

Background of Nigeria

Nigeria EO

How are TNC's important to Nigeria's development?



Background of Nigeria		How is Nigeria's economy changing?			How are TNC's important to Nigeria's development?		
		Economic sector	What has happened?	This means that.....	Advantages	This means that.....	
<p>- Nigeria was a colony of the UK and was stripped of its resources.</p> <p>- In 1960 Nigeria achieved independence from the UK, however no one was really in government.</p> <p>- From 1999 the country has been political stable with free elections in 2011 and 2015</p> 	This means that.... <ul style="list-style-type: none"> - Nigeria struggled to develop as it was exploited. - Nigeria struggled to develop as different groups fought for control this left the country without a government. - Nigeria became a stable country and encouraged other countries such as China to want to invest. 	Primary industry (farming, fishing, mining)	The majority of people used to be mainly employed in agriculture. However now employment has fallen due to increased mechanisation and rural-urban migration.	Nigeria is the largest growing economy in Africa, but not everyone is seeing the benefit of this. Wealth tends to be focused in the south around the Niger Delta (oil). 100 million people still earn less than \$US1 a day! Those that are seeing the benefits are now earning more money than they would have in agriculture-improving their quality of life.	1) TNC's such as shell employ local people- Shell employs 65,000 workers. 2) Companies such as Shell train their workers and teach them new skills. 3) Tankers transport the oil to Europe and the USA where it is refined into petroleum.	1) Workers earn a good income this improves their quality of life. They pay taxes which the government can use to improve quality of life. 2) Education improves the workers quality of life as they are able to increase their income. 3) The Nigerian government benefits from the export tax which can be spent on improving education, healthcare and services.	
		Secondary industry	Rapid industrialisation because of political stability and investment from other countries now means that more people are employed in manufacturing. 50% of the country's GDP comes from manufacturing and service sectors. The discovery of oil in the Niger Delta in the 1950 has also caused industrial growth.		Disadvantages	This means that....	
		Tertiary industry	There has been a huge growth in the service sector (finance, communications and retail).		1) There have been many oil spills which have caused water pollution and damaged fisheries-Bodo Oil spill 09-10 2) Social unrest caused by those not benefiting from the oil industry has caused sabotage and violent crime. 3) The oil industry causes oil flares.	1) The aquatic ecosystem is damaged. Fishermen struggle to make money and therefore their quality of life is affected. 2) Social unrest impact development and causes conflict between local people. 3) Toxic fumes are released into the atmosphere causing air pollution and respiratory problems for locals.	
Social context <ul style="list-style-type: none"> - Nigeria is multi-cultural and multi-faith society- many different religions are practiced. 	This means that.... 	How does manufacturing cause economic growth?			How is Nigeria's political and trading relationship changing?		
		Feature of manufacturing	This means that.....		Political relationships	This means that....	
Cultural context <ul style="list-style-type: none"> - Nigeria's social diversity has created a rich and varied artistic culture (music, film etc). It has 'Nollywood'. The Nigerian football team has won the African Cup three times. 	This means that.... <ul style="list-style-type: none"> - Nigeria has developed relationships within Africa and attracts investment from other countries. 	Manufacturing industries need raw materials and other industries expertise.	This means industries that can supply manufacturing grow and are set up, creating more jobs.		Since becoming independent Nigeria has a growing link with China, is part of the Commonwealth and plays an important role within Africa (peacekeeping, economic planning).	Nigeria has benefited from investment from China (US\$12 million to construct a new railway). Nigeria is looked to as a model for development by Africa- helps to maintain peace.	
		Manufacturing needs service industries such finance, retail and communications.	The service industry also grows and employs more people.		Trading relationships	This means that....	
		Manufacturing pays a higher wage than working in agriculture.	People have greater disposable income and therefore consumer demand increases, which increases the market and leads to further growth.		Nigeria's main imports are from China, USA and the EU. Almost 50% of the country's exports are to the EU (crude oil, natural gas, cotton).	Nigeria's economy is benefiting from strong trading relationships. Money made from exports can be spent on development.	
Environmental context 	This means that.... <ul style="list-style-type: none"> - Nigeria is in the tropics and has a range of climates. - The south has a high rainfall and tropical rainforest. - The north has a lot less rainfall and the main type of ecosystem is therefore grassland. - The upland plateau region is cooler and wetter. -The far north has semi-desert conditions. 	A growth in manufacturing means more people are employed in a higher paid job and are paying taxes.	Taxes can be used by the government to improve social conditions and expand the economy further.	What has been the impact of international aid?			
		A thriving manufacturing sector attracts foreign investment (other countries improve infrastructure etc.) into the country.	This helps to create the multiplier effect as the country improves more foreign investment is attracted and more jobs created.		Impacts of aid	This means that....	
<ul style="list-style-type: none"> - Economic development is varied with. - People grow crops such as cocoa and rubber. - Life is harder and field crops are grown such as cotton and cattle graze. - It is easier for people to farm here than in the north. - Nomadic grazing of cattle is the main activity. 	How does economic development impact quality of life?	Positive impacts of development	This means that....		This means that....		
		1) Improvements in services and infrastructure. 2) People have better paid jobs in manufacturing and services. 3) People have a higher disposable income.	Infant mortality has reduced and life expectancy has increased by 7 years. Expected years of schooling has increased from 6.7 to 9.0. Access to safe water has increased to 64%.		Aid is being used to help improve the quality of life and reduce infant mortality rate and increase life expectancy.		
		Issues			However, some aid money fails to get to the people who need it due to corrupt individuals and corruption within the government.		
<ul style="list-style-type: none"> - Corruption needs to be addressed so wealth reaches all the people. - Environmental issues such as soil erosion, oil spills and malaria needs to be addressed. - Basic service provision (water, electricity) needs to be a priority for all people. 		What are the environmental impacts of economic development?			This means that....		
		Mining and oil- serious incidents of pollution through oil spills. Tin mining has polluted local water supplies.	Industry- in Lagos toxic chemicals are discharged into drains and sewers. Chimneys emit poisonous gases. Deforestation is a major issue (80% of forests have been destroyed).		Destruction of aquatic ecosystems and impacts to local fishermen's businesses. Lack of drinking water.		
		CO ₂ is released into the atmosphere causing global warming and climate change.					

How has the UK's economy changed?

Sectors		This means that.....
Primary- Declined mainly as a result of the increased use of machinery.		The UK has grown economically and jobs in services and the quaternary sector have increased. These jobs pay higher wages and therefore the standard of living of the population has increased.
Secondary- since the 1960s has declined dramatically, due to increased mechanisation and competition from abroad.		
Tertiary and quaternary- The service sector increased dramatically due to the expansion in public services and the growth of financial services. Since the 1980s the new knowledge based sector has become important (research and development) to support services.		

What are the main causes of economic change?

Causes	This means that.....
Deindustrialisation- Involved the decline in heavy industries such as manufacturing and the closure of coal mines. As a result of globalisation creating competition abroad.	There was high unemployment, low incomes and environmental dereliction in regions such as Yorkshire.
Globalisation- Has occurred due to improvements in communication and technology together with the development of trading groups.	Has allowed the growth of TNCs. The UK's place within this landscape is services, finance and the quaternary sector, increasing jobs.
Government policies- 1) 1945-79: the government created state run industries as heavy industries were in decline. 2) 1979-2010: privatisation of industries. 3) 2010- onwards: the government has tried to rebalance the economy by encouraging investment (loans) in the high tech manufacturing sector such as aerospace.	1) Jobs were protected. 2) Many heavy industries closed down and jobs were lost. Former industrial areas were transformed into financial centres. 3) Creation of jobs in the north where industry had closed down.

What impact have post industrial sectors had on the economy?

Sectors	This means that.....
Information technology- Mobile devices enable information to be accessed anywhere. The UK is recognised as one of the world's top IT countries.	1.3 million people are employed in the IT sector. The growth of specialist manufacturing industries as well as service and research has been stimulated. Companies abroad are attracted to invest in the UK= jobs.
Service industries- The largest sector in the UK. The UK is recognised as the world's leading centres for financial management.	The service industry has the largest employment and economic output. 2 million people are employed in finance and it contributes 10 per cent to the UK's GDP.
Developments in research- Much research is linked to UK universities such as Oxford. Research is conducted by government bodies and private organisations.	Employs 60,000 highly educated people and contributes £3billion to UK economy. Likely to be the UK's fastest growing industrial sectors in the future.

UK EO

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What impact have science and business parks had on the economy?

Cambridge Science Park	This means that.....
Science parks- 1) Groups of research based companies. 2) Employ recent graduates. 3) Usually located within a good distance of main roads (motorways) and on the edge of universities. 4) Create attractive working environments.	1) Companies can share facilities such as meeting rooms etc. 2) They create thousands of jobs. 3) They are able to access the workers that they need. 4) Workers benefit from a nice environment and are more likely to be productive.
Business parks- 1) Usually small businesses on a single plot of land. 2) Usually located on the edges of towns and cities where land is cheap and communications are good. 3) The majority supply goods and services.	1) Benefit from cheaper land rents. 2) Easy access to and for workers. 3) Benefit from close association with each other- e.g. a printing company may benefit from supplying printing to other companies in the park.

How have developments in infrastructure impacted the economy?

Developments	This means that.....
Roads- In 2014 the government launched a £15 billion 'Road Improvement Strategy': Motorways converted to 'smart' motorways. 100 new road schemes by 2020.	These improvements will provide construction jobs for hundreds of people, and should boost local & regional economies.
Railways- Planned railway improvements include; London's Crossrail and High Speed 2 (connecting London and Birmingham).	This will ease congestion and help stimulate economic growth particularly in the north of England.
Ports- The UK has always been a trading nation, importing and exporting goods through its ports. Plans to expand these to trade and encourage more tourism.	The port industry employs 120,000 and handles 32 million passengers a year bringing tourist income to the UK.
Airports- Over 2 million tonnes of freight passes through the UK's airports each year and 750,000 flights depart, with the UK handling 200 million passengers. There are plans to expand the UK's largest airport; Heathrow	The expansion will create thousands of jobs and boost the UK's economy adding to the 3.6 per cent that airports already contribute to the UK's GDP.

What are the impacts of industry on the environment?

Nissan	This means that.....
In the past- 1) Waste materials from industry were often toxic. 2) Burning coal released gas and soot emissions. 3) Coal mining disrupted the landscape.	1) These polluted the land and water supplies. 2) The air was polluted resulting in smogs. 3) Landscapes became ugly spoil heaps.
Modern industry (Nissan)- In the past: car engines were not efficient, materials used to make cars were toxic and difficult to recycle and production was energy intensive. Now: 7% of the energy comes from wind turbines, new car models are designed to be more fuel efficient (Leaf), cars are designed with materials that can be recycled.	In the past: The car industry polluted the air and contributed to global warming. It also polluted the land with materials going to landfill. Now: Reduced contribution to land and air pollution.

What are the social and economic changes in areas of population growth and decline?

Social changes	This means that.....	Economic changes	This means that.....
Population growth (South Cambridgeshire)	- Greater demand for houses. - High proportion of commuters in the village who own a car.	- House prices increase pushing out young locals. - Sense of community is lost and public transport closes.	- Lack of affordable housing. - Commuters shop where they work. - Agricultural land sold for housing.
Population decline (Outer Hebrides)	- Young people move out. - Fewer people of working age. - Lower younger population means less children.	- Increasing elderly population who require a lot of care. - Decline in farming and fishing that needs a young work force. - Schools could close.	- Lack of population to use services. - Tourism has become an important economic activity.

What is the north-south divide?

People living in the south tend to have high incomes, longer life expectancy and a better standard of living than those in the north.	This means that.....
Cause- Deindustrialisation of manufacturing that was largely based in the north.	Northern economy declined and the economy of the south grew rapidly (growth in services and finance).
Strategies- 1) Government incentive packages to attract TNC's. 2) 'Northern Powerhouse' project.	1) TNC's locate in the north creating jobs. 2) Boosting cities such as Manchester so that wealth is spread in the UK.

What is the UK's place in the wider world?

Political and economic links	This means that.....
EU- Financial support for farmers and disadvantaged regions, goods and services can move freely.	Economic growth is supported in areas such as the North. There is free trade which has economic benefits for the UK.
Commonwealth- The secretariat provides support and advice on social and economic development.	Economic growth from the trade links. Support on economic growth, especially for the North of the UK.

Why is Rio an important city regionally, nationally and internationally?

	Importance	This means that.....
Regional  RIO DE JANEIRO	<ul style="list-style-type: none"> The city contains schools, universities, hospitals as well as many opportunities for employment, leisure and recreation. The city is a major transport hub, with an international airport, an important docks for importing and exporting. 	Rio is an important national and global city. Industrial growth in the city is helping to develop the city and Brazil economically. As a result rural-urban migrants are drawn to the city in search of a better quality of life and standard of living that they think the city can offer.
National 	<ul style="list-style-type: none"> Brazil's oil and mining industries have their HQ's in Rio. Rio is a major manufacturing centre specialising in chemicals and clothing. Rio is Brazil's second most important industrial area, producing 5% of the GDP. 	
International 	<ul style="list-style-type: none"> Rio is an international centre for industry and finance- exporting goods across the world. Rio has 5 ports and 3 airports making it an international transport hub. 	

Why has the city of Rio grown?

Reasons	Description	This means that.....
Rural- urban migration 	Rio has grown into a major industrial, commercial and cultural centre. It is a major manufacturing centre specialising in a variety of industries.	Rio attracts large numbers of migrants from other parts of Brazil and abroad. People have moved from the countryside in search of better paid work and living conditions.
Natural increase 	Young people migrate to the city in search of a better quality of life and better employment opportunities in Rio's industries.	The rate of natural increase has gone up as a result of the young people migrating and therefore increasing the birth rate.

What social and economic opportunities has urban growth created?

	Opportunities	This means that.....
Social 	Access to services (health and education)- Compared to the rural areas Rio has better hospitals and health care centres. The literacy rate is 95% for children aged 10 and over. Access to resources- over 90% of the population now has access to mains water supply. There is the opportunity to tap into electricity illegally. Legal electricity is subject to power cuts.	Migrants are able to improve their quality of life as they have better access to education, and therefore employment opportunities. Better access to healthcare means they can increase their life expectancy.
Economic 	Industry has stimulated economic growth; <ul style="list-style-type: none"> Improvements in roads, services and the environment. The manufacturing industries offer employment for migrants in areas such as Sepetiba Bay. Exporting these goods via the ports also provides employment. The service sector has grown to serve the people working in the industrial areas. 	Migrants have the opportunity to work in higher paid jobs than farming and therefore improve their standard of living and quality of life as they are able to afford to send their children to school and are able to afford access to healthcare.

Rio de Janeiro EO

Rio de Janeiro is located in the NEE of Brazil, South America. The city has a population of 6.5 million.

What challenges has urban growth created?

	Issues	This means that.....
Squatter settlements 	The lack of affordable homes and lack of skills to get manufacturing jobs means migrants are forced to build their own homes. Health- due to high population density, disease can spread easily and therefore infant mortality rates are high. Landslides- heavy rainfall makes the steep slopes prone to landslides, in 2010 200 people were killed. Services- 10% of people lack access to piped water, 30% have no electricity and 50% lack sanitation. Employment- unemployment rates are high, most people work in the informal sector which is risky with low wages. Crime- crime is widespread with violence and drug crime.	Squatter settlements are a problem for the city. The authorities have tried to improve the quality of housing with now 90% of them being constructed from bricks. They have also built schools, universities and health care centres.
Social 	Access to services- Health care is very patchy. In the west zone only 60% of pregnant women get medical care and life expectancy is just 45. Only 50 per cent of children continue education past 14, with school attendance being low.	The infant mortality rate is high in some areas (21 per 1,000). Many of Rio's rivers and Guanabara Bay are heavily polluted by raw sewage- an estimated 200 tonnes per day. 12 new sewage works have been constructed and 5 kilometres of sewage pipes installed.
Economic 	Unemployment- In the favelas unemployment exceeds 20% with one third of people working in the informal sector.	Those working in the informal sector do not pay tax and receive no insurance cover and therefore are very vulnerable.
Environmental 	Waste- Waste collection takes place in the city however in the favelas it is inadequate. Recycling is being encouraged and 'pickers' sort this at landfill.	Pollution causes thousands of premature deaths a year. Guanabara Bay is filled with raw sewage and industrial waste. Traffic congestion wastes time for businesses and commuters and causes pollution

How has the Favela Barrio (urban planning scheme) Project improved quality of life in the slums?

	Feature	This means that.....	Successes	Failures
Social 	1) Day care centres and after school schemes. 2) Services to help young people affected by drug addiction. 3) Installation of cable car to the commercial centre of Ipanema- inhabitants are given one free return ticket a day.	1) Parents are able to go to work and earn and income. 2) Young people are given a future and able to get an education to work in the formal sector. 3) People can get into the city easily for work and improve their standard of living.	The quality of life, mobility and employment prospects of the inhabitants have improved.	The budget of US\$1 billion may not cover every favela.
Economic 	1) Residents can now legally apply to own their own homes, this gives them a postcode. 2) Training schemes to help people learn new skills. 3) 100% mortgages available for people to buy their own homes.	1) Favela's become a legal settlement and therefore have access to services such as waste collection. 2) Helps people to get a job in the formal sector and have a secure income. 3) When people own their own homes they look after them.	The project has been recognised as a model by the UN and has been used in other Brazilian cities.	The newly built infrastructure is not being maintained.
Environmental 	1) Paving, widening and formally naming roads. 2) Replacement of wooden buildings to brick and securing/ removing homes from steep slopes. 3) Provision of basic services such as piped water and electricity.	1) Rubbish can be collected and the emergency services can get into the favelas. 2) Less risk of people being killed during landslides. 3) Reducing the death rate and increasing life expectancy. Children can see at night to do their homework.		Residents lack the skills and resources to make repairs. Rents rise in the improved favelas and the poorest inhabitants are even worse off.

Why is London an important city nationally and internationally?

	Importance	This means that.....
National	-The headquarters for many British companies are based there. -392,400 people are employed in the city of London. -It is a major retail centre.	It is a key city for trade around the world and therefore is a valuable city to the UK economically, this can be seen from the fact that it generates 22% of the UK's GDP.
International	-It has world city status and along with New York is one of the worlds most important financial centre. -It is the headquarters for many international companies.	

London EO

London is located in the south-east of the UK. Urban change occurred when the city lost de-industrialised and the service and finance sectors grew.

Why is the impact of national and international migration on the character?

	Impact on London's character	This means that.....
National	Those moving to London from across the UK are mainly between the ages of 20-30 years old.	The population of London is younger influencing the character of areas such as Shoreditch and increasing the population due to natural increase.
International	Opportunities + Challenges - -Contribute £83 billion a year. -Enrich cities bringing in cultural food and festivals (Notting hill). -Pressure on housing. -Pressure on jobs. -Variety of languages in schools.	London is one of the most diverse city in the UK and migrants enrich the city with their culture and are an important source of income for the capital economy. However conflict is created over competition for jobs and housing.

What opportunities has urban change created?

	Opportunities	This means that.....
Social	Cultural mix: Ethnic diversity has brought a range of foods, festivals and cultural experience (e.g. Brick Lane market). Recreation and entertainment: The younger population and regeneration of industrial area has brought new forms of recreation. For example Spitalfields is popular with shoppers visiting Boxpark (old containers). Integrated transport systems: London is developing its integrated transport system to cope with an increase demand of 60%. To do this the London Cross Rail is being created, going from East to West and North to South.	London has become an attractive place for the younger generation (20-30 year olds). This has increased the population.
Economic	Employment: New jobs have been created from the development of service and finance. The regeneration of the London Docklands employs 100,000 people.	Increased taxes are paid which the government can use to further improve the city.

	Environmental	This means that.....
	Urban greening: 47% of London is greenspace. The focus is not on creating more green space but protecting the space. The green space can be seen in London's large parks.	CO ₂ is absorbed helping to reduce global warming, cleaning the air and reducing flooding.



What challenges has urban change created?

	Challenges	This means that.....
Socio-economic	Social deprivation: Areas (especially in East London) previously where employment was in industry remain run down from their industrial past. Inequalities in housing, health, education and employment: The east of London (e.g. Newham) is on average less educated than the west (e.g. Kensington and Chelsea), with 62% achieving 5+GCSE's Vs. 80%.	There is a clear difference in quality of life between East and West London resulting in a lower incomes and therefore a poorer diet and overall lower life expectancy (78 Vs .90).
Environmental	Pollution: Mainly generated from heating systems and vehicles, especially with the increasing population. One of the worst pollutants is nitrogen dioxide which mainly comes from vehicles. Most of London is above the EU limit of 40mg/m ³ for NO ₂ . Waste disposal: Almost a quarter of all London's waste goes to landfills outside of London. London has set a target to send 0 waste to landfill by 2030 by encouraging more recycling. Dereliction: Areas such as the Lower Lea Valley (East London) become run down after deindustrialisation. The Lower Lea Valley was an inner city area with housing built for industrial workers.	Pollution has a negative impact on people's health and is responsible for 4,000 premature deaths each year. New cycle superhighways are planned to encourage more cycling. Waste contributes to wider issues of climate change through the release of methane. This should be reduced by the recycling scheme. Dereliction left the areas with polluted rivers and land. Co-operations such as the Olympic Park have re-developed these areas.

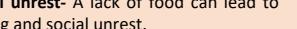
What has been the impact of urban sprawl on the rural-urban fringe?

	Issues created by urban sprawl	This means that.....
Socio-economic	1) People shop where they live in the rural urban fringe. 2) Housing developments on public open space. 3) Traffic congestion due to more people commuting.	1) Loss of trade in city centres thus leading to businesses having to close down. 2) Loss of recreational space. 3) Increased journey times and potential loss of income for those travelling to work.
Environmental	1) New housing is built on agricultural land and public open land. Trees are cut down and hedgerows removed in order to build housing. 2) Increased commuting from the suburbs into the city centre.	1) Impact to and loss of habitats. 2) Increase in pollution and traffic congestion which has an impact on businesses.

	How has the Lower Lea Valley been regenerated?
A formal industrial area which was one of the poorest and most deprived parts of London. The area was characterised by low income housing, poor service provision, large amounts of derelict/unused land and polluted waterways.	

	Changes	This means that..... (impacts)
Social:	1) Providing training programmes for young people in construction. 2) The athletes village has now been turned into homes with some affordable housing. 3) The facilities such as the aquatics centre are now open for the public.	1) Young people will be able to find jobs which will improve their standard of living and help to regenerate one of the poorest boroughs in London. 2) The lack of housing for young people with an average income is reduced. 3) The facilities provide fitness benefits to the local people and give jobs to local people.

Why is food consumption increasing?

Reason	This means that.....	What are the impacts of food insecurity?	
Economic development- Rapid economic development in countries such as China and Nigeria increases the need for food. As people become richer they can afford a greater quantity and variety of food.	 People's diets change and there is an increase in meat consumption. Livestock are fed cereals to produce meat for people to eat, whereas it used to be people who ate the cereals. Demand for processed food also increases.	 Famine and undernutrition- A lack of food (famine) can lead to malnourishment and undernutrition and weakened immune systems.	People are more susceptible to becoming ill and therefore are unable to farm food- creating further food insecurity.
Population growth- This increases the pressure on food supply and production. Almost all of the population growth has been in LICs and NEEs where production is low and many people suffer from food insecurity.	 Feeding people in LICs and NEEs in the future is going to be a huge challenge. As the population increases so does food insecurity.	Soil erosion- Overcultivation and overgrazing due to a lack of food together with a lack of rainfall can cause the soil to erode.	 Soil fertility is reduced and therefore food production is limited.
What factors affect food supply?			Rising prices- When food supply falls, the price rises. 
			Social unrest- A lack of food can lead to rioting and social unrest. 

Factor	This means that.....	What strategies can be used to increase food supply?	
Climate- droughts, floods and climate change can have massive effects on food production and distribution. For example climate change could change the patterns of rainfall.	Floods can wipe out the majority of a countries food supply. Climate change could cause some areas of the world may produce more food, whereas others may suffer from frequent droughts and floods.	 Irrigation- Used when there is not enough water or no water during the growing season. Huge sprinklers are used, extracting water from underground aquifers.	Crops receive an adequate supply of water therefore ensuring the yield is high.
Technology- Food supply and distribution in LICs can be affected by the lack of; farm machinery, irrigation and processing facilities.	 Low yields are produced and therefore food insecurity is increased. If food cannot be processed it cannot be stored and again food insecurity is increased.	 Biotechnology- Using scientific processes to modify crops, for example GM crops which are resistant to certain types of pests.	Fewer chemicals need to be used and crops are less likely to catch diseases and will grow well.
Pests and diseases- Many tropical regions suffer from pests and diseases and they often lack the money to protect crops and livestock. Farmers who lack healthcare in LICs can also suffer.	 Pets such as locusts can devastate crops and increase food insecurity. People with diseases are unable to produce as much food.	 Aeroponics and hydroponics- Crops are grown without soil. Crops can be grown throughout the year in artificially heated and lit greenhouses. Nutrients are applied directly to the roots.	The plants grow quickly and disease found in soil is eliminated, meaning a lot of food can be grown. 
Water stress- This is a serious issue in LICs where climate change is expected to cause more damage. Economic poverty prevents the technology needed to extract water	A lack of water together with drought or the technology to extract water reduces food production as crops cannot be irrigated.	 Appropriate technology- A low tech solution which makes use of local materials. Commonly used in LICs. It may involve simple harvesting techniques or irrigation systems.	The local people are able to continue to use the technology to maintain yields as it is not expensive and can be repaired easily.

Large scale agricultural development: Almeria, Spain		
+ Advantages/Disadvantages -		This means that.....
 Arid region of Spain used to grow crops in greenhouses.		
		1) Drip irrigation and hydroponic water recycling system. 2) Warm desert temperatures reduce need for artificial energy. 3) Jobs created in the greenhouses.
		1) Less water is extracted from an already fragile environment. 2) Reduction in energy costs and greenhouse gases that cause climate change. 3) Workers pay taxes- contributes to 5% of Spain GDP.
 1) Vast areas of land have been covered in plastic. 2) Plastic waste has been dumped into the sea. 3) Immigrant labour is poorly paid.		1) Plastic affects the natural ecosystems and habitats of the desert. 2) Plastic waste impacts the aquatic ecosystem. 3) Impact on their standard of living and quality of life, use of pesticides also impacts their health.

Food EO

What is sustainable food supply?

Strategy	This means that.....
Organic farming- Producing food without using chemicals and works in harmony with nature.	Reduced impact on the environment (such as eutrophication) as no fertilisers or pesticides are used. 
Permaculture- Farming in harmony with nature. Uses natural systems rather than chemicals such as natural predators.	Reduced impact on the environment as promotes working with the natural processes.

Urban farming initiatives- Turning derelict land into productive vegetable gardens.	Increased food security, healthier diets, improved natural environments and greater social cohesion. 
Sustainable fish and meat- Fish are caught with a line and pole rather than a net. Livestock are raised by being pasture fed with minimal use of vaccinations and chemicals.	The fish are given a chance to replenish maintaining supplies. Raising livestock this way benefits the environment and maintains high standards of animal welfare.

Seasonal food consumption- Buying food locally from farmers markets.	Greenhouses are not used and climate change is reduced.
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Reducing waste- 60% of food waste is fruit and vegetables because these tend to go off and require expensive storage. Reducing food waste can be achieved by introducing refrigerated storage and applying common sense with best before dates.	Less food will be thrown away meaning that there is an adequate supply globally therefore having a positive impact on global food shortages. 
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Local scheme in LIC to increase sustainable food: Jamalpur, Bangladesh	
	Practical Action has been helping subsistence farmers in introducing a new practice called rice-fish culture. The practice is a form of organic farming and permaculture as the fish are a natural fertiliser and predator. 

Features	This means that.....
1) Small fish are introduced into the rice paddy fields. 2) The fish aerate the water and fertilise the soil through their droppings. 3) Rice yields have increased by 10%. 4) The method uses appropriate technology. 5) The fish eat the insects that eat the rice crops.	1) The fish provide a source of protein improving farmers and their families diets therefore preventing undernourishment. 2) The fish eradicate the need to chemicals such as fertilisers which harm the environment. 3) Surplus rice can be sold at market improving the farmers standard of living and allowing them to send their children to school. 4) Farmers are able to maintain the method. 5) There is no need to use chemical pesticides.