

Introductory Economics

Introdução à Economia

Problems

2021/2022

3rd Quarter (P3)

6. Economy, environment, and climate change

6. Economia, ambiente e alterações climáticas

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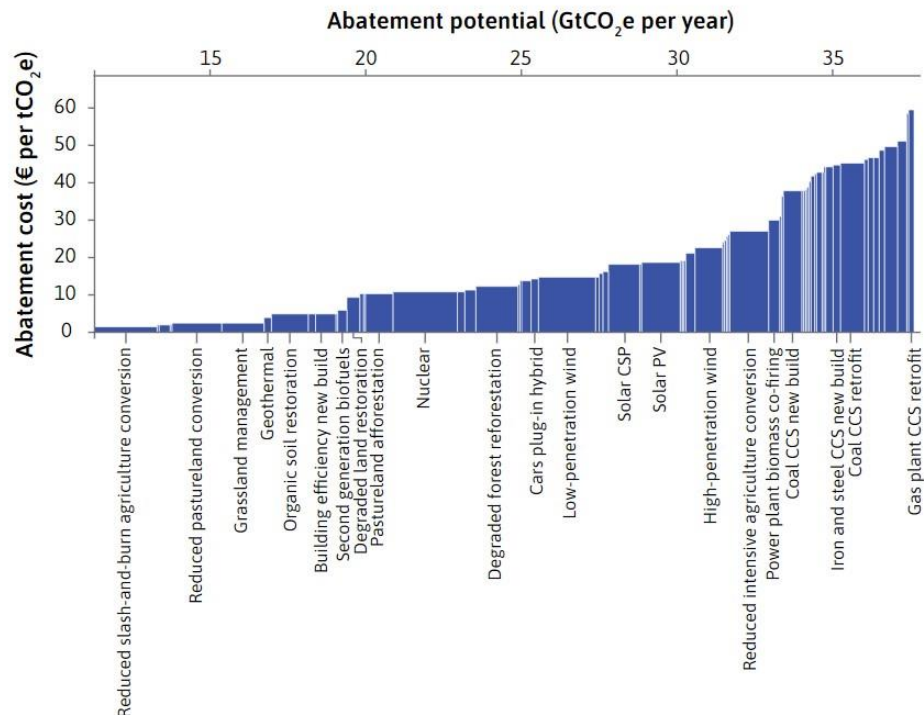
- 6.1** Considering the figure below, classify the following sentences as True or False. Justify.
(Adapted from CORE, The Economy)

Decision	How it affects others	Cost or benefit	Market failure (misallocation of resources)	Possible remedies	Terms applied to this type of market failure
A firm uses a pesticide that runs off into waterways	Downstream damage	Private benefit, external cost	Overuse of pesticide and overproduction of the crop for which it is used	Taxes, quotas, bans, bargaining, common ownership of all affected assets	Negative external effect, environmental spillover
You take an international flight	Increase in global carbon emissions	Private benefit, external cost	Overuse of air travel	Taxes, quotas	Public bad, negative external effect

- Bargaining between affected parties is always effective in reducing the inefficiencies caused by externalities.
- The market price of pesticides is unlikely to reflect the full social cost of their use.
- Reducing air travel is an unfortunate and inefficient by-product of taxing flights.
- Making polluters pay for the pollution they cause is one of the best policies to deal with negative externalities.

- 6.2** What are abatement policies? Give some examples. (Adapted from CORE, The Economy)

- 6.3** The figure below shows a global greenhouse gas abatement curve, defined as the abatement in 2030 compared with 'business as usual', produced by McKinsey in 2015. The width of each bar indicates potential abatement measured in gigatonnes of CO₂, while the height indicates the cost of abatement per tonne.



Classify the following sentences as True or False. Justify. (Adapted from CORE, The Economy)

- Nuclear energy has a higher potential to abate emissions than reforestation of degraded forests.
- Solar energy should be preferred to nuclear power in the abatement of greenhouse gas emissions.
- Nuclear power produces more abatement per euro spent than Solar energy.
- Geothermal technology has a very low abatement potential and therefore should never be adopted.
- Gas plant CCS should be a priority technology to adopt.

6.4 Explain what a cap-and-trade policy is. How can Governments apply this policy? (Adapted from CORE, The Economy)

6.5 Recall question 1.11 in which we defined common resources. Why do common resources get used more than is desirable from the standpoint of society as a whole?

6.6 Explain the discounting dilemma and its importance for addressing the environmental impact of economic activity in terms of climate change. How is technological progress used in this debate?