

# Public Goods and Common Resources

AP Microeconomics | Unit 6 | rival, excludable, free riders, the commons

## 1. Two questions about any good

### Rival and excludable

**Excludable:** people who do not pay can be kept from using it.

**Rival:** one person's use leaves less for everyone else.

|           | excludable                      | non-excludable                         |
|-----------|---------------------------------|----------------------------------------|
| rival     | private good (pizza, shoes)     | common resource (fish in the ocean)    |
| non-rival | club good (streaming, cable TV) | public good (street lighting, defense) |

## 2. Public goods and the free rider

*Example.* A streetlight costs \$1,000 and is worth \$20 to each of 100 households (\$2,000 in total). It shines on every house whether that house paid or not, so each household waits for the others to pay, and the light is not built.

### Free-rider problem

A **free rider** enjoys a good without paying for it. Because a public good is non-excludable, private firms cannot charge for it, and the market provides **too little** (or none). The usual fix: the government provides it and pays with taxes.

## 3. Common resources and overuse

A common resource is rival but non-excludable. Each user keeps the whole benefit of taking more and shares the cost (less left) with everyone, so the resource is **overused**: the *tragedy of the commons*. Fixes limit access: quotas, permits, property rights.

|             | public good         | common resource        |
|-------------|---------------------|------------------------|
| rival?      | no                  | yes                    |
| excludable? | no                  | no                     |
| problem     | free riders         | tragedy of the commons |
| result      | too little provided | too much used          |

## 4. How much of a public good

Everyone uses the *same* unit of a public good, so its benefit to society is the **sum** of the individual marginal benefits.

| unit | Ann's benefit | Ben's benefit | total benefit |
|------|---------------|---------------|---------------|
| 1st  | \$8           | \$6           | \$14          |
| 2nd  | \$6           | \$4           | \$10          |
| 3rd  | \$4           | \$2           | \$6           |
| 4th  | \$2           | \$0           | \$2           |

If each unit costs \$6, provide **3** units: the 4th is worth \$2 and costs \$6.

$$\text{sum of marginal benefits} = MC$$

#### Where students lose points

1. Mixing up rival and excludable.
2. Calling anything the government provides a public good.
3. Free riders go with public goods; overuse goes with common resources.
4. Saying the market makes too much of a public good: too little.
5. For a public good, add marginal benefits across people, not quantities.

#### Now practise it

Theory sticks once you use it. On **sad-academy.com** you'll find practice questions for this exact subtopic in the AP format, and an AI that grades your free-response answers against the scoring guidelines, the way an AP reader would.

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