

How can Government policies contribute to the sustainable economic growth?

Breaking news

Paris 2024 launches ambitious plan to become first carbon-neutral Olympics



<https://www.youtube.com/watch?v=a0FlxNQqbwo>

1. What is the ambitions plan of the Olympics Games in Paris?
.....
2. Why were the Olympics not a “climate friendly” before the Paris ones?
.....
3. Why is Paris considered as the best place to make an environmental change?
.....
4. According to Tony Estanguet, the president of Paris 2024, what will be the two points of the success of the Paris games?
-;
-
5. Fill in the followings showing efforts to achieve a climate friendly Olympics Games
The Paris games could reduce carbon foot print / cut its emissions in half thanks to:
 - Meals provided by farms and with less
 - Clean green energy through new and power stations;
 - Seats made entirely from water bottles.
6. Give the two long term climate solutions.
-;
-
7. Why has Paris Mayor decided to accelerate climate investments now?
.....
8. What new kind of competition can Paris 2024 spark?
.....
.....
9. Give the two opportunities the Paris Games could provide:
-;
-

Consequently, the question is: how Government policies contribute to a sustainable economic growth? To answer this question, we are going to address the following:

What is economic growth? (I) What are its limits that prevent it from being sustainable? (II)

Are Government policies for sustainable growth efficient? (III)

I. What does economic growth consist in?

A. Definition and measurement of economic growth

Economic growth refers to the growth of the country's real income.

*It is measured by the percentage annual increase in real national output. More specifically, it's measured by the percentage change of **GDP** in **real terms**.*

Look at the two important terms:

- **GDP** is the total market value of all final goods and services produced in a given time period, within a country's borders.
- **Real terms**

In order to know the relevant/ true increase of the national output we have to express it in real terms. What does real national output mean?

Real* / nominal* terms: economic growth, episode 22, mjmfoodie.



1. Recap the meaning of the third macroeconomic goal.

2. Why is better to measure the economic growth in real terms than in nominal terms?

3. How to calculate an increase of real GDP?

Exercise

"An increase in real national output can be calculated by subtracting the rate of inflation from the increase in nominal national output over the period in question."

- a. Recap the definition of inflation.

- b. Fill in the following with nominal and real:

A growth of output means an increase of output adjusted for inflation. Conversely, an increase of GDP means a rise of output not adjusted for inflation.

- c. Using the definition, quote the calculation of the growth of real output in 2007 from the data below.

- Output rose by 4.76% in the UK in 2007
- Prices rose by 1.9% in 2007
- Growth of Real output was 2.86% in 2007.

4. Write down the formula of the percentage change in real GDP.

% change real GDP =

5. Identify the two situations:

- % change real GDP > 0:
- % change real GDP < 0:

6. What is the difference between recession et depression.

Sum up
Definitions

Economic growth*:
.....
This **means** that **more** goods and services can be purchased with income, leading to a rise in **living standards**.
GDP*:
Real GDP*:
Nominal GDP*:

B. Is economic growth a relevant indicator of economic welfare?

GNP, an indicator of economic growth, cannot be a measure of economic welfare.

The gross national product includes air pollution and advertising for cigarettes, and ambulances to clear our highways of carnage. It counts special locks for our doors, and jails for the people who break them. GNP includes the destruction of the redwoods and the death of Lake Superior. It grows with the production of napalm and missiles and nuclear warheads... And if GNP includes all this, there is much that it does not comprehend. It does not allow for the health of our families, the quality of their education, or the joy of their play. It is indifferent to the decency (1) of our factory and the safety of our streets alike. It does not include the beauty of our poetry or the strength of our marriages, or the intelligence of our public debate or the integrity of our public officials ... GNP measures neither our wisdom (2) nor our learning, neither our compassion nor our devotion to our country. It measures everything, in short, except that which makes life worthwhile; and it can tell us everything about America – except whether we are proud to be Americans.

US Senator Robert Kennedy, 1967.

(1) Decency: *décence*

(2) Wisdom: *sagesse*

1. Economic growth can be measured with either GDP or GNP. Fill in the text showing the difference between the two indicators.

Gross Domestic Product (GDP) and Gross National Product (GNP) both try to measure the market value of all goods and services produced for final sale in an economy. The difference is how each term interprets what constitutes the economy.

GDP refers to and measures the *domestic* levels of production in a country. It represents the monetary value of all goods and services produced a nation's geographic borders over a specified period of time. GDP is often used to indicate the health of a nation's economy. (...)

GNP measures the levels of production of all the citizens or corporations from a particular country working or producing in country.

<https://www.investopedia.com/ask/answers/030415/what-functional-difference-between-gdp-and-gnp.asp>

2. According to R. Kennedy, what's wrong with GNP as a measure of economic welfare?

GNP cannot measure economic welfare for a country because:

-
.....
.....
-
.....

Sum up
Limits of GDP –GNP

..... represents the market value of goods and services produced within an economy whereas measures the levels of production of all individuals or corporations from a country producing in any country.

GNP (or GDP) is only a quantitative indicator. Consequently, it fails to estimate how of life factors affect economic Additionally, it fails to reflect the effects resulting from the economic activity, as well

II. What are the limits to economic growth (preventing a sustainable development)?



The end of growth, 5 December 2011
<http://www.makingitmagazine.net>

1. Describe the cartoon.

.....

.....

.....

.....

.....

.....

.....

2. What is the issue at stake in this cartoon?

.....

.....

Environmentalists, ecologists and some economists predict that the pursuit of over-growing GDP is not sustainable, arguing that growth will eventually lead to the depletion (reduction in the number or quantity of something) of non-renewable resources.*

Sustainable growth* meets the needs of people living today without compromising the ability of future generations to meet their own needs.

Or growth in the productive potential of the economy today which does not lead to a fall in the productive potential of the economy for futures generations.

A. The awareness of the “limits to growth”

‘The Limits to Growth’

In the late 1970s, the Club of Rome, a forecasting institute, produced a report called ‘The Limits to Growth’. The report claimed that industrialized economies as we know them would collapse. They would be caught between a growth in pollution and a decline in the availability of scarce resources such as oil, coal and timber (1). Oil was projected to run out in the next century and coal by the year 2400. In the 1980s and 1990s, the world was gripped by reports that people were destroying the ozone layer and raising the world’s temperature through the greenhouse effect. The planet cannot support growth rates of even 1 or 2 per cent per year. Growth must stop and the sooner the better.

Alain Anderton, Economics, fifth edition, Pearson, 2008.

(1) timber: bois

1. Why is the Club de Rome report important?

.....

2. What is the current environmental issue?

.....

A. The environmental impacts of economic growth

Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

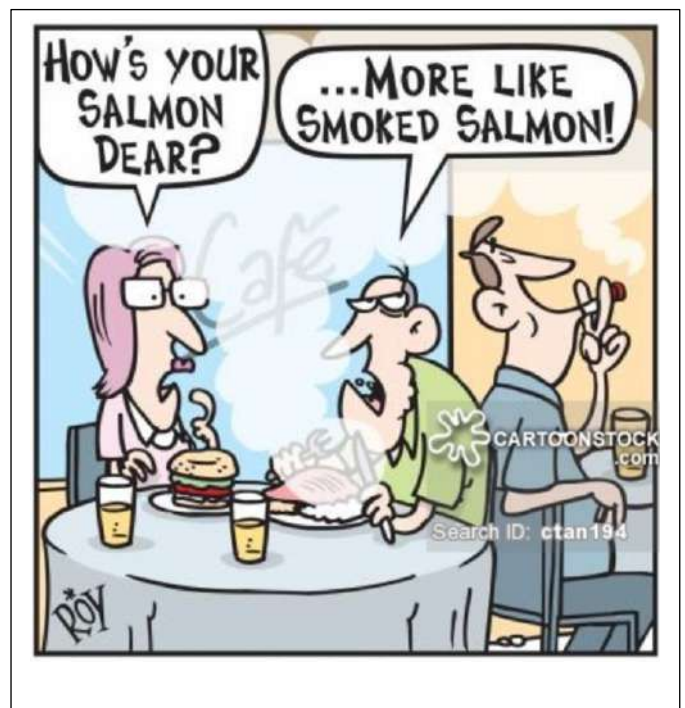
Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 1



Hazchem is a warning plate system used in Australia, Malaysia, New Zealand, India and the United Kingdom for vehicles transporting hazardous substances, and on storage facilities.

TEAM 2

Tasks

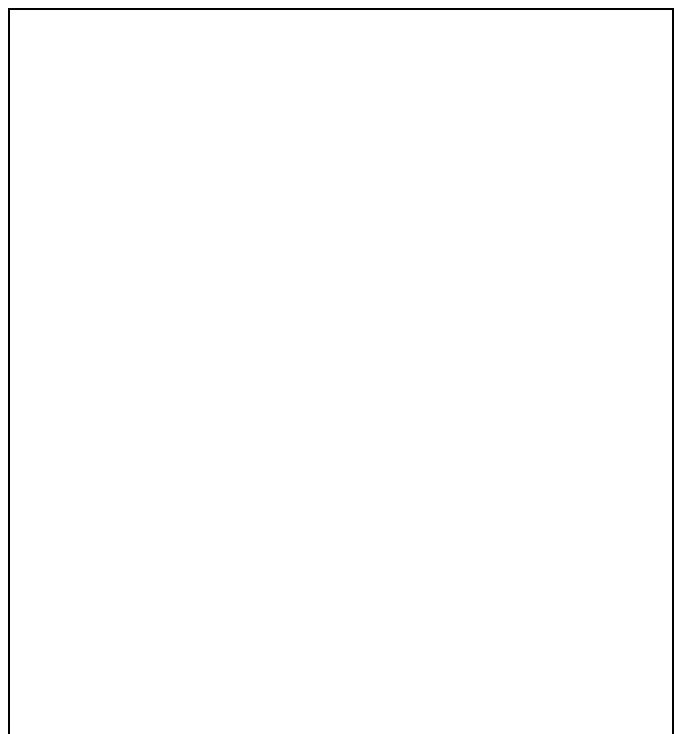
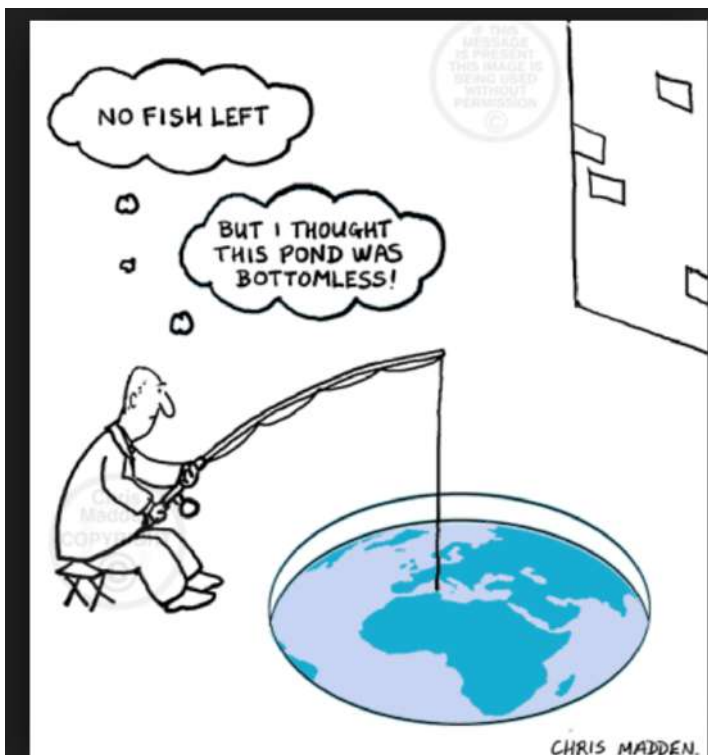
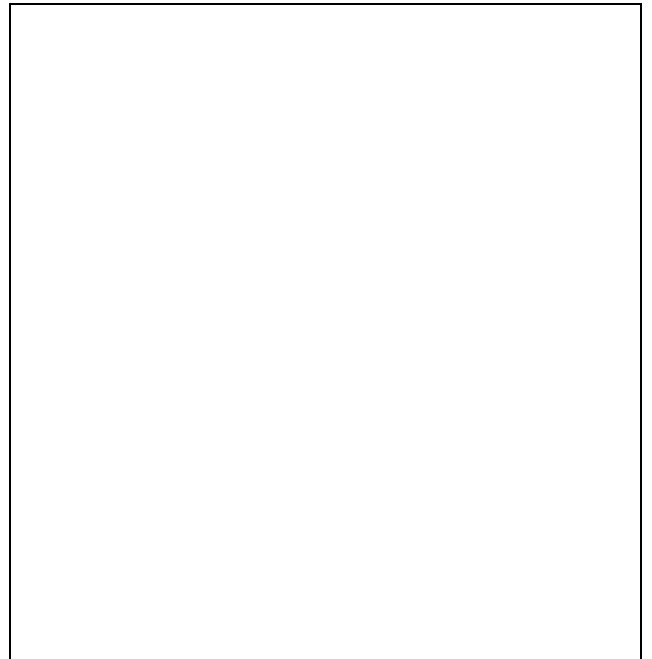
In pairs, you will have to introduce some environmental impacts from cartoons.

Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

Step 1:

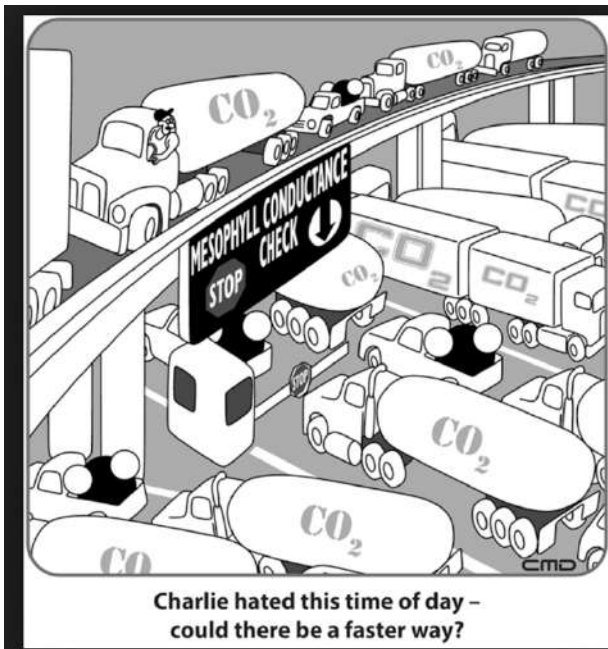
1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 3

Mesophyll conductance



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

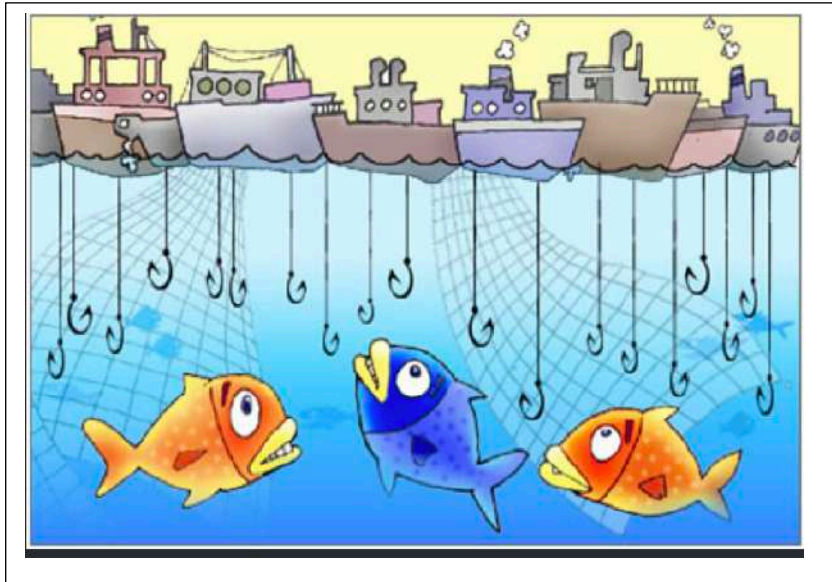
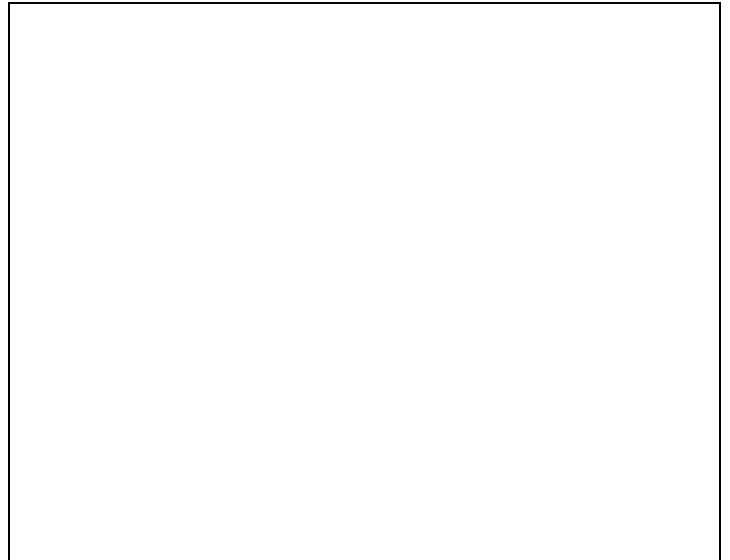
Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 4



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

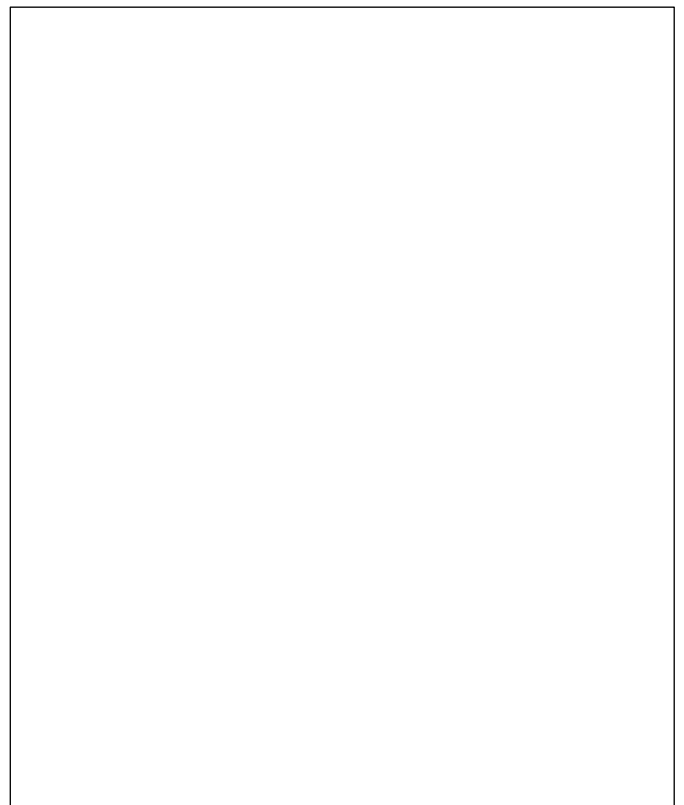
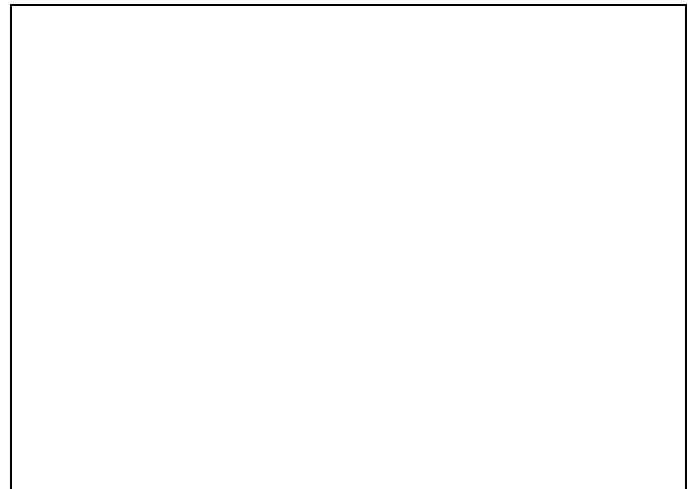
Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 5



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

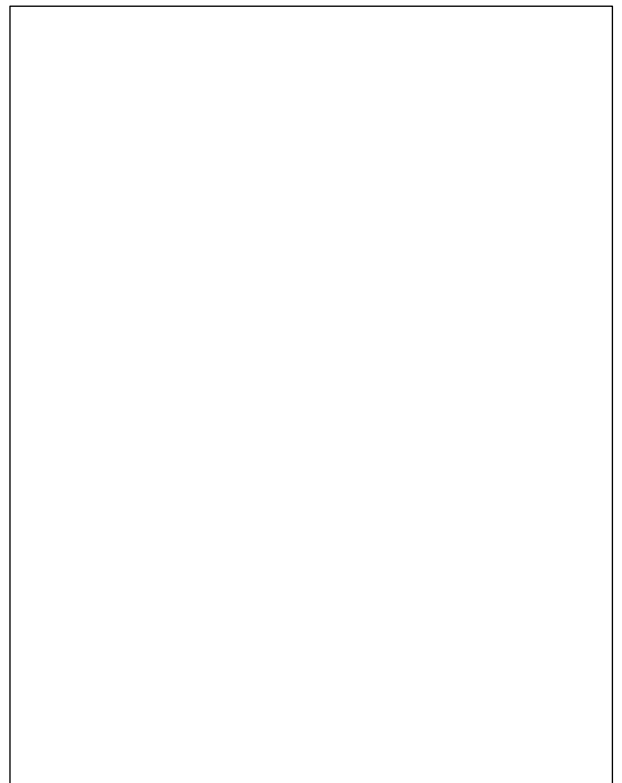
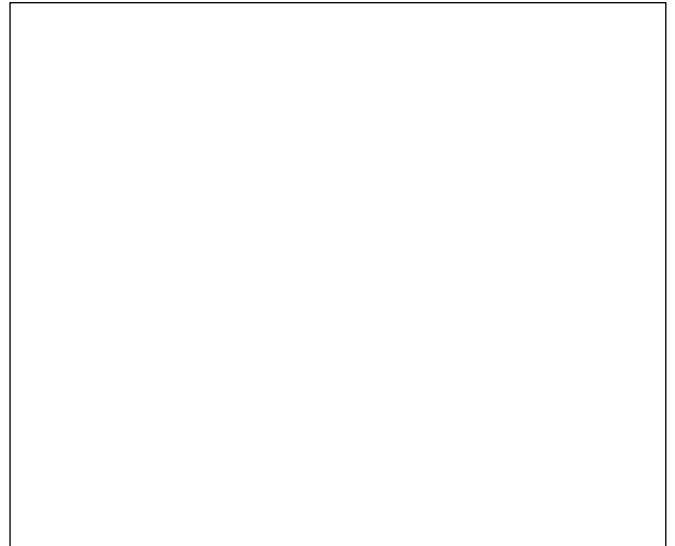
Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 6



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 7



Tasks

In pairs, you will have to introduce some environmental impacts from cartoons.

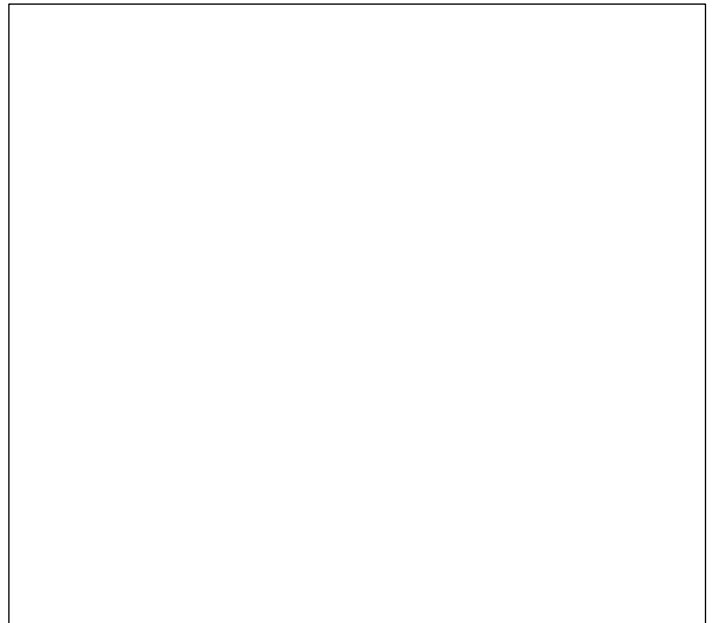
Step 1:

1. Describe each picture.
2. What is the issue at stake in each picture?

Step 2:

Present your answers orally without any notes.

TEAM 8



The indigenous inhabitants of this land had a wise saying: "Every time you take something from the Earth, you must give something back"



B. Negative externalities as cases of market failures

According to economists, the limits to growth are considered as a market failure. The market fails to report any negative environmental effects: degradation, depletion, waste
Let's introduce economists' explanations about this issue.

a. Depletion of resources: the tragedy of the commons.

The tragedy of the commons.

Picture a pasture open to all. Each herdsman (1) will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably well for centuries because tribal wars, poaching (2) and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning (3) ...

As a rational human being, each herdsman seeks to maximize his gain. He asks, 'What is the utility to me of adding one more animal to my herd?' This utility has one negative and one positive component. The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from sale of the additional animal, the positive utility is nearly +1. The negative component is a function of the over-grazing created by one more animal. Since, however, the effects of over-grazing are shared by all the herdsmen, the negative utility of any particular decision-making herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another. But this is the conclusion reached by each and every rational herdsman sharing commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom of the commons brings ruin to all.

Ray Powell, AS economics, Philip Allan, 2011.

- (1) herdsman
- (2) poaching
- (3) judgement

1. Recap how A. Smith has advocated the free-market.

...../.....
.....

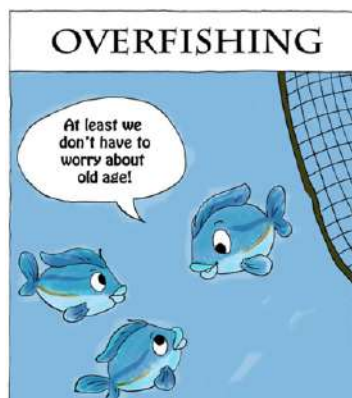
2. Find out two characteristics of the commons.

.....

3. Explain how the market fails with the commons.

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Applied economics



Show that cartoon illustrates the tragedy of the commons.

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b. Negatives externalities and welfare losses.

An inefficient allocation of resources

Externalities imply that there is an inefficient or sub-optimal allocation of resources. Consider Figure 1. Assume that all other markets in the economy are producing at a point where marginal social cost equals marginal social benefit. Marginal cost and benefit curves are drawn on the diagram.

- Marginal cost curves are U-shaped. The cost of producing an extra unit of output is assumed to at first, and then to This is because of diminishing marginal returns in the short run or economies or diseconomies of scale in the long run.

- Marginal benefit curves are downward sloping. This is because the benefit from consuming an extra unit of output is assumed to the more is consumed. The marginal benefit curve is also the demand curve for the product since the demand curve shows the value that consumers place on consuming an extra unit of the good.

Figure 1: Allocation resources with external costs

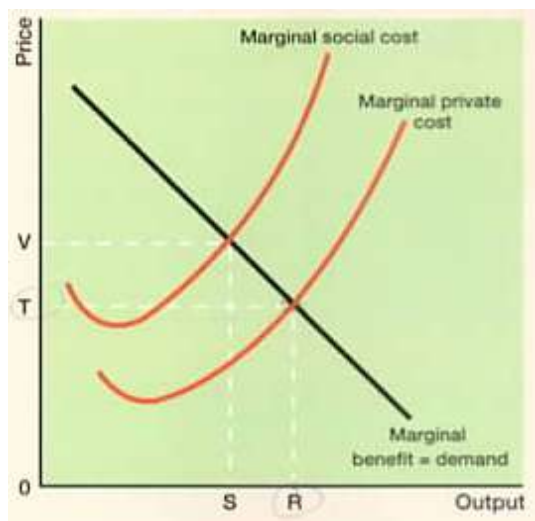


Figure 1 shows that the marginal social cost is the marginal private cost. Therefore, there are external cost of production in this market. The vertical distance between the two lines shows the cost at any given level of output. The equilibrium quantity demanded and supplied in a free market would be where marginal private cost marginal benefit. Markets signals are such that will be produced and sold at a price of However, resources could be allocated more efficiently if marginal benefit were equated with the full cost of production shown by the marginal cost line. If all costs were taken into consideration, equilibrium quantity produced and consumed would fall to whilst price would have to rise to This is what one would expect. Society needs, for instance, to consume chemicals and pay a price for them if their production leads to pollution in the environment.

(...) If it is assumed that all other markets are producing where price = marginal cost (the demand or marginal benefit equalling marginal cost condition just discussed), then allocative efficiency will exist in a market if it too produces where price = marginal cost. On the other hand, there will be allocative inefficiency if private cost or benefit from social cost or benefit and markets are free. The size of this allocative inefficiency can be seen in Figure 1. Production should only be at OS if price is set equal to marginal social costs. Overproduction of SR leads to allocative

Alain Anderton, Economics, fifth edition, Pearson, 2008.

1. Recap the meaning of:

- Externality or spillover effect:
- Marginal private cost:
- Marginal social cost:
- Negative externality or external cost:
- Diminishing marginal returns:
- Economies of scale:

2. Fill in the text.

Sum up

The economic activity generating economic growth has yielded impacts, especially on environment, such as and of scarce resources. According to economists these negative are cases of market : the market is unable to put a on the environment because it is considered as a good, and

If it is considered that market fails to protect the environment, governments must intervene to correct environmental negative. We are going to study the efficiency of the government policies aiming sustainable development.

III. Are government policies for sustainable development efficient?

A. What policies can a government use to achieve a sustainable development?

*Until recently, the main choice of policy for dealing with pollution as a negative externality was between **regulation** and **taxation**. In the 1990s, another market-oriented solution started in the USA, based on a **trading market in permits or licences to pollute**.*

First solution: regulation

In its most extreme form, regulation can be used to ban completely, or criminalise, the discharge of negative externalities such as pollution and noise. It may be impossible to produce a good or service as electricity in a coal-burning power station without generating at least some negative externality. In the situation, banning the externality has the perverse effect of preventing production of a good (for example, electricity) as well as the bad (pollution).

Because of this, quantity controls rather than a complete ban may be more appropriate. These include **maximum emission limits**, and restrictions on the time of the day or year during which the negative externality can legally be emitted.

Ray Powell, A2 economics, Philip Allan, 2010.

1. Quote the two measures used with regulation.

.....

2. Picture



At current rates of dumping, there could be more plastic trash than fish in the world's oceans by 2050 if nothing is done. (Photo: AFP/Noel CELIS)

Are quantity controls of plastic bags more appropriate than a complete ban, as it is suggested in the text?

.....
.....
.....
.....



But some countries have applied tax on them...second solution.

Second solution: taxation

Completely banning a negative externality such as pollution is a form of market replacement rather than market adjustment. By contrast, because taxes placed on goods affect incentives that consumers and firms face, they provide a market –oriented solution to the problem of externalities. Taxation compensates for the fact that there is a missing market in the externality. In the case of pollution, the government calculates the money value of the negative externality and imposes this on the firms as a **pollution tax**. This is known as the **polluter must pay** principle. The pollution tax creates an incentive, which was previously lacking, for less of the bad to be dumped on others. By doing so, the tax internalizes the externality. The polluting firm must now cover all the costs of production, including the cost of negative externalities, and include these the price charged to customers. By setting the tax so the price the consumer pays equals the marginal social cost of production ($P = MSC$), an allocative efficient level of production and consumption could in theory be achieved.

Ray Powell, A2 economics, Philip Allan, 2010.

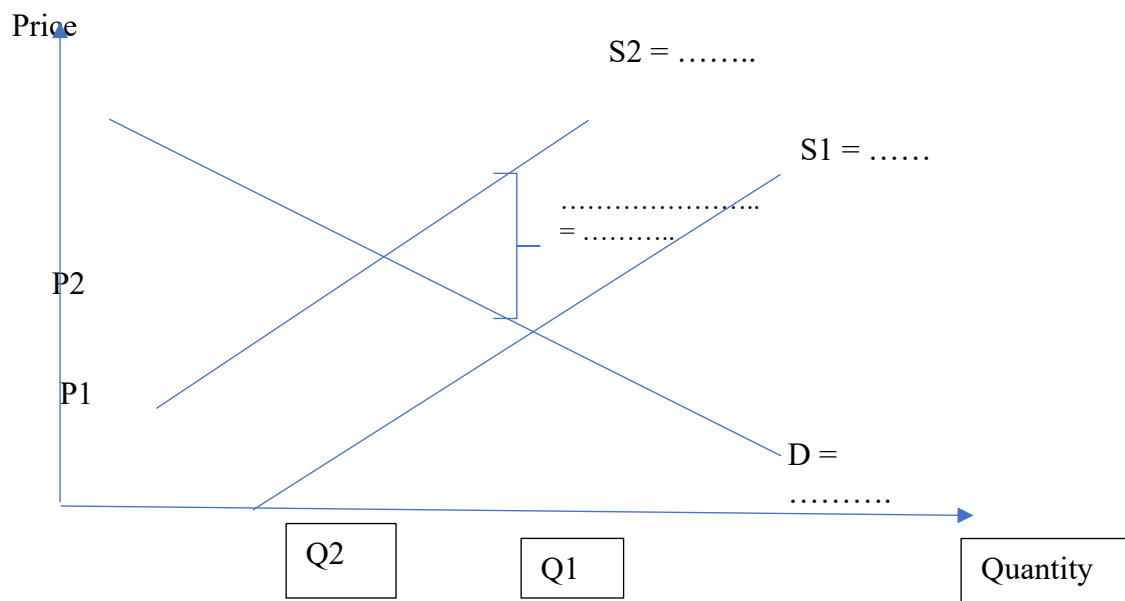
1. Give the main difference between regulation and taxation.

.....

.....

.....

2. Draw appropriate curves showing external costs arising from polluters in the fresh chart below. By doing so, place in the diagram the tax used to correct negative externalities.



3. Explain how tax internalizes the externality.

.....

.....

.....

4. Find out why tax used to correct negative externalities are also called 'Pigovian tax'.

[illegible]

Third solution: pollution permits

The 'EU Emissions Trading Scheme is now the centrepiece of European efforts to cut emissions. The following video illustrates in simple terms how this Emissions Trading System works.



<https://climatepolicyinfohub.eu/eu-emissions-trading-system-introduction>

1. What does climate change consist in? Where does it come from? What does it involve?

.....

.....

.....

.....

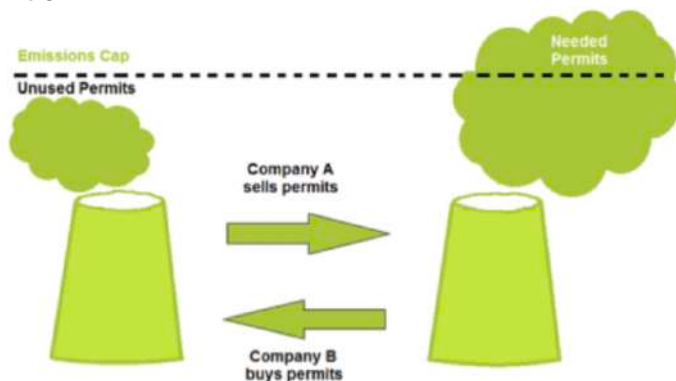
.....

2. What is the name of the EU pollution permits?

.....

3. Fill the diagram using the following: needed, cap, sell, unused, buy. Give a title to this diagram. Then, complete the comment.

Title:



If companies emit less than the, they are permitted to the excess carbon permits to companies that are polluting

Conversely, if companies emit more than the cap, either theytheir emissions or extra allowances from another emitter who gets of carbon permits.

The company polluting less will profit from this transaction by selling unused permits → q4

Source: adapted from Energy Royd, 2013

4. How does EU ETS create incentives for companies to cut back their emissions?

.....

.....

5. Are EU ETS only based on a market mechanism?

.....

.....

.....

B. Is one of the three government policies better than the others?

	Regulation	Taxation	Pollution permits
Definition	Ban or on a number of pollutants that can be discarded into the atmosphere. It's a command and control approach.	Tax which makes people pay the social cost of pollution. This is known as "making the polluter pay": polluters pay the full social cost of producing pollution. It's a market-based scheme.	It's an Emissions trading scheme where firms are given the right to pollute a certain amount, a cap; these permits can be traded with other firms. It's a market-based scheme.
Examples	EU pollution regulations:		
Advantages	<ul style="list-style-type: none"> - Strict limits create clearly defined and can make sure that pollution levels are actually reduced rather than relying on markets-based incentives, which may or may not work. 	<ul style="list-style-type: none"> -Government raises substantial, which could be used to finance other pollution reduction schemes (solar power is an alternative to burning coal); - market incentive for firms to offer more engines, which cause pollution. 	The scheme uses the of the market. In theory, permits create a financial incentive to pollute because you can then sell your permits to other firms.
Disadvantages (drawback)	<ul style="list-style-type: none"> - Strict limits can be difficult to, e.g. having regulations on air pollution levels, doesn't say how that will be achieved. - the state interference is rejected in countries advocating values. 	<ul style="list-style-type: none"> -If demand may be quite inelastic and that an increase in petrol tax may do little to demand and only marginally reduce the amount of pollution; - It can be difficult to implement green taxes due to administration - It is difficult to know how to tax; - Business claim higher tax can discourage investment and economic -In practical terms (non-economic issue), the difficulty is often political resistance – people never like new taxes, even if there is a long-term goal of reducing pollution. 	<ul style="list-style-type: none"> -In practice, it can be difficult to implement. It is difficult to know how permits to give out. If the government is too generous, there will be pollution reduction. If the government is too strict in implementing permits, firms may complain it adversely affects output because they cannot get enough permits. This could economic prosperity. - It is difficult to the amount of pollution created. There may be an incentive to cheat (tricher) and hide the amount of pollution a firm creates.

Sum up

Pollution is a negative externality – a to society, and by the way it reduces people well-being. To reduce pollution, the government can use three main policies – tax to the price, regulation to or certain pollutants and pollution

It cannot be concluded that one of the three policies is efficient than the others. Because each policy contains advantages as well as disadvantages. Plus, due to the pollution several solutions could be combined to solve the problem efficiently. Furthermore, the choice of the policies in favor of a sustainable development depends on governments political orientations: either a command and a control approach (.....) or a market- mechanism one (..... and)