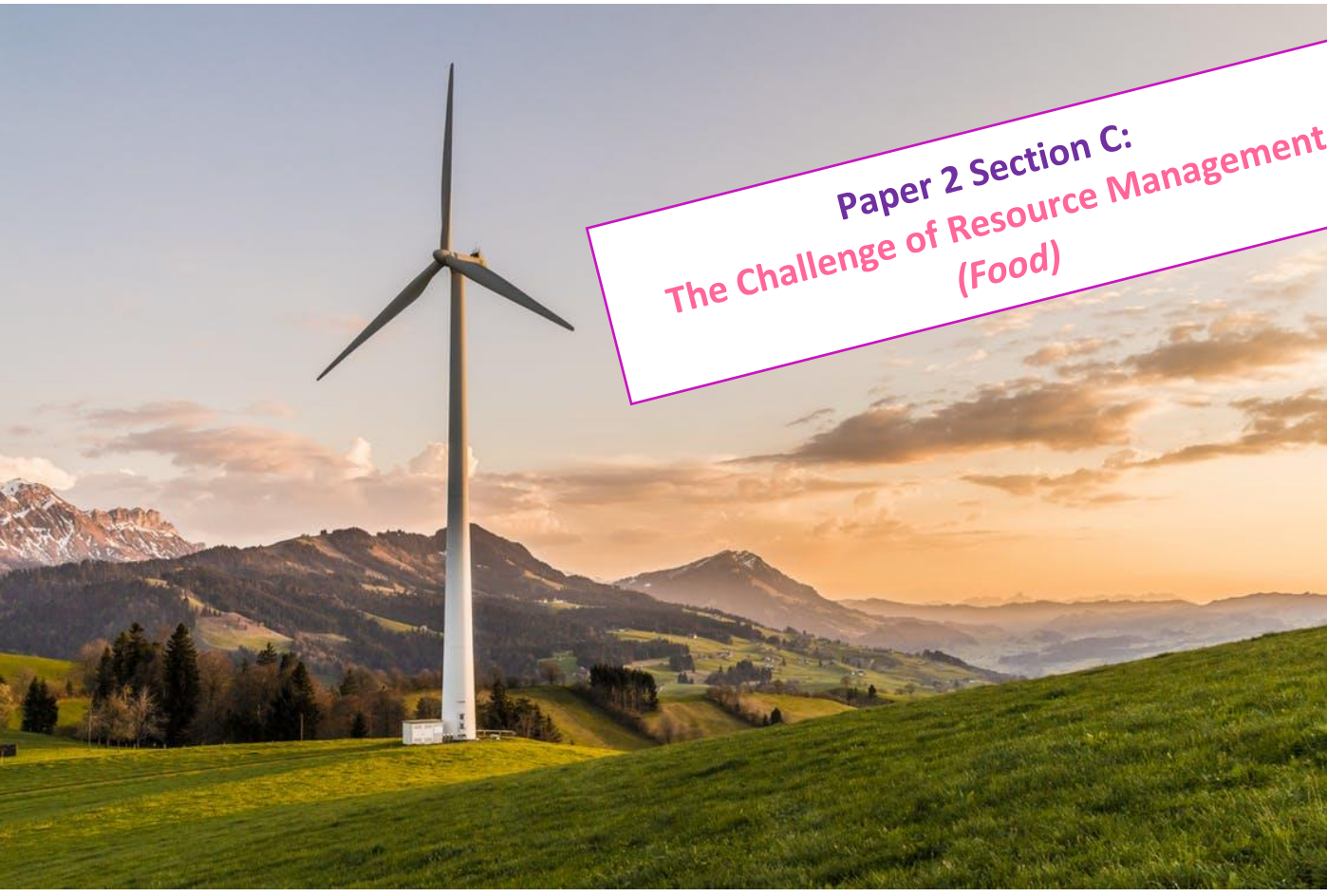


**GCSE**



# Geography



**Paper 2 Section C:  
The Challenge of Resource Management  
(Food)**

**Name:** \_\_\_\_\_  
**Class:** \_\_\_\_\_

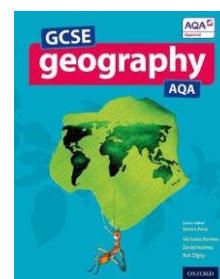
## How to use this booklet

This booklet has been designed to cover every aspect of the AQA 8035 specification in some way. It is ordered in the same way as the specification. You may study the topics in a different order, which is okay.

If you complete all activities (and check with your teacher when you do not understand the activities), you will be well prepared for the exams.

The booklet has a combined approach: it includes some content information alongside lots of tasks to help you revise. All of the tasks will help you to revise the content and skills of the course. Some of the questions are in the style of the exam (and these are identified clearly as EXAM-STYLE QUESTIONS); other questions help you to practice the skills needed but do not exactly mirror the exam (e.g. the MINI ISSUE EVALUATION TASKS); others are purely designed to help you remember and revise content (e.g. brainstorm, tables and general questions).

You should remember that this is not a textbook, so it does not provide all of the content information. It should be used as an accompaniment to your lesson notes, teacher guidance revision guides, and text books.



At the start of the booklet you'll find some helpful resources. The CASE STUDIES AND EXAMPLES information will help you to take an organised approach to these important parts of Paper 1 and Paper 2. The COMMAND WORDS section tells you what each command term is asking you to do, and gives example answers to show you how.

The booklet is designed to be flexible. You may complete tasks in lessons or for homework- your teacher should guide you.

The best approach is to 'chip away' at the tasks over time rather than leaving it to a mad rush in April or May. That way you'll avoid overwhelming yourself too much.



Best of luck. Although you don't need luck, because deep down you know that if you use the booklet your confidence will go up and your grade will follow!

# Course information

Your GCSE Geography course (AQA 8035) culminates in three exams. The basic information that you need to know is in dot points below. More detail is shown at the bottom.

## Paper 1: Living with the physical environment

- The physical geography one!
- Worth 35%
- 1hr 30mins

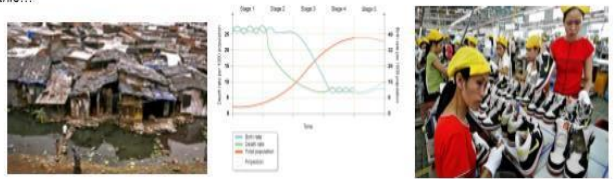
Physical stuff like this...



## Paper 1: Challenges in the human environment

- The human/economic one!
- Worth 35%
- 1hr 30mins

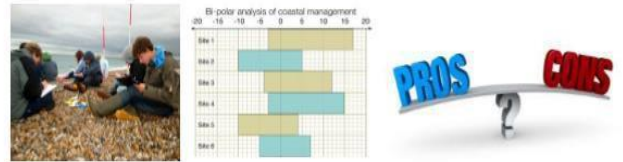
Human/economic stuff like this...



## Paper 3: Geographical applications

- The skills one!
- Worth 30%
- 1hr 15mins

Skills stuff like this...



Paper 1: Living with the physical environment	+	Paper 2: Challenges in the human environment	+	Paper 3: Geographical applications
<p><b>What's assessed</b></p> <p>3.1.1 The challenge of natural hazards, 3.1.2 The living world, 3.1.3 Physical landscapes in the UK, 3.4 Geographical skills</p>		<p><b>What's assessed</b></p> <p>3.2.1 Urban issues and challenges, 3.2.2 The changing economic world, 3.2.3 The challenge of resource management, 3.4 Geographical skills</p>		<p><b>What's assessed</b></p> <p>3.3.1 Issue evaluation, 3.3.2 Fieldwork, 3.4 Geographical skills</p>
<p><b>How it's assessed</b></p> <ul style="list-style-type: none"> <li>• Written exam: 1 hour 30 minutes</li> <li>• 88 marks (including 3 marks for spelling, punctuation, grammar and specialist terminology (SPaG))</li> <li>• 35 % of GCSE</li> </ul>		<p><b>How it's assessed</b></p> <ul style="list-style-type: none"> <li>• Written exam: 1 hour 30 minutes</li> <li>• 88 marks (including 3 marks for SPaG)</li> <li>• 35 % of GCSE</li> </ul>		<p><b>How it's assessed</b></p> <ul style="list-style-type: none"> <li>• Written exam: 1 hour 15 minutes</li> <li>• 76 marks (including 6 marks for SPaG)</li> <li>• 30 % of GCSE</li> <li>• Pre-release resources booklet made available 12 weeks before Paper 3 exam</li> </ul>
<p><b>Questions</b></p> <ul style="list-style-type: none"> <li>• Section A: answer all questions (33 marks)</li> <li>• Section B: answer all questions (25 marks)</li> <li>• Section C: answer any two questions from questions 3, 4 and 5 (30 marks)</li> <li>• Question types: multiple-choice, short answer, levels of response, extended prose</li> </ul>		<p><b>Questions</b></p> <ul style="list-style-type: none"> <li>• Section A: answer all questions (33 marks)</li> <li>• Section B: answer all questions (30 marks)</li> <li>• Section C: answer question 3 and one from questions 4, 5 or 6 (25 marks)</li> <li>• Question types: multiple-choice, short answer, levels of response, extended prose</li> </ul>		<p><b>Questions</b></p> <ul style="list-style-type: none"> <li>• Section A: answer all questions (37 marks)</li> <li>• Section B: answer all questions (39 marks)</li> <li>• Question types: multiple-choice, short answer, levels of response, extended prose</li> </ul>

## Case studies and examples

The specification sets out **14 examples** and **5 case studies** that you must learn for Paper 1 and Paper 2.

**Examples** are small scale. They will probably be taught within one lesson or less, and may take up about a page in an exercise book. Sometimes you must learn a **named example** which is usually regarding an event that happens regularly in a place so names are important to avoid confusion (e.g. Typhoon Haiyan 2013). Most of the time you will learn an **example** which is something that is more constant (e.g. a regeneration project in the UK).

**Case studies** are at a much larger scale. They include a lot of content and will need several lessons to cover the material concerned.

### Paper 1 examples and case studies

1. Named **examples** of a tectonic hazard (in two areas of contrasting levels of wealth)
2. A named example of a tropical storm
3. An example of a recent extreme weather event in the UK
4. An example of a small scale UK ecosystem
5. A **case study** of a tropical rainforest
6. A **case study** of a hot desert OR a cold environment
7. An example of a section of coastline in the UK
8. An example of a coastal management scheme in the UK
9. An example of a river valley in the UK
10. An example of a flood management scheme in the UK
11. An example of an upland area in the UK affected by glaciation
12. An example of a glaciated upland area in the UK used for tourism

For UK landscapes, you will study TWO of Rivers, Coasts and Glacial landscapes. Consequently, you will only study the **four** relevant examples listed as numbers 7-12 here.

### Paper 2 examples and case studies

13. A **case study** of a major city in an LIC or NEE
14. An example of urban planning (LIC or NEE)
15. A **case study** of a major city in the UK
16. An example of an urban regeneration project (UK)
17. An example of tourism reducing the development gap in an LIC or NEE
18. A **case study** of an LIC or NEE
19. An example of modern industrial development
20. An example of a large scale agricultural development
21. An example of a local food scheme in an LIC or NEE
22. An example of a large scale water transfer scheme
23. An example of a local water scheme in an LIC or NEE
24. An example of fossil fuel extraction
25. An example of a local renewable energy scheme in an LIC or NEE

You will study EITHER Food, Water or Energy so you will only study the **two** relevant examples listed as numbers 20-25 here.

Your teacher will choose which specific cases you study. For example, for **an example of tourism reducing the development gap in an LIC or NEE**, you might study safari tourism in Kenya. On the following page, you should write down which specific cases you will use.

## My case studies and examples

	The specification requires...	My specific case...	Have I learnt it?
Paper 1	Named examples of a tectonic hazard (in two areas of contrasting levels of wealth)		
	A named example of a tropical storm		
	An example of a recent extreme weather event in the UK		
	An example of a small scale UK ecosystem		
	A <b>case study</b> of a tropical rainforest		
	A <b>case study</b> of a hot desert OR a cold environment		
	<b>TWO OF...</b> An example of a section of coastline in the UK  An example of a river valley in the UK  An example of an upland area in the UK affected by glaciation		
<b>TWO OF...</b> An example of a coastal management scheme in the UK  An example of a flood management scheme in the UK  An example of a glaciated upland area in the UK used for tourism			
Paper 2	A <b>case study</b> of a major city in an LIC or NEE		
	An example of urban planning (LIC or NEE)		
	A <b>case study</b> of a major city in the UK		
	An example of an urban regeneration project (UK)		
	An example of tourism reducing the development gap in an LIC or NEE		
	A <b>case study</b> of an LIC or NEE		
	An example of modern industrial development		
<b>STUDY EITHER FOOD, WATER OR ENERGY...</b> An example of a large scale agricultural development + An example of a local food scheme in an LIC or NEE OR An example of a large scale water transfer scheme + An example of a local water scheme in an LIC or NEE OR An example of fossil fuel extraction + An example of a local renewable energy scheme in an LIC or NEE			

## Command words

When you read a question (in this booklet and in the exams), underline the command word/s (the ones that tell you what to do!).

**Assess** (or **Evaluate**): make a judgement about something

**Tip:** The higher mark questions on case studies and examples often have an assess/evaluate element, so it's smart to go back over your case studies/examples and figure out **what your opinions are**, and **why you have these opinions** (evidence). But remember- assess and evaluate questions can appear throughout all three papers.



*Example question:* 'The effects of and responses to tectonic hazards vary in areas of contrasting levels of wealth.' Assess the extent to which this is true, referring to examples that you have studied. (9)

*Example answer:*

Tectonic hazard type: earthquake

Primary impacts mainly vary because of the types of buildings in HICs and LICs. For example, an earthquake in a HIC like the L'Aquila earthquake in Italy in 2009 destroys many expensive buildings, meaning that rebuilding is more expensive in HICs. In L'Aquila damages cost \$16 billion, compared to \$450 million in Nepal in 2015. Poorly constructed buildings also cause more deaths in LICs due to building collapse. In Nepal nearly 9000 were killed compared to 309 in L'Aquila.

The secondary effects vary even more than the primary. HICs have strong economies so they can rebuild and repair quickly. In Nepal, thousands of people still live in 'temporary' refugee camps two after the event. In L'Aquila, 65,000 people were made homeless compared to 3.5 million in Nepal, but far more people in Italy had insurance to minimise on-going impacts. Also, if a country has enough money to rebuild damaged ports, roads and airports, it can continue to trade. This reduces the economic impacts of an earthquake.

Responses to an earthquake are mainly determined by a country's level of wealth. Immediate and long-term responses are costly, and many LICs such as Nepal must rely on donations and aid. This is unreliable, and while large donations may be given soon after the quake, this may 'dry up' as hazards strike elsewhere. This can mean that immediate responses are prioritised, such as food and medical supplies, while rebuilding and creating employment opportunities may not occur for a long time in poorer regions.

**Read through the model answer above. Circle the main judgement/claim that is made in each paragraph, then underline the evidence that is used to justify the judgement.**

**Define:** you need to say what the term means

**Tip:** These are usually worth 1 or 2 marks, so don't over-complicate it! Keep it simple, but avoid simply re-stating the term as part of the definition. For example, if you're asked to **define 'development gap'**, don't say 'it's a gap in development'! A bit more detail is needed.



*Example answers:*

'Development gap' refers to the differences in levels of wealth and quality of life that exist across the world. (2)

'Development gap' refers to the disparity that exists both within and between nations, for example variations in GNI per head. (2)

**Describe:** write about what it is like

**Tips:** Describe questions will often (not always) require you to describe something from a figure (e.g. a map, table or photograph), so study the resource properly if this is the case.

*Example question:* Describe **two** environmental challenges caused by urban growth in an LIC or NEE. (2)

*Example answer:*

**Challenge 1:** Insufficient sanitation infrastructure can result in people dumping human waste into rivers.

**Challenge 1:** Increased emissions from traffic can add to air pollution.



**Discuss:** give both sides of an argument

**Tip:** You do not need to present a point of view here (unless asked directly to do so), but you do need to outline both views (and ideally, the reasons for those views). For example, if a question was **'TNCs bring more advantages than disadvantages to the LICs and NEEs in which they operate.'**

**Discuss.** (6 marks), you would need to outline the supporting view and the opposing view.



*Example answer:*

TNCs and host governments agree that TNCs bring more advantages than disadvantages to the LICs and NEEs in which they operate, primarily because TNCs pay taxes to the government and generate thousands of jobs. These jobs may raise incomes and quality of life, and lead to greater spending which strengthens local economies. However, environmentalists disagree because TNCs are often not forced to follow regulations that protect water, soil and air from pollution. Human rights activists may disagree as workers are often exploited by TNCs, e.g. in 'sweatshops'. Some economists disagree, arguing that the majority of profits go to the TNC rather than being spent in the LIC/NEE.

**Can you see the two 'sides' that are discussed in this answer?**

**Explain:** offer reason/s

**Tip:** Focus on 'why' something is the way it is! For example, if the question is **Explain why tropical storms form over warm water**, you need to offer reasons why!

*Example answer:*

Warm water leads to mass evaporation, where water vapour rises. When the vapour meets the cool air above, it condenses and forms cloud. The rising warm air creates a low-pressure system which attracts the winds that join smaller clouds together and move the storm cloud at high speed. As the cloud moves over warm water, more rising vapour condenses and joins the cloud, generating huge amounts of energy. Once the storm is moving at 74mph+ it is officially a tropical storm.

\*Go through the answer above and identify the reasons that have been given!



**Justify:** give evidence for, or defend a decision

**Tip:** This command term tends to arise where you are asked to make a decision, so think about where that will happen in the exams! It is likely to appear in the case study or example questions in Papers 1 and 2. In Paper 3, you will need to justify your recommendation in the Issue Evaluation, and in the Fieldwork section you will often need to justify why you have chosen particular data collection or presentation techniques.



*Example question:* Justify **one** of your primary data collection techniques. (3)

*Example answer:*

**Primary data collection technique:** Perception analysis

**Justification:** Conducting perception analysis of residents and local business owners nearby to the business park enabled me to investigate the economic impacts of the business park on the local area because it helped me to gather data on locals' views on how job opportunities, wages and how the local economy had changed.

*Example question:* Justify the statistical techniques you used to analyse your data. (4)

*Example answer:* I used percentage increase and decrease to compare residents' and local business owners' views on how economic opportunities had changed as a result of the development of the business park. This was an appropriate technique because I had collected data from different numbers of residents and business owners, meaning that the raw data results were not easily comparable. Because percentages show proportion, I could reliably compare the data from the two groups of people to see whether there were differences in their views of the business park's impacts. From this I could infer where the benefits of the business park were felt.

**Reminder:** 'statistical techniques' refers to techniques including measures of average (e.g. mean, median, mode); measures of spread (e.g. range or interquartile range); line of best fit; percentage increase/decrease; calculating percentiles, etc. You won't be able to answer a question like this until you have conducted your fieldwork and presented the data you collect.

**Outline:** give the main points

**Tip:** Focus on giving the basic/central information. If you are asked to outline **one** thing (*example A below*), be sure to do that! (writing about more than one factor/issue when you've been asked to write about only one is a waste of time as you'll only be credited for one idea). You may be asked to outline **more than one** impacts/challenges (*example B below*). In that case, ensure that you make distinct (clearly different) points.



*Example question A:* Outline **one** change in UK farming practices since the 1960's. (2)

*Example answer:* Farming in the UK has undergone industrialisation since the 1960's (1 mark), meaning that farm sizes, chemical use and crop yields have increased (1 mark).

*Example question B:* Outline **two** environmental impacts of deforestation. (4)

*Example answer:*

**Impact 1:** Deforestation releases the carbon dioxide captured by trees into the atmosphere (1 mark), meaning that more of the sun's radiation becomes trapped which contributes to climate change (1 mark).

**Impact 2:** Deforestation causes habitat destruction (1 mark), which can threaten the survival of species, leaving them endangered or even causing extinction (1 mark).

This is worth 4 marks, so a bit more detail is needed for each point!



**Suggest:** offer an idea. You may be asked to suggest a reason or to suggest what an effect may be.

**Tips:** Take clues from the resources provided, if there are any. If not, don't panic- you can make an educated guess. If the question is worth 2 marks, you should offer an idea and then add some detail. For example, if the question asks you to '**Suggest and explain one reason why the death rate decreases as a country develops**', you would need to say more than 'the country can afford better healthcare' (that'd only get you 1 mark).



*Example answers:*

As a country develops, the government can invest more money into healthcare (one reason has been suggested here). This means that more people can access medication needed to prevent sickness and death (and here is the added detail for the 2<sup>nd</sup> mark!).

As a country develops, people can afford better nutrition (1 mark). This means that fewer people die from preventable conditions such as malnutrition (1 mark).

An additional support resource is below. Geography exams almost always ask you to describe and/or explain **distribution**, but many students get confused about what they need to do so they lose unnecessary marks. This should help.

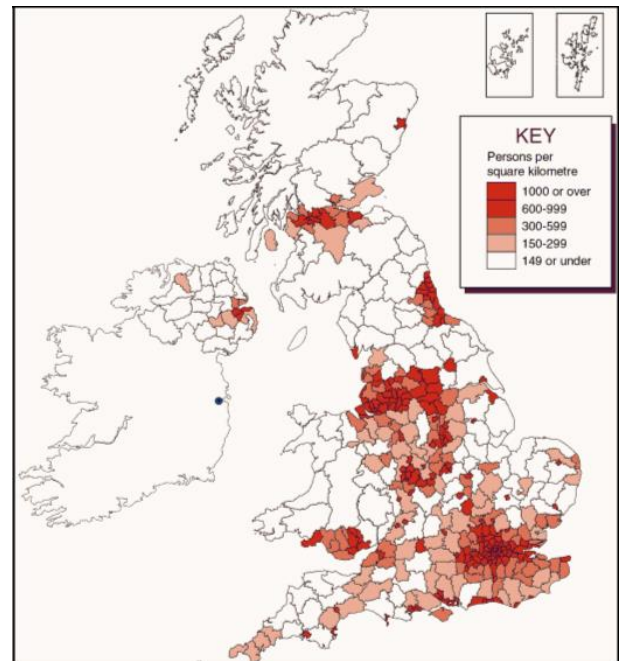
**Distribution:** where something exists or occurs/ how it is spread out across a place.

If you are asked to describe the distribution, you need to say **where** something is.

For example: **Using Figure 1, describe the distribution of the UK's population. (4)**

*Example answer:*

The UK's population is concentrated in England, especially the south-east in London and surrounding counties, where the population is generally 1000+ people per km<sup>2</sup>. Dense populations also exist in S.Wales and SW.Scotland. Populations are sparse (less than 140 people per km<sup>2</sup>) in N.Scotland, central and N.Wales, central and western Northern Ireland and the north-west of England.



If you are asked to explain the distribution, you need to say **why** it is spread in that way.

*Example question:* Explain the distribution of the UK's population as shown in **Figure 1** (4).

*Example answer:*

London is the centre for financial and other key UK industries, meaning that it provides many opportunities and jobs which encourages people to live there. Historically, the centre and north of England had many industrial areas, which established cities such as Manchester and Birmingham. Cold and mountainous places (e.g. N.Scotland and N.Wales) are more difficult to inhabit than the flatter lowland areas (e.g. SE.England), making them sparsely populated.

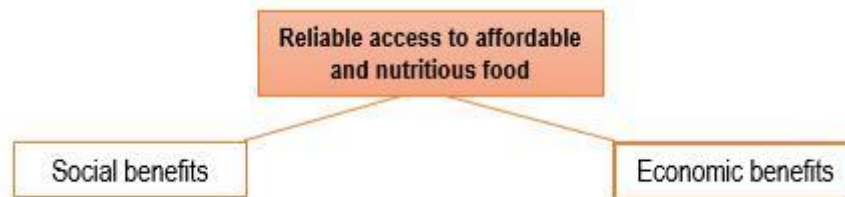
## Section C: The challenge of resource management

- In this section, you **MUST** study **Resource management**
- You will also study one of either **Food OR Water OR Energy**
- **Which optional topic do I study?** \_\_\_\_\_
- Go down and put a line through the topics that you do NOT study!

### Resource management

Key idea: Food, water and energy are fundamental to human development.

1. Create flow charts to show the **social** and **economic** benefits of access to nutritious food.



Key idea: The changing demand and provision of resources in the UK create opportunities and challenges.

2. **EXAM-STYLE QUESTION:** Suggest and explain two reasons why demand for high-value foods such as exotic fruits and vegetables has increased in the UK in recent decades.

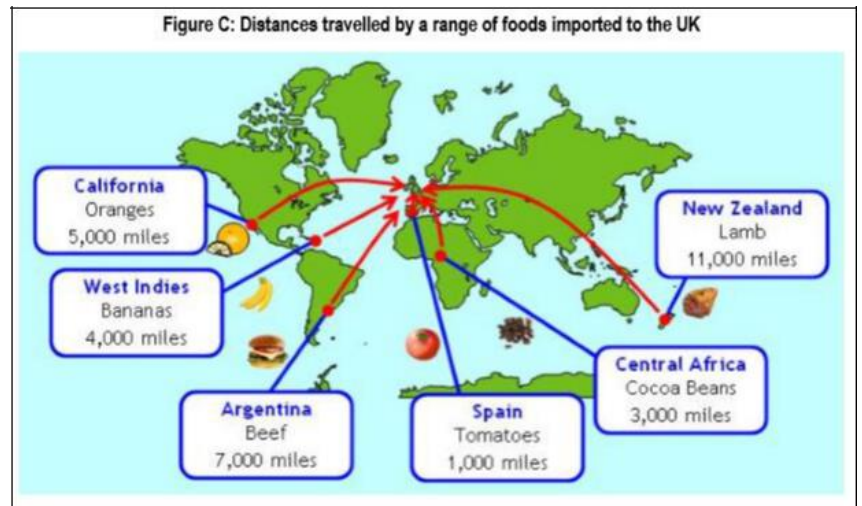
Reason 1: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reason 2: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Study **Figure C**, showing distances travelled by a range of food imports to the UK.

3. Using **Figure C** and your own knowledge, explain why the carbon footprint associated with UK food consumption is increasing.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



4. A variety of strategies exist to reduce food miles. Create a brainstorm to briefly explain a range of these strategies.

Strategies to reduce food miles in the UK

5. Outline **one** change in UK farming practices since the 1960's.

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**Food**

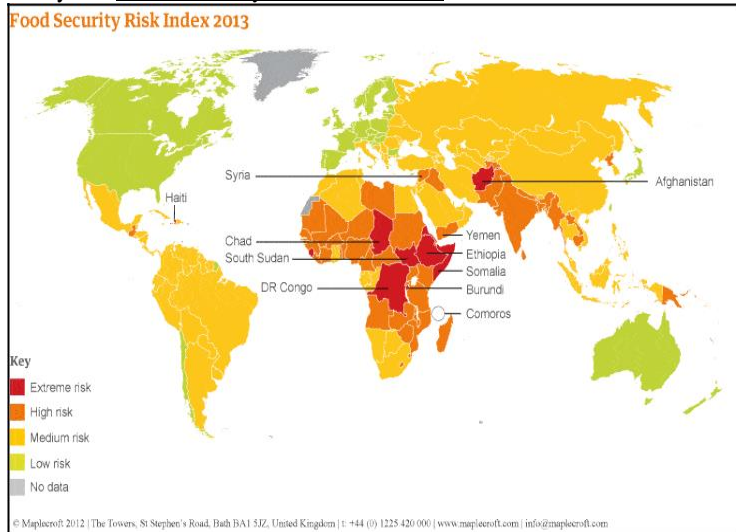
Key idea: Demand for food resources is rising globally but supply can be insecure, which may lead to conflict.

1. Define 'food security'.

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Study the Food Security Risk Index 2013.



2. Describe the global distribution of places with medium risk of food insecurity.

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3. List three countries with low risk of food insecurity.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

4. Using the map, complete the following sentences:

The continent with the highest number of countries with extreme risk of food insecurity is .....

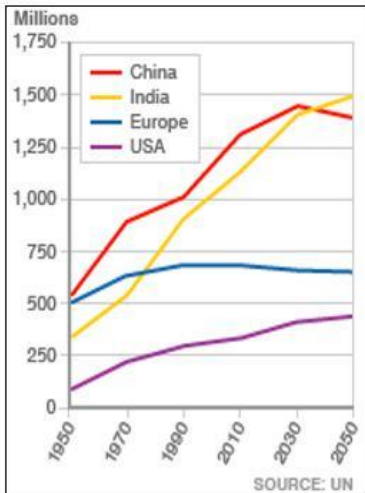
A country in the Middle East with extreme risk of food insecurity is .....

Syria, India and Madagascar have a ..... risk of food insecurity.

5. Complete the paragraph below on **food production and consumption**, using the vocabulary provided. **Vocabulary:** Africa, varies, wealth, calorie intake, import, Less, primary, available, USA, eat, income.

The amount of food that countries produce \_\_\_\_\_ dramatically. East Asia and the \_\_\_\_\_ produce a lot of food, while Central America and \_\_\_\_\_ only produce small amounts. (This may seem surprising considering that you have already learnt that LICs tend to rely on the exporting of \_\_\_\_\_ goods to make money- this indicates how small their economies are!) The amount of food people \_\_\_\_\_ also varies across the world. HICs such as the USA and UK can afford to \_\_\_\_\_ lots of food and most people have a high enough \_\_\_\_\_ to purchase lots of food. \_\_\_\_\_ developed areas such as central Africa cannot afford to import lots of food and less food is \_\_\_\_\_. People in NEEs consume less than those in HICs, but consumption in NEEs is growing rapidly as \_\_\_\_\_ increases. You can see why \_\_\_\_\_ is a useful development indicator!

Figure A: Population growth and projections



6. Describe the trends shown in **Figure A**.

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7. Using **Figure A** and **Figure B** and your own knowledge, suggest why global food consumption is rapidly increasing.

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Figure B: Average yearly income (WB data)

Country	1960	2016
China	\$89	\$8123
India	\$81	\$1709
USA	\$3007	\$57467

8. A number of **factors** affect food supply, and we can categorise these as **physical** or **human**. Complete the tables below to help you revise these factors. Some examples have been done for you.

PHYSICAL FACTORS AFFECTING FOOD SUPPLY		
	Explanation of how it affects food supply	Example
<b>Climate</b>		
<b>Water stress</b>	<ul style="list-style-type: none"> <li>Water is necessary for <b>crops</b> and <b>livestock</b> to survive. Areas with low <b>rainfall</b> or with limited <b>groundwater</b> availability for <b>irrigation</b> struggle to grow enough food.</li> <li><b>Climate change</b> is increasing the degree of water stress in many places, as <b>temperatures</b> rise and <b>rainfall</b> becomes more <b>unreliable</b>.</li> </ul>	The <b>Sahel</b> region in northern Africa receives <b>low annual rainfall</b> and the ' <b>wet season</b> ' is short and unreliable. In <b>35 of the last 40 years</b> , rainfall in the Sahel has been below the level previously considered normal.
<b>Pests and diseases</b>		

HUMAN FACTORS AFFECTING FOOD SUPPLY		
	Explanation of how it affects food supply	Example
<b>Poverty</b>		
<b>Technology</b>		
<b>Conflict</b>	<ul style="list-style-type: none"> <li>Fighting can ruin <b>agricultural land</b> and <b>crops</b> or kill <b>livestock</b>. In some cases, the land is ruined for decades.</li> <li>When people are forced to <b>flee</b> it is difficult to ensure <b>food supply</b>.</li> <li>Conflict disrupts <b>trade routes</b> which reduces or stops <b>access</b> to food. Conflict also prevents people <b>working</b> which reduces <b>income</b> and thus their capacity to <b>purchase</b> food.</li> <li>In some cases, <b>withholding food</b> is used as a <b>weapon of war</b>.</li> </ul>	In <b>Cambodia</b> and <b>Bosnia</b> landmines made large areas of land too <b>unsafe</b> to use, even decades after the wars ended. Right now (2017) in <b>Somalia</b> , food aid to <b>drought</b> -prone areas is being withheld by <b>al-Shabaab</b> as a way to control the population, so <b>famine</b> is widespread.

9. **EXAM-STYLE QUESTION:** Describe the problems that a country may experience as a result of food insecurity. (6)

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10. Practising your **evaluation** skills... **Think:** of the problems you've mentioned above, which are most difficult to overcome? Why do you think this? Is this the case in both LICs and HICs? Make dot point notes to summarise your thoughts below.

11. Most difficult: \_\_\_\_\_

12. This is because: \_\_\_\_\_

13. It is similar/different for HIC and LICs because: \_\_\_\_\_

Key idea: Different strategies can be used to increase food supply

14. Select **two** of the strategies below, and **explain** how each can be used to increase food supply.

**Strategies:** *irrigation, aeroponics and hydroponics, the new green revolution, biotechnology, appropriate technology*

Strategy 1: \_\_\_\_\_

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Strategy 2: \_\_\_\_\_

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The specification says that you need to use '***an example of a large scale agricultural development to show how it has both advantages and disadvantages***'.

Example alert!

15. Complete the template below to help you revise your example of a large scale agricultural development.

<b>AN EXAMPLE OF A LARGE SCALE AGRICULTURAL DEVELOPMENT</b> <b>My example:</b> _____	
<b>A map to show the location</b> of your chosen large scale agricultural development.	<b>Background information</b> (What is produced? Provide details e.g. size of the development, amount of produce, etc.)
<b>Advantages</b> (social/economic/environmental, statistics, stakeholder views, etc.)	<b>Disadvantages</b> (social/economic/environmental, statistics, stakeholder views, etc.)



You've already looked at the idea of **sustainability**, and now you need to apply it to the challenges of **providing enough food to rising populations**.

**Remember:** *sustainability* refers to solving an immediate problem, without damaging the environment, costing too much, or ruining chances of future generations.

One of the **problems** with **industrial agriculture** is that it uses **unsustainable** amounts of **water** (70% of the world's freshwater supply). Another problem is that it uses **pesticides** and **fertilisers**, which are **toxic chemicals** that contaminate **soil** and **water**, and can change **food chains** (e.g. via **eutrophication**, which occurs when fertilisers make their way to rivers and cause greater growth of algae and other plants. These plants absorb a lot of the water's **oxygen** which causes **fish** and other species to **die** off). Thankfully, there are more sustainable ways to **grow** and **consume** food!

16. Write a paragraph to describe and explain each of the three types of **low impact farming** listed below, using the questions provided as a guide.

Organic Farming:

- a. What sorts of natural processes are used in organic farming in order to cause less environmental damage?
- b. Are herbicides, pesticides and vaccinations used? Why/why not?
- c. Why do many organic farmers sell their goods close to where they are produced?




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Permaculture:

- d. What is permaculture?
- e. According to permaculture principles, should people grow their own food or buy it? Why?
- f. According to permaculture principles, should people attempt to eat more or fewer animal products? Why?




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Urban farming initiatives:



- g. What sorts of urban spaces are used for urban farming initiatives?
- h. How does urban farming reduce food miles?
- i. How does urban farming make cities more attractive?

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17. Write paragraphs to describe and explain how **eating seasonally** and **reducing waste** can help us move towards a more sustainable resource future, using the questions provided as a guide.

Fish and meat from sustainable sources:



- a. How can fishing quotas help to protect the environment?
- b. How can consumers be helped to make informed decisions about purchasing sustainably farmed fish?
- c. Why is a more sustainable approach to farming meat needed? How can meat farming practices become less harmful to the environment?

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Seasonal food consumption:



- d. What does 'seasonal food consumption' involve?
- e. How is purchasing out-of-season foods harmful to the environment?
- f. What does 'food miles' mean, and how are food miles reduced by seasonal food consumption?

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Reduced waste and losses:

- g. How much of the food that is produced is wasted or lost?
- h. Why is food waste an environmental problem?
- i. What sorts of schemes exist to educate people about food waste?

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The specification says that you need to use ***'an example of a local scheme in an LIC or NEE to increase sustainable supplies of food'***.



18. To revise your example, complete the template below.

<p><b>AN EXAMPLE OF A LOCAL SCHEME IN AN LIC OR NEE TO INCREASE SUSTAINABLE SUPPLIES OF FOOD</b> My example: _____</p>	
<p><b>Location</b> (identify the country on the world map. Also, say where the scheme operates <i>within</i> that country)</p>	<p><b>Describe</b> what the scheme involves</p>
<p><b>Say how it helps to increase sustainable supplies of food</b> (most important part!)</p>	<p>Are there any <b>problems</b> with the scheme?</p>



The challenge of resource management (do questions 164-175 and then **one** of Food (176-182), Water (183-189) or Energy (190-196))

164. Describe the global pattern of food consumption.
165. Give one reason why the UK's changing pattern of food consumption has led to a larger carbon footprint.
166. Explain why economic development is causing increased food consumption.
167. Give two factors affecting food supply.
168. Describe one impact of food insecurity.
169. How can use of biotechnology increase food supply?
170. Give two advantages and two disadvantages from your **example** of a large scale agricultural development.
171. How can organic farming help to secure more sustainable food supplies?
172. Using your **example** of a local scheme in an LIC or NEE, describe how sustainable food supplies can be increased.