Climate Policy Worksheet

Grade 12 · environment and policy



Name: Date: Score: / 26

Why this is hard to solve

Climate change is the textbook **collective action problem**. The benefit of cutting emissions is shared by everyone on the planet; the cost of cutting falls on whoever does it. So every actor, taken alone, does better by letting someone else cut — which is why the problem has outlasted thirty years of agreements.

Policy tools fall into two families. **Mitigation** reduces emissions: a **carbon price**, regulation, subsidies for low-emission technology, or a treaty. **Adaptation** accepts the warming already committed and protects people from it: sea walls, heat planning, drought-tolerant crops.

The two are not alternatives. Adaptation protects people now but does nothing about the eventual total, and mitigation lowers the eventual total but cannot undo what is already in the atmosphere. Any serious policy does both, and the argument is about proportions.

Part A — Vocabulary match each term to its meaning (8 marks)

1. Mitigation	_____	A. A fixed total of permits that firms may buy and sell
2. Adaptation	_____	B. Shifting away from high-emission industries while supporting the workers affected
3. Carbon price	_____	C. An actor that takes the benefit of others' effort without contributing
4. Cap and trade	_____	D. A charge per tonne of emissions, set by tax or by a permit market
5. Collective action problem	_____	E. Emissions moving to a country with weaker rules rather than falling
6. Free rider	_____	F. A situation where everyone benefits from action but each actor gains by not acting
7. Carbon leakage	_____	G. Changing infrastructure and practices to cope with warming already underway
8. Just transition	_____	H. Reducing emissions to limit how much warming happens

Part B — Fill in the blanks (6 marks)

1. Reducing emissions to limit warming is _____.

2. Changing infrastructure to cope with warming already underway is _____.

3. A fixed total of tradable permits is called cap and _____.

4. An actor taking the benefit of others' effort without contributing is a free _____.

5. Emissions moving to a country with weaker rules is carbon _____.

6. Supporting affected workers while moving off high-emission industry is a just _____.

Part C — Strengths and weaknesses give one of each for every tool (5 marks)

Policy tool	One strength and one weakness
Carbon price	
Regulation on a specific product or sector	
Subsidy for low-emission technology	
International treaty	
Adaptation spending	

Part D — Apply the idea (4 marks)

1. A country introduces a carbon price. A steel plant closes and reopens in a country with no such price. Name the problem this illustrates and one policy response to it.

2. Explain why an international treaty is necessary for this problem but hard to enforce.

Part E — Take a position (3 marks)

1. A government has funding for one measure only: a carbon price or sea defences for a coastal city. Argue for one, and state the strongest objection to your choice.

Climate Policy Worksheet — Answer Key

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Part A — Vocabulary

1. **Mitigation** → H
2. **Adaptation** → G
3. **Carbon price** → D
4. **Cap and trade** → A
5. **Collective action problem** → F
6. **Free rider** → C
7. **Carbon leakage** → E
8. **Just transition** → B

Part B — Fill in the blanks

1. **mitigation**
2. **adaptation**
3. **trade**
4. **rider**
5. **leakage**
6. **transition**

Part C — Strengths and weaknesses

1. Carbon price → **Cheapest cuts happen first, but the cost is visible and politically hard**
2. Regulation on a specific product or sector → **Certain and easy to explain, but may force expensive cuts before cheap ones**
3. Subsidy for low-emission technology → **Politically popular, but costs public money and may fund what would have happened anyway**
4. International treaty → **The only tool that reaches a global problem, but enforcement is weak**
5. Adaptation spending → **Protects people now, but does nothing to reduce the eventual total**

Part D — Apply the idea

1. **Carbon leakage. Response: a border adjustment charging imports the same carbon cost.**
   Emissions did not fall; they moved, and the first country lost the plant as well. Accept any workable response: a border carbon adjustment, sector exemptions, free permits for trade-exposed industry, or coordinating the price with trading partners.
2. **Necessary because the atmosphere is shared; hard because no authority can compel a sovereign state.**
   Cutting alone costs everything and returns a fraction, so only a joint commitment changes the arithmetic — but treaties rest on reporting, reputation and trade pressure, and a state can leave. Both halves needed.

Part E — Take a position

1. **Either choice earns full marks with a real objection stated.**
   Carbon price: only option that cuts the eventual total — but one country barely moves global emissions. Sea defences: the flooding is near-certain and lives are saved this decade — but it funds symptoms and leaves every other coast exposed. Mark the objection, not the side.