

Topic 1 – Basic Economic Concepts and Resource Allocation



I can formulate and pursue enquiries into aspects of the material world using basic economic concepts, as well as tools such as the Production Possibility curve to help me explain how to best allocate resources.



Section A – Scarcity and Resources

Learning Outcomes:



1. Explain that resources are finite in relation to human unlimited wants.

- ✓ Scarcity
- ✓ Economic Goods
- ✓ Free Goods

Imagine the world has just been created and you are given the possibility to possess five items. List these items and the purpose they would serve you.

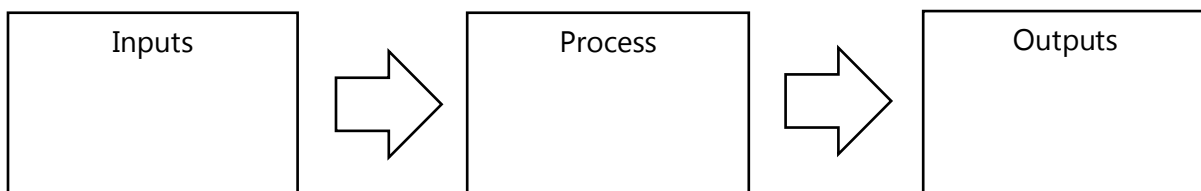


All the items mentioned are called _____ - _____



_____ are important because they are used to make **Goods** and provide **Services**.

Production refers to the creation of goods and services from available resources. So, production can be described as the process of converting inputs into outputs to satisfy people's wants.



A **Service** is an action that a person does for someone else. For example: _____

Goods are the physical items that are bought. For example: _____

JANUARY 2100 | VOL. XII

REFLECTIONS

The leading local newspaper for the last 55 years!

THIS ISSUE'S
FEATURED
ARTICLES:

Cocoa Trouble - 1
Where to go? - 3
Special offers - 6



CHOCOLATE
COULD RUN
OUT IN SEVEN
YEARS!

Climate change and
the cocoa tree.



The new year has just begun, and chocolate lovers have already been hit with scary news - we could run out of chocolate in 7 years as climate change makes it too hot for cacao plants to survive.

The news spread quickly on social media, with chocoholics fearing for their future. T-shirts and mugs with the slogan, "Save our planet. It's the only one with chocolate," became the trend of the day.

Chocolate could soon be a thing of the past, after scientists warned that the cacao plant could be extinct within 7 years. Over half of the world's chocolate comes from just two countries in West Africa - Ivory Coast and Ghana - where the temperature, rain, and humidity provide the perfect conditions for cacao to thrive. But the threat of rising temperatures over the next three decades, caused by climate change, is expected to result in a loss of moisture from the ground that will cause the trees to die.

Now scientists at the University of California have teamed up with the company Mars, in an attempt to keep chocolate on the menu where they are trying to create a cocoa plant seed that would thrive in dry warm climates.

The newspaper article shows a gloomy picture of what could happen in the future. It is hard to imagine a world without chocolate! The cocoa trees do not give an infinite number of chocolate beans but provide a limited number – in other words they are **finite** (limited in supply).



Resources are not finite and will eventually run out. This is known as **scarcity**. All natural materials and resources are scarce and will eventually run out. The problem of scarcity is regarded as the **Central Economic Problem** and is the reason why we study economics.



*"Only when the last tree
has died and the last river
has been poisoned and
the last fish has been
caught, we will realise that
we cannot eat money".*

- **Free Goods** – Goods which are unlimited in supply. For example: _____

- **Economic Goods** – Goods which are limited (scarce) in supply. Anything that is paid for is considered as an economic good. For example: _____

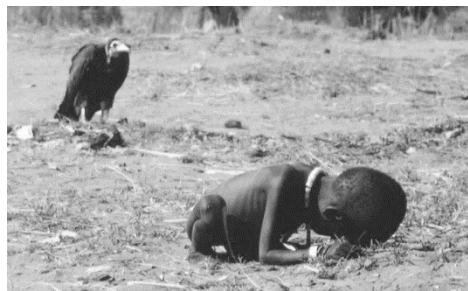
Section B – Scarcity and Choice

Learning Outcomes:



1. Relate the concept of choice to the concept of scarcity.
2. Define rational behaviour by consumers and by producers.
3. Assess how scarcity may result in inequality within an economy.

Economics is the study of how economic resources are used to produce goods and services to satisfy society's needs and wants.



Needs are goods and services that are essential for survival. These include: nutritional food, clean water, shelter, protection, clothing, and access to healthcare and education.

Wants are goods and services that are not necessary for survival but are demanded by people to fulfil their desires. For example: _____

All people need food, water, shelter, and clothing to survive so we can say that all people have the same basic needs. However, people usually want more than they need (for example: branded clothing, vacations, big televisions, jewellery, big cars, **etc...**)



The list of human wants can go on and on and on... So, we can say that human wants are



Resource Allocation

Resources are _____ when compared to humans' _____ wants. This is known as the _____ where not enough _____ are present to satisfy the _____ of all people.

Scarcity means there aren't enough resources for everyone to have what they want or need. This means that some people may get more than others:

People with more money can afford things like better homes, education, and healthcare. Others, with less money, might miss out.

This causes inequality, which means the gap between the rich and the poor becomes bigger. In simple words, scarcity can lead to unfairness in how things are shared in a country.

During the COVID-19 pandemic, all schools moved online.

Some students had **fast Wi-Fi, laptops, and quiet rooms** at home — they could keep learning. Others had to **share one phone with siblings**, or had **no internet at all** — they fell behind.

This happened because **technology was scarce** for some families. Even though **all students wanted to learn**, only those with **access to resources** could do well. That's **scarcity** causing **inequality** — not based on how smart you are, but on what you have at home.

Research Task – Identify another scenario where scarcity of resources leads to inequality:

Nobody has enough resources to satisfy their wants and needs, so people must make _____. We can make _____ because scarce resources have alternative uses!

It is important to realise that scarcity and choice are not just problems that are restricted to individuals, but businesses and countries face these problems of choice as well.

- A business must make the best use of the money invested by its owners to earn the most profit possible – **profit maximisation**.
- A country has to use its' resources and taxation collected from people's money to use them to the best of the community.



Consumption refers to the using up of goods and services to satisfy human needs and wants. This decision is taken based on personal preferences where we generally consume those goods that give us the most satisfaction – **maximisation of satisfaction**.

For example - _____

Every time we go shopping, we are involved in a basic economic activity. We only have limited money available, but we would like to buy more than we can afford. Consequently, we are required to make a choice because of scarce resources using our personal preferences.



The Three Economic Questions

The **Basic Economic Problem** means that decisions/choices must be made by society/individuals using the **three economic questions**:

1. What to produce?

- This is the choice of goods/services are going to be consumed/produced and which goods/services are not going to be consumed/produced.
- For example - _____

2. How to produce?

- Most goods/services can be produced using a variety of methods – one good can be produced in a number of different manners.
- Different methods of production can be distinguished from one another using the resources they use, that is, labour intensive or capital intensive.
- Producers use the method that will likely give them the biggest amount of profit possible – **maximisation of profit**.
- For example – _____

3. For whom to produce?

- This refers to who will *consume* the goods and services provided.



Exercise Set A**1. Circle the correct answer**

- A. Which of the following can be classified as a good?
- i. Haircut.
 - ii. Car.
 - iii. Taxi journey to Sliema.
 - iv. Personal fitness session.
- B. An example of a free good is:
- i. Air whilst scuba diving.
 - ii. Public domain web pages.
 - iii. Running shoes.
 - iv. Olive oil.
- C. Which is **NOT** one of the three basic economic questions addressed by an economy?
- i. For whom to produce?
 - ii. How to produce?
 - iii. What to produce?
 - iv. When to produce?
- D. Which term is used to describe non-physical items, such as haircuts, bus journeys, and internet access?
- i. Factors of production.
 - ii. Goods.
 - iii. Opportunity costs.
 - iv. Services.
- E. A pizza shop sells pizzas for €8 each. It costs them €3 to make one pizza. The owner wants to earn as much money as possible. What should the owner do to maximise profit?
- i. Give pizzas away for free
 - ii. Sell as many pizzas as possible at €8
 - iii. Stop selling pizza
 - iv. Make each pizza more expensive to produce

2. Answer the following questions

A. What is the central economic problem? (2 marks)

B. Explain the difference between needs and wants by giving examples. (4 marks)

C. Explain the difference between economic goods and free goods. (4 marks)

D. Explain the concept of "maximisation of satisfaction". (2 marks)

E. Explain the concept of "maximisation of profit". (2 marks)

Section C – Opportunity Cost

Learning Outcomes:



1. Describe opportunity cost in words.
2. Apply the concept of opportunity cost to choices made by individuals, businesses, and the government.

Resources are _____, so we need to choose how to best use them. Scarcity is the excess of human wants over what can actually be produced. As a result, various _____ have to be made between alternatives.

Think of alternative uses that each of the following can be used for



People around the world must choose how scarce resources are used as _____

The **Opportunity Cost** is the second-best alternative that must be given up when scarce resources are used for one purpose instead of another. It can be described as the cost of the next best thing that is given up. So, this implies that choosing one use means going without the other!

Genially Activity – Click [Here](#)

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The problem of scarce resources means that choices must be made. This is true for individuals, firms, and governments who all have to make decisions about how to **allocate** resources. Such choices will always involve a cost – the opportunity cost.

1. Individuals

- An individual does not have unlimited income and so one has to make economic choices on a daily basis.
- _____

2. Firms

- Firms may have to decide with what to do with money invested by owners and profits.
- _____

3. Governments

- Governments cannot spend infinite amounts of money on the provision of public services.
- _____

Exercise Set B

1. For the following scenarios identify what are the limited resources, the opportunities, the choices and the opportunity cost.

Scenario 1

A factory has 10 employees. With these employees, the factory is able to produce **one** of the following: 300 bottles of water, 200 bottles of orange juice or 50 bottles of Iced Tea. The manager decides to use the labour to produce the 200 bottles of orange juice.

Limited Resource/s:	Opportunities
The Choice/s:	The Opportunity Cost:

Scenario 2

For New Year's Eve you and your friends decide that you want to go on an outing. The options are: the cinema, a restaurant, and a concert. You have a budget of not more than €15 each and can only choose 1. Eventually you collectively decide to go to the cinema.

Limited Resource/s:	Opportunities
The Choice/s:	The Opportunity Cost:

3. Circle the correct answer

1. A farmer uses one of his fields to plant corn. What could be the opportunity cost of this decision?
 - a. The cost of the seeds.
 - b. Wages paid to his farm workers.
 - c. The water used to irrigate the field.
 - d. Using the field to grow potatoes.

2. A firm can produce a number of possible combinations of two goods. It can either produce:
 - 500 of good X and 300 of good Y, or
 - 600 of good X and 250 of good Y.

What is the opportunity cost of producing the extra 100 of good X?

- a. 100 units of Y.
 - b. 250 units of Y.
 - c. Nothing.
 - d. 50 units of Y.

3. A firm produces 1000 units of good X and 600 units of good Y each week using its resources. It wants to increase output of X to 1,200 units per week. To do so, it must cut production of Y to 500 units per week. What will be the opportunity cost of the decision to increase the output of good X by 200 units each week?
 - a. 200 units of Y per week.
 - b. 500 units of Y per week.
 - c. 100 units of Y per week.
 - d. 250 units of Y per week.

Section D – The Production Possibility Curve (PPC/PPF)

Learning Outcomes:

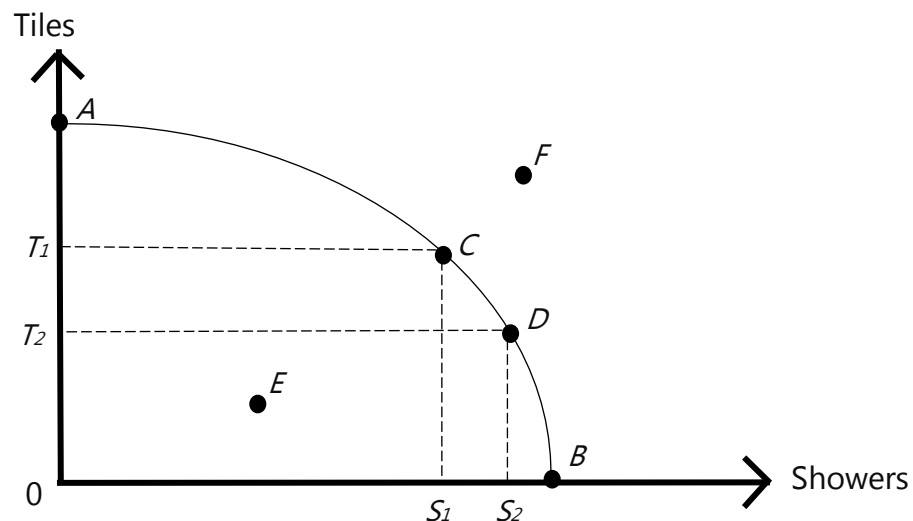


1. Describe opportunity cost by means of PPC.
2. Illustrate the PPC through plotting and sketching.
3. Interpret the PPC in terms of allocation of resources.
4. Interpret the PPC in terms of opportunity cost.
5. Analyse the PPC by making reference to efficiency and inefficiency.

The **Production Possibility Curve** (Frontier) also known as PPF or PPC is a line or curve that shows what a society is capable of producing with existing resources. It shows the combination of goods and services that an economy can produce with existing resources.

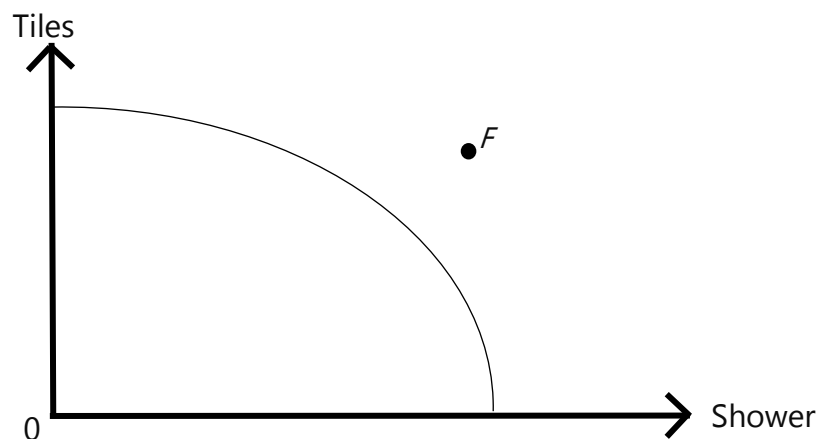
The PPC outlines the choices that an economy has and will also show the opportunity cost in a period of time.

Assume a country can only produce two types of goods with its available resources: tiles and shower-trays. The figure below shows that if a producer would like to increase production of shower-trays from S_1 to S_2 then the number of tiles that have to be produced will have to decrease from T_1 to T_2 . The opportunity cost of producing the extra shower-tray is the decrease in the production of tiles from T_1 to T_2 .



The points in the PPC diagram illustrate the following:

- Point A – all resources are dedicated to the production of tiles.
- Point B – all resources are dedicated to the production of shower-trays.
- Point C – shows a combination of the production of both tiles and shower-trays with available resources. In this case, the combination is T_1 tiles and S_1 showers.
- Point D - shows another combination of the production of both tiles and shower-trays with available resources. In this case, the combination is T_2 tiles and S_2 showers.
 - Points A, B, C, D all shows different combinations of output when all resources are used **efficiently**.
- Point E – this point is within the productive capacity of the economy, so the production of both tiles and shower-trays can increase without any opportunity cost as resources are not all being used or are being used **inefficiently** (can be used better).
- Point F – this point goes beyond the productive capacity of the economy (not enough resources), so it is currently unattainable. How can it become attainable?



Exercise Set C**1. Plot the PPF on graph paper and clearly show one example of opportunity cost**

The following table shows possible combinations of refrigerators and plastic bottles that can be produced in country X.

Combinations	Plastic bottles	Refrigerators
A	40	0
B	35	15
C	25	25
D	15	30
E	0	35

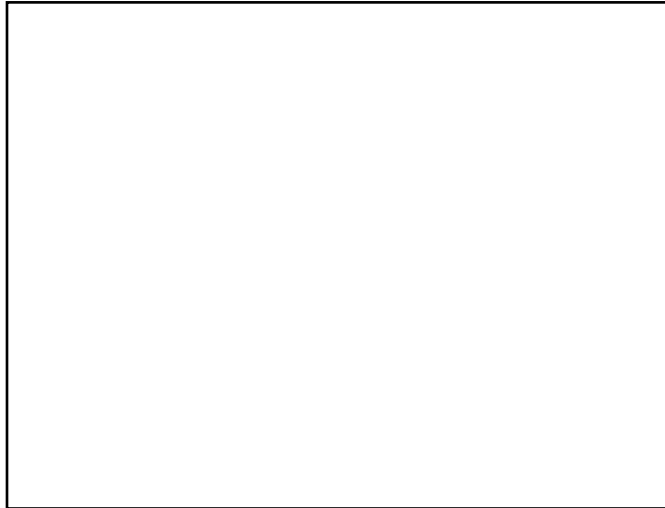
2. Plot the PPF on graph paper

The following are the production possibilities for tomatoes and ovens in country S. Plot the data from the table into the graph, using the y-axis for the tomatoes and the x-axis for the ovens.

Combinations	Tomatoes	Ovens
A	60	0
B	58	15
C	50	30
D	35	45
E	20	52
F	15	53
G	0	55

3. Sketch a PPF to illustrate the following

Assume that with 50kg of flour, a chef can make either 100 packets of fresh pasta or 200 cakes. Show the following on a PPF.

**4. Read the following and answer the questions**

The following table shows possible combinations of *t-shirts* and *mobile phones* that could be produced in country Y.

Combinations	T-shirts	Mobile Phones
A	50	0
B	45	15
C	35	30
D	20	40
E	0	45

Questions

- Plot the Production Possibility Curve on graph paper using the information from the table.
- Illustrate the concept of opportunity cost on the graph paper.
- What is the opportunity cost of increasing the production of mobile phones from 15 to 30?
- What is the opportunity cost of increasing the production of t-shirts from 0 to 20?

5. Read the following and answer the questions

The following table shows possible combinations of *books* and *ladders* that could be produced in country Y.

Books	Ladders
0	50
15	45
25	37
35	25
45	0

Plot the Production Possibility Curve on **DESMOS** using the information from the table.

(Link: <https://www.desmos.com/calculator>)

Insert screenshot of graph

Section E – Economic Systems

Learning Outcomes:



1. List ways through which the limited resources have to be allocated by the market mechanism or by the government or both.
2. List the characteristics (features) of different economic systems.
3. Describe ways through which the limited resources have to be allocated by the market mechanism or by the government or both
4. Show how the three economic systems are used to solve the basic problems of scarcity and choice.
5. Assess the role of markets in allocating resources with what Adam Smith describes as an 'invisible hand'.

The basic economic problem requires individuals, firms and governments to make choices to **allocate resources**. Resource allocation can occur by answering three questions:

1. What to produce?
2. How to produce?
3. For whom to produce?



In a society, the way resources are allocated and the way the three questions are answered will depend on people's beliefs and values. Thus, there is no right answer. The way resources are allocated in Malta is different from the way they are allocated in Germany. How a national economy answers the questions of what to produce, how to produce, and for whom to produce is called an **economic system**.

Private Sector – made up of all the businesses and firms owned by ordinary members of the general public.

Public Sector – Owned and controlled by the Government.

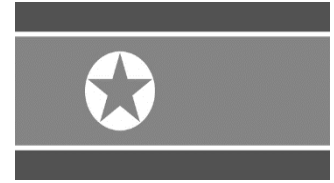
Resource Allocation

There are three economic systems where the main difference between them is the level of government intervention in answering the three economic questions.



Case Study – Chung

Chung Cha is a female North Korean defector who is 25 years old. She managed to escape from North Korea and has started off her new life in New York City after finding employment as an assistant cook at a local Korean restaurant. She started to think about how life in the city is different than that in her native country.



Chung started thinking about how other people were buying clothes from mega fashion stores, such as Macy's. What a difference! She was only able to buy certain shirts and dresses as they were the only ones available. Little _____ existed. She wouldn't have thought of discussing the option of choosing the red or the green shirt with her friends let alone choosing Levi's or Tommy Hilfiger! How different life was...

Having said so, they were more peaceful due to the lack of commodities available. This led to less competition between people as opposed to that in the USA where competition can be found: in businesses, between employees, in schools, and everywhere else. One particular incident that struck Chung was when two school children were competing between them on who wore the most branded clothes to school. In North Korea, there was a fairer distribution of income.

The primary concern in North Korea was providing work to all citizens where equal pay for most was the rule of thumb but in New York there were a lot of people who were homeless and unemployed. It was up to the government to decide what, how, and for whom to produce in those days so the highest possible employment of resources was aimed for.

Oh! What about Nick ... the boy she met at the cinema? Will he call her again? He had a luxurious car, and the well-groomed Shih Tzu called Mila. Chung has none of this in North Korea yet the basic needs were all provided by the government for all citizens! Well perhaps life in North Korea was not so bad, but as they say "every cloud has a silver lining".

List down the differences between life in New York City and North Korea

<u>North Korea</u>	<u>New York City</u>



Characteristics of the Planned/Command Economic System

If you ask the Maltese 'who leads the economy?' most people would probably reply the Government. Whilst it is true that governments, in most if not all countries, have a say, they do not have or give all the answers to the economic questions. But, where they do, the system is known as a **command economy**.

In a **command economy**, the solutions to the economic problems are worked out by some all-powerful authority, which then imposes its solutions on the population. Thus, decisions about what, how, and for whom (resource allocation) are made by the government.

In most **command economies**, all the important means of production are *publicly* owned, thus all land, housing, factories, power stations, transport systems and so on are owned by the government. Another important feature of command economies is that there is no form of personal income that is derived from the ownership of property. For example, Cuba and North Korea.

Characteristics of the Market/ Free-Market/ Laissez-Faire Economic System

A **market economy** occurs when society decides that the solutions to the basic economic problems will not be given by some authority but by market forces. In such an economy, what is produced depends on what households want to consume and what firms are able to produce.



The main features of a market economy are:

- **Private property** - individuals may own, control and dispose of land, buildings, machinery as well as other natural and artificial resources. They may also earn income from that property in the form of rent and interest.
- **Freedom of choice and enterprise** - households are free to demand what they want and firms are free to supply what they are able and willing to supply.
- **Self-interest** - each firm and household will attempt to do what is best for itself. Free economies are also known as *laissez faire* (leave well alone) economies. This is because consumers freely choose the goods and services they will buy and producers freely decide on the goods and services they will provide. **Adam Smith describes this as the invisible hand** where if each consumer is allowed to choose freely what to buy and each producer is allowed to choose freely what to sell and how to produce it, the market will settle on a product distribution and prices that are beneficial to all the individual members of a community. Collectively, consumers and firms can create an efficient allocation of resources for the whole of society.
- **Competition** - By competition, economists mean price competition, i.e. the market consists of a large number of buyers and sellers such that no one buyer or seller has an influence on the market demand or the market supply.
- **A price system** – Choices are resolved by the free play of the market forces (supply and demand) where price is determined through the price mechanism.
- **A small role of government** – the only role of the government is to provide public goods (law and order, street lighting, light house, pavements).

Characteristics of Mixed Economic Systems

Mixed economies are market economies but all contain elements of state enterprise and governments in all of them intervene to modify the operation of market forces. They are mixtures of command and market economies. It may be said that most economies nowadays are mixed economies.

It combines government planning with the use of free market to bring the best of both worlds.

- People and firms in the private sector own scarce resources with the aim of profit maximisation.
- Government too owns scarce resources to produce goods and services that they think their people need and want.

Advantages of a **mixed economic system**:

1. Unemployment is less than in a Market Economy because of government intervention.
2. Government provides Public and Merit goods
3. Government intervention helps prevent the consumption of harmful goods.
4. The Government makes sure that private firms do not make profits at the expense of the environment and human rights.
5. The social aspect is safeguarded by the Government.

Task - Build Your Own Economy: A New Nation is Born! (In Pairs)

You are the founding leaders of a new country. Your task is to choose one economic system (Traditional, Command, or Market) to implement. Create a presentation (PowerPoint, Canva, Google Presentations, etc...) that introduces your country and explains how it will work based on your chosen system.

Slide 1

- Name of your country
- A short description of the climate, population and geography.

Slide 2

- Chosen economic system
- Explain the economic system in your own words.

Slide 3

- What types of jobs exist?
- What are people's needs and wants?
- How do people get food, housing, or clothing?

Slide 4

- Who decides what to produce?
- How are goods and services produced?
- Who receives the goods?

Slide 5

- List 2 advantages and 2 disadvantages of your system in the context of your country.

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Section F – Sustainable Development Goals (SDGs)

Learning Outcomes:



1. Analyse the impact of the allocation of resources to individuals, firms and government whilst ensuring environmental protection (SDG 12 and SDG 14).
2. Assess the effectiveness of the three economic systems to allocate resources and their impact on individuals and businesses in terms of equity, sustainability and environmental issues.

Development refers to the process of growth that results in something developing. Development is an inevitable process in society that is in contact with other countries. Throughout history man has always tried to make life simpler, that is to, develop. **Sustainable Development** can be defined as the way in which we, as today's generation satisfy our needs and wants, without making it difficult or impossible for future generations to achieve their needs and wants.



The **Sustainable Development Goals** (SDGs) were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The main aim of the SDGs is to end poverty. However, for this to be achieved there have to be strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Allocation of Resources and SDG 12 (Responsible Consumption and Production)



ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

SDG 12 is meant to ensure good use of resources, improving energy efficiency, sustainable infrastructure, and providing access to basic services, green and decent jobs and ensuring a better quality of life for all. Our planet has provided us with an abundance of natural resources. But we have not utilized them responsibly and currently consume far beyond what our planet can provide. We must learn how to use and produce in sustainable ways that will reverse the harm that we have inflicted on the planet.

Allocation of Resources and SDG 14 (Life Below Water)



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEA AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

SDG 14 is meant to conserve and sustainably use the oceans, seas and marine resources for sustainable development. Healthy oceans and seas are essential to our existence. We rely on the seas for _____

We must protect them by eliminating pollution and overfishing and immediately start to responsibly manage and protect all marine life around the world.



How does the allocation of resources influence individuals whilst ensuring environmental protection?

How does the allocation of resources influence firms whilst ensuring environmental protection?

How does the allocation of resources influence government whilst ensuring environmental protection?

Read more about SDGs: <https://sdgs.un.org/goals>