



Open Access and Coase's Theorem

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Open Access/Common Property

- > **Goods that are rivalrous and nonexcludable**
 - Everyone has free access and an equal right to exploit this resource
- > **Unregulated Fisheries:**
 - I take my boat out and catch a fish, I now have the property right of that fish
 - **MPC of fishing**
 - > Boat, crew, equipment, supplies
 - **MEC of fishing**
 - > Reduce the stock of fish -> raise the cost of fishing for others today and in the future
 - **Negative externality and overfishing occurs**

Open Access/Common Property

- > **Goods that are rivalrous and nonexcludable**
 - Everyone has free access and an equal right to exploit this resource
- > **Atmosphere**
- > **Natural Resources**
- > **Highways**
- > **Websites**

Open Access/Common Property

- > Let's go fishing
- > An unregulated fishing hole gets crowded fast. The marginal benefit and marginal cost of fishing in relation to the number of visitors are below:

$$MB = 110 - 10 * visitors$$

$$MC = 12 * visitors$$

Open Access/Common Property

- > **When do we expect people to stop trying to use the fishing hole?**
 - **What is the market equilibrium?**

Open Access/Common Property

- > **When do we expect people to stop trying to use the fishing hole?**
 - **What is the market equilibrium?**
 - > **If the good is nonexcludable, I can access it without restriction, and so can everyone else after me**
 - > **If the good is rivalrous, my benefit is impacted by another person's consumption, so we consider Average Benefit and Average Cost, not marginal**
 - > **If Average Benefit > Average Cost, I will enter the market**

Open Access/Common Property

- > **When do we expect people to stop trying to use the fishing hole?**
 - **What is the socially optimal point?**
 - > **We define social optimum as the point where Net Benefits are maximized**
 - > **This happens where Marginal Benefit = Marginal Cost**

Open Access/Common Property

Visitors	Marginal Benefit	Marginal Cost	Total Benefit	Total Cost	Average Benefit	Average Cost	Net Benefits
1	100	12					
2	90	24					
3	80	36					
4	70	48					
5	60	60					
6	50	72					
7	40	84					
8	30	96					
9	20	108					
10	10	120					

Open Access/Common Property

Visitors	Marginal Benefit	Marginal Cost	Total Benefit	Total Cost	Average Benefit	Average Cost	Net Benefits
1	100	12	100	12			
2	90	24	190	36			
3	80	36	270	72			
4	70	48	340	120			
5	60	60	400	180			
6	50	72	450	252			
7	40	84	490	336			
8	30	96	520	432			
9	20	108	540	540			
10	10	120	550	660			

Open Access/Common Property

Visitors	Marginal Benefit	Marginal Cost	Total Benefit	Total Cost	Average Benefit	Average Cost	Net Benefits
1	100	12	100	12	100	12	
2	90	24	190	36	95	18	
3	80	36	270	72	90	24	
4	70	48	340	120	85	30	
5	60	60	400	180	80	36	
6	50	72	450	252	75	42	
7	40	84	490	336	70	48	
8	30	96	520	432	65	54	
9	20	108	540	540	60	60	
10	10	120	550	660	55	66	

Open Access/Common Property

Visitors	Marginal Benefit	Marginal Cost	Total Benefit	Total Cost	Average Benefit	Average Cost	Net Benefits
1	100	12	100	12	100	12	88
2	90	24	190	36	95	18	154
3	80	36	270	72	90	24	198
4	70	48	340	120	85	30	220
5	60	60	400	180	80	36	220
6	50	72	450	252	75	42	198
7	40	84	490	336	70	48	154
8	30	96	520	432	65	54	88
9	20	108	540	540	60	60	0
10	10	120	550	660	55	66	-110

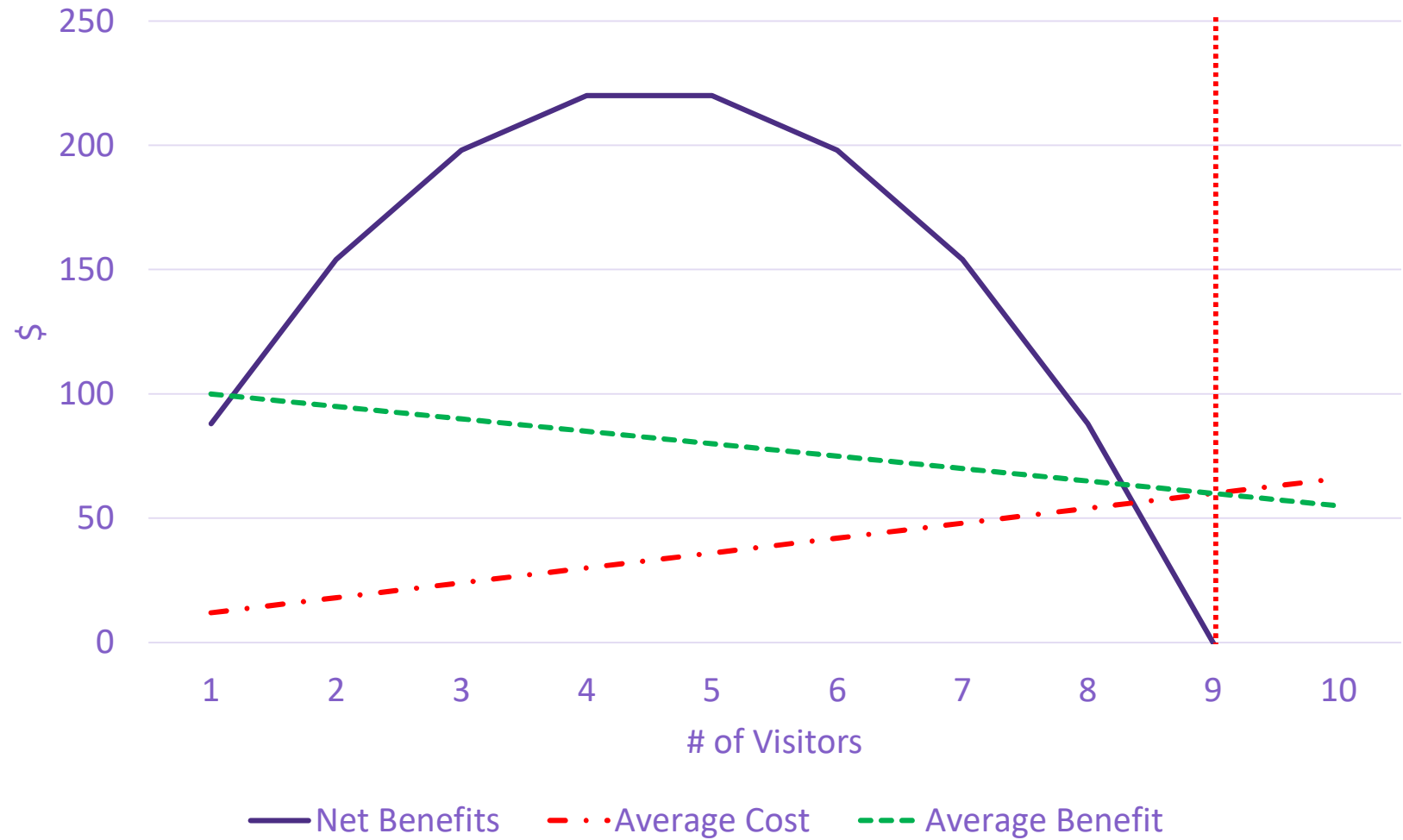
Open Access/Common Property

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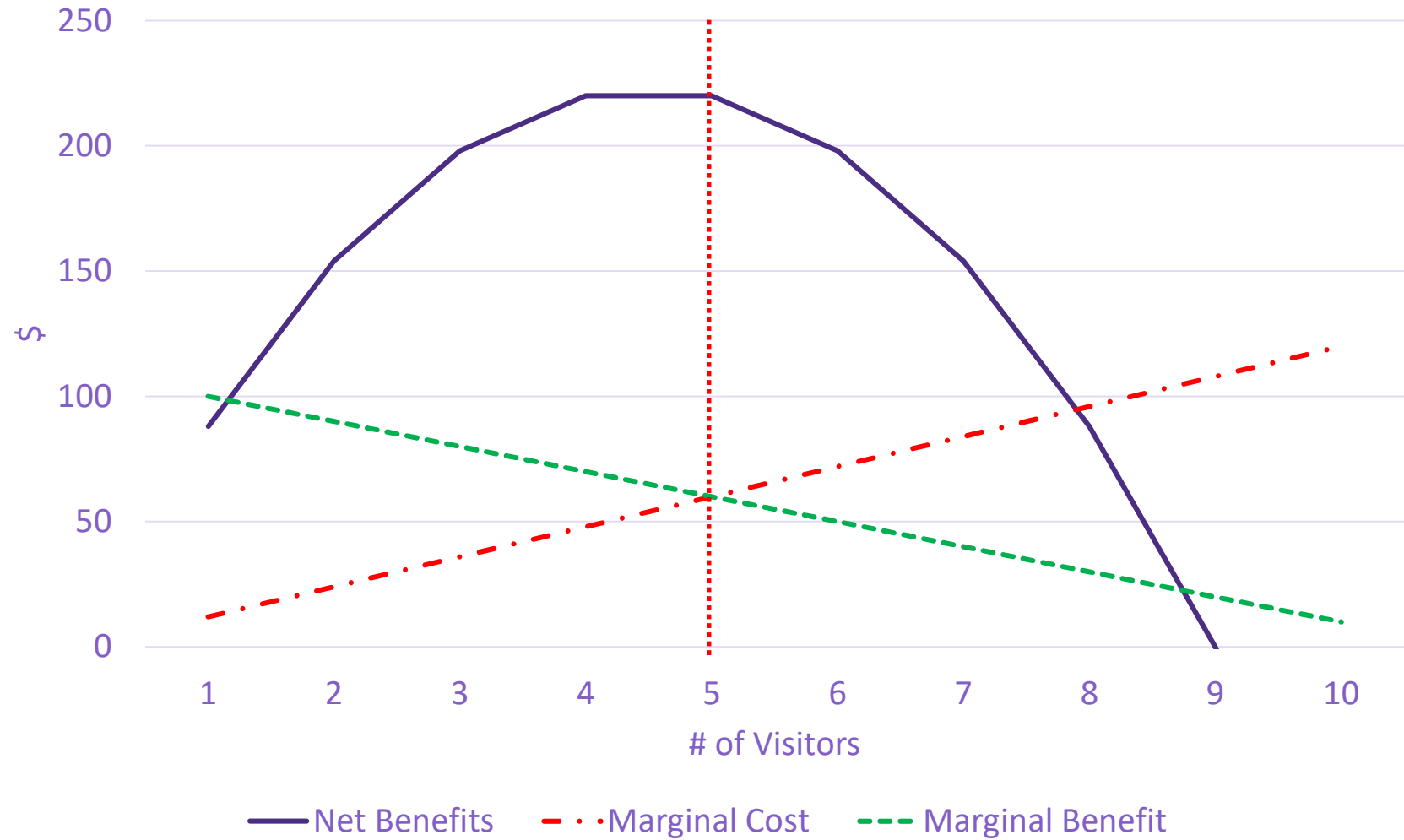
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Coase Theorem

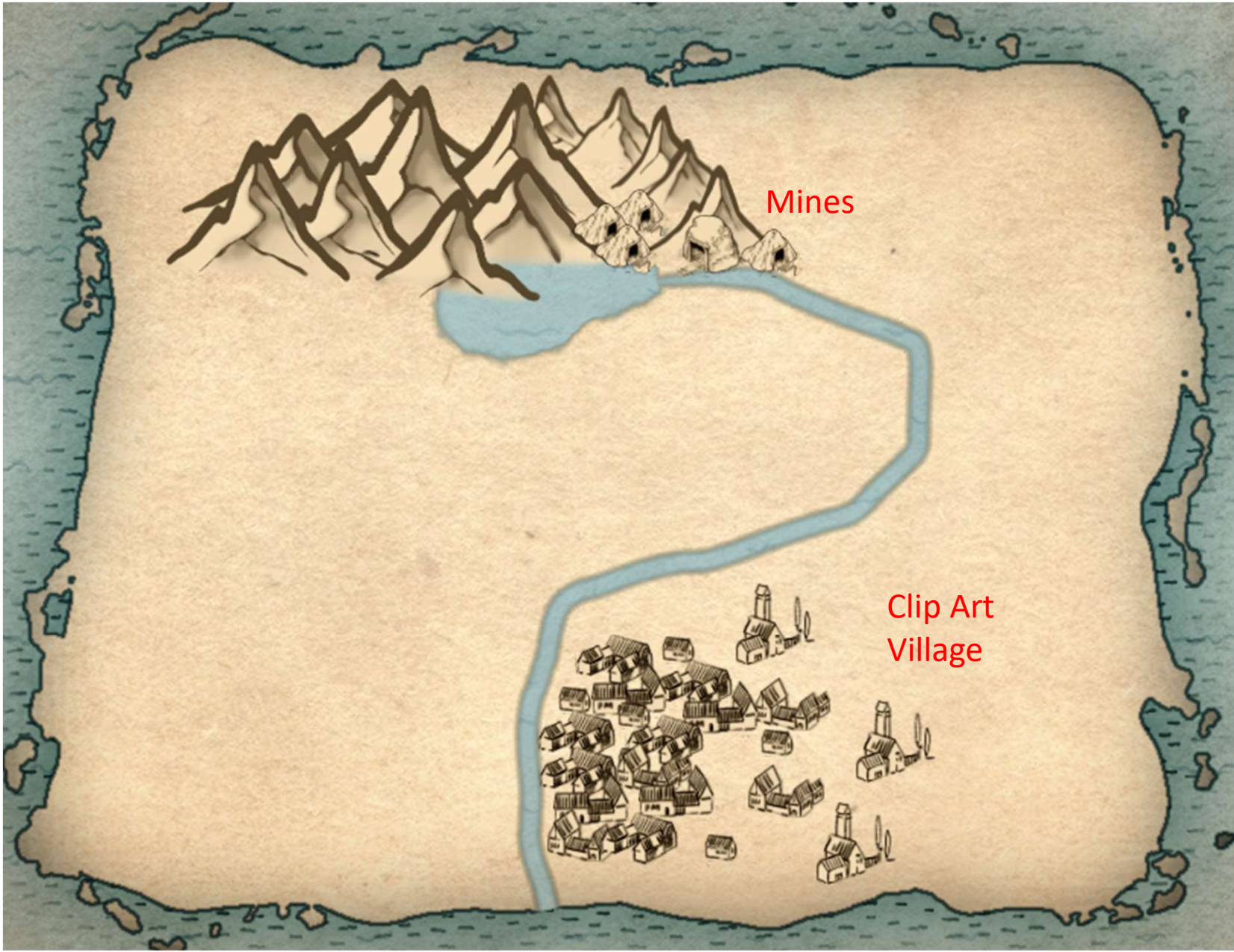
- > We have seen how poorly defined property rights may result in both over and under consumption/production of goods and services
- > What happens if we just ... assign property rights?

Coase Theorem

- > We have seen how poorly defined property rights may result in both over and under consumption/production of goods and services
- > What happens if we just ... assign property rights?
- > A polluter and its victim can achieve the optimal levels of pollution if property rights are clearly defined and they can practically bargain
- > It does not matter who is assigned the property rights

Coase Theorem

- > **The full assignment of property rights can also resolve open-access problems**
- > **If all fishing stocks are owned, then the owner has an incentive to preserve the long-term health of the fishing stock. This can allow the owner to limit catches**
- > **If the fishing hole was owned, they can charge a price for entry equal to the marginal cost leading people to stop fishing at the social equilibrium**



Coase Theorem

- > **If we assign the property rights of the waterway to the mine, the town can seek to payoff the mine**
 - **They may also invest funds to clean the water and make it safer to use**

- > **If we assign the property rights of the waterway to the town, the mine may seek to pay for the right to pollute or the town may seek damages**
 - **The mine may also avoid paying for the right to pollute and instead invest in cleaner practices**