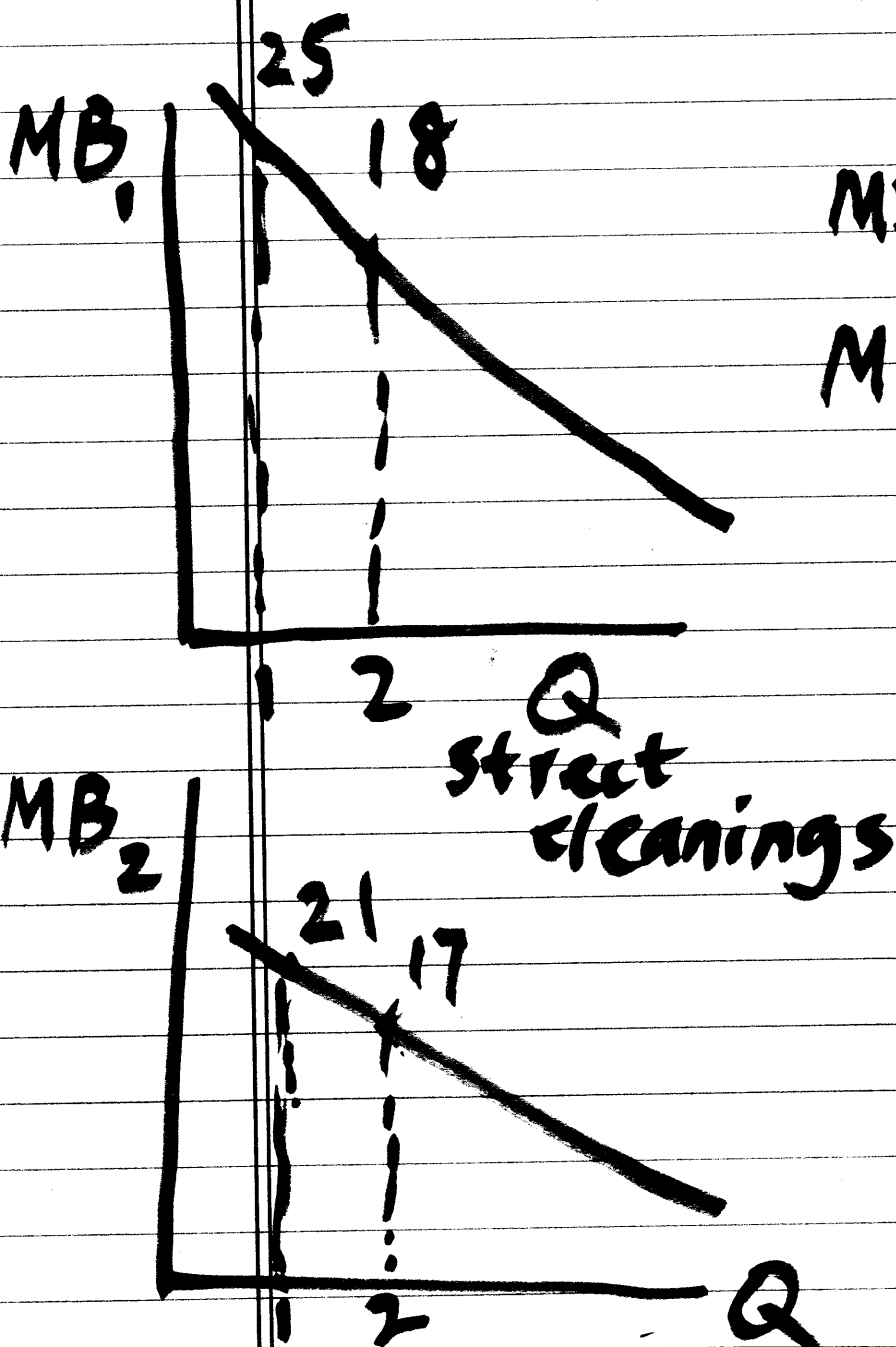- Some public goods deliberately made excludable

- in UK, TV programs paid by yearly license fee on every television owner (£145·50 in 2014)

- Government provides the public goods — national defense, legal system, disease control, fire protection in large cities

- via taxation

How much of a Public Good Should be provided?

$$MC = MSB$$ marginal social benefit

MB₁ graph:
25
18
1 2
Q
street cleanings

MB₂ graph:
21
17
1 2
Q

MSB / MC' graph:
46
35
MC
1 2
↑
Efficient Q of public good

Common Resources

- nonexcludable but rival in consumption

- cannot be charged for their use

- subject to overuse

- similar to negative externality

- public goods somewhat similar to positive externality

A Common Resource
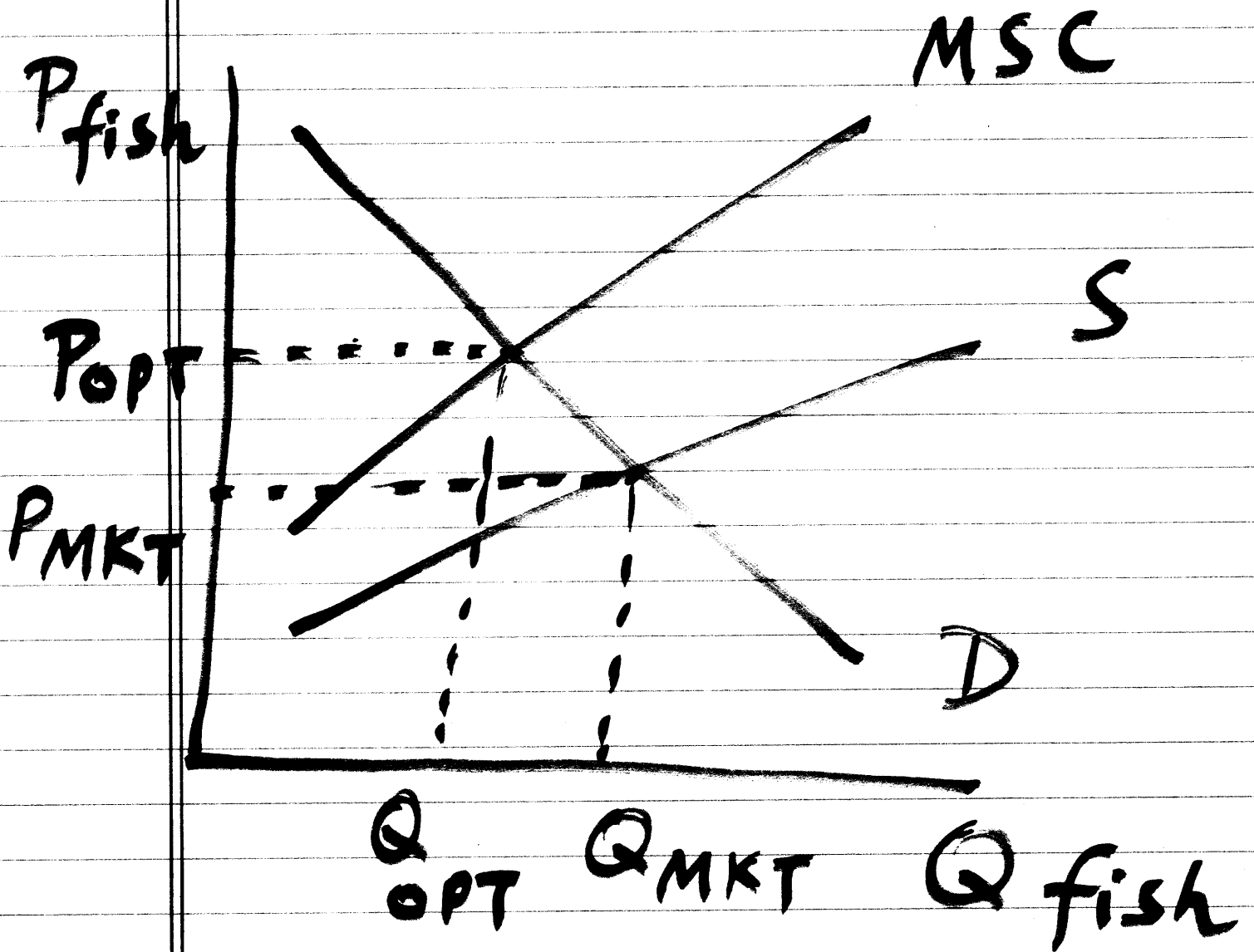
Fishing , Traffic Congestion
Examples of common resources

3 Main Ways to internalize the costs imposed on others

- Tax or regulate the use of the common resource

- Create a system of tradable licenses for the right to use the common resource

- Make the common resource excludable and assign property rights

- Similar to case of negative externalities

- use of common resource can be made efficient by Pigouvian tax

- e.g. congestion charges fees to visit national parks

- or issue licenses that corresponds to efficient level of use

- Tradable licences
- right to use the good allocated efficiently
- Fundamental problem — no one owns common resource
- Need to make excludable
- assign property rights

Private goods: excludable and rival in consumption e.g. wheat

Public goods: nonexcludable and nonrival in consumption e.g. public sewer system

Common resources: nonexcludable but rival in consumption e.g. clean water in river

Artificially scarce good: excludable but nonrival in consumption e.g. on-demand movies

Artificially Scarce Goods

- excludable but nonrival in consumption

- markets will supply these goods

- producers can charge

e.g. Netflix

- But marginal cost of an individual's consumption is zero

- So Price > mc

	Rival in consumption	Non rival in consumption
Excludable	Private goods · wheat	Artifically scarce goods · On-demand movies
Non-Excludable	Common resources · Clean water	Public goods · Public Sanitation

An Artificially Scarce Good

Price of on-d movie

P^N: Netflix price

Deadweight loss

P^N

Q_{MKT}

Q_{OPT}

Q of on-demand movies watched