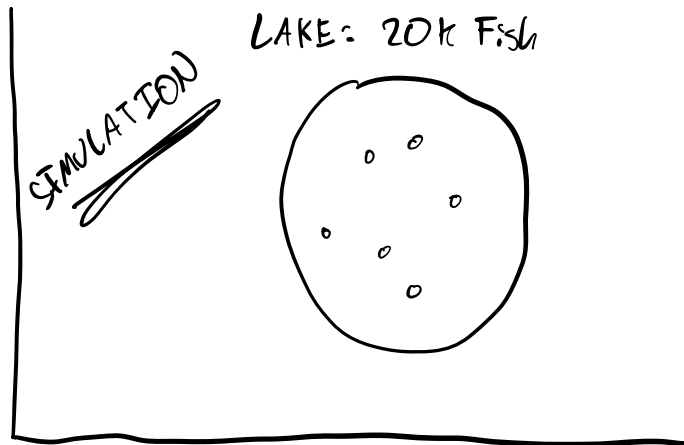
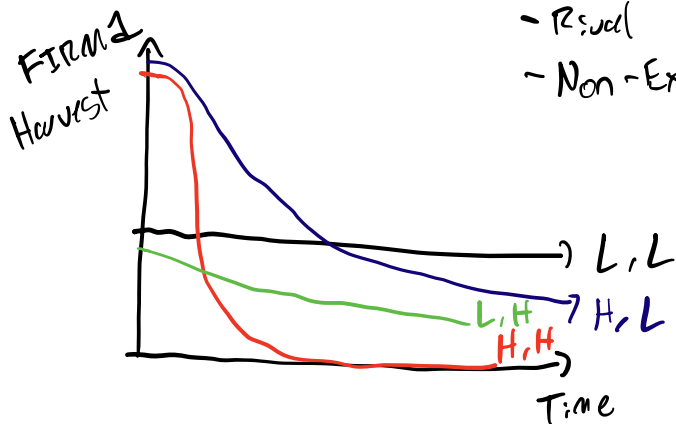


TUNA GAME! → Common Resources

- Rival
- Non-Excludable



FIRM 2

L H

L

	L	H
L	10, 10	2, 12
H	12, 2	4, 4

SE = (L, L)

NE = (H, H)

TRAGEDY of the COMMONS:

Incentives lead to the overuse of common resources.

SCENARIO 1:

FIRM 1 → L } 10
FIRM 2 → L } 10

SCENARIO 2:

FIRM 1 → H } 8
FIRM 2 → H } 8

SCENARIO 3:

FIRM 1 → H } 12
FIRM 2 → L } 2

SCENARIO 4:

FIRM 1 → L } 2
FIRM 2 → H } 12

NPR GAME!

PUBLIC GOOD

- Non-Rival
- Non-Excludable

THREE PLAYER : C = { 15
0

$$\text{PAYOFF}_i = (C_1 + C_2 + C_3) \cdot \frac{2}{3} + (15 - C_i)$$

FUNDING NPR

THE MONEY I KEEP

SCENARIO 1:

If player 1 contributes and both other players don't.

$$\text{PAYOFF}_1 = (15 + 0 + 0) \cdot \frac{2}{3} + (15 - 15) = 15 \cdot \frac{2}{3} = 10$$

SCENARIO 2:

No player contributes.

TWO PLAYER VERSION

P2

C DC

	C	DC
C	20, 20	10, 25
DC	25, 10	15, 15

SE = (C, C)

NE = (DC, DC)

15 + 10

FREE RIDER PROBLEM
incentives lead to the underprovision of public goods.

$$\text{PAYOFF}_1 = (0 + 0 + 0) \cdot \frac{2}{3} + (15 - 0) = 15$$

MEMORIAL to DOBBY:

COST = 100

HARRY	RON	HERMIONE	GINNY	NEVILLE	
34	24	24	14	14	MB=D
✓	✓	✓	✗	✗	



Q1. Everyone pays 20 in property tax.

3 vs 2 → It passes.

Q2. Is this plan socially efficient?

$$MSC = 100$$

$$MSB = 34 + 24 + 24 + 14 + 14 = 120$$

} $MSB > MSC \rightarrow \text{YES}$

Q3. Can we privatize and charge admission?

$$P = 20 \rightarrow Q = 3 \rightarrow \text{REV} = 3 \cdot 20 = 60 \quad \text{✗}$$

$$P = 24 \rightarrow Q = 3 \rightarrow \text{REV} = 3 \cdot 24 = 72 \quad \text{✗}$$

$$P = 14 \rightarrow Q = 4 \rightarrow \text{REV} = 4 \cdot 14 = 76 \quad \text{✗}$$