



GEO.HU19 Impacts of Food Insecurity: Drought and Famine in the Horn of Africa

AQA 8035 · Calculators not allowed · about 50 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** On the map of East Africa, identify the three countries most affected by recent drought and famine in the Horn of Africa. Name each country: the country north of Kenya, the country to the east with a long Indian Ocean coastline, and the country south of Ethiopia with large pastoralist populations.
- (a) Name the country north of Kenya that has been severely affected by drought in the Horn of Africa. (1)
- (b) Name the country to the east of Ethiopia, with a long coastline on the Indian Ocean, that has experienced famine episodes. (1)
- (c) Name the country south of Ethiopia that has large pastoralist populations affected by drought. (1)

(Total for Question 1 is 3 marks)

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- 2** Define 'food insecurity' in the context of the Horn of Africa droughts and famines, referring to availability and access.

(Total for Question 2 is 1 mark)

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- 3** Give TWO physical causes of repeated rainfall failure in the Horn of Africa that contribute to drought.

(Total for Question 3 is 2 marks)

- 4 Describe how land degradation such as overgrazing and soil erosion can make communities in the Horn of Africa more vulnerable to famine during drought.

(Total for Question 4 is 2 marks)

5

The table below shows illustrative monthly prices for a staple grain (maize) in a market in northern Kenya during a normal year and during a drought year. Month	Normal year price (KES per 50 kg bag)	Drought year price (KES per 50 kg bag)
June	2200	3500
July	2250	3900
August	2300	4200

- (a) Using the table, state the month in which the drought year price is highest. (1)
- (b) Calculate the absolute increase in price from the normal year to the drought year for August. Show your working. (2)

(Total for Question 5 is 3 marks)

- 6 Explain TWO human causes that can worsen food insecurity in the Horn of Africa during drought, using specific reference to pastoralist and farming communities.

(Total for Question 6 is 4 marks)

- 7 Give TWO social or health impacts of undernutrition during a famine in the Horn of Africa, referring to children where appropriate.

(Total for Question 7 is 2 marks)

- 8** A displaced pastoralist community of 12,400 people receives international food aid sufficient to feed 8,700 people. Calculate the percentage of the community fed by this aid, to one decimal place.

(Total for Question 8 is 3 marks)

- 9** Explain ONE economic impact of rising local food prices for urban households in the Horn of Africa during drought.

(Total for Question 9 is 2 marks)

- 10** State ONE reason why dependence on international food aid can create long-term challenges for local food systems in the Horn of Africa.

(Total for Question 10 is 1 mark)

- 11** Give TWO environmental impacts of prolonged drought and famine responses on rangelands in the Horn of Africa.

(Total for Question 11 is 2 marks)

- 12** Explain how population displacement caused by drought can increase social tension and conflict in affected areas of the Horn of Africa.

(Total for Question 12 is 2 marks)

- 13** Give ONE way that aid agencies try to support longer-term resilience to food insecurity in pastoralist communities in the Horn of Africa.

(Total for Question 13 is 1 mark)

- 14** Identify ONE named region or province in the Horn of Africa that has been repeatedly affected by drought and famine in recent decades.

(Total for Question 14 is 1 mark)

- 15** Use the case-study region (Ethiopia, Somalia and Kenya) and the issues covered in this pack to answer the question below.

Explain the impacts of food insecurity in the Horn of Africa, considering physical, human, economic and social effects. In your answer, make sure to include effects on children, pastoralist livelihoods and local markets, and to assess which impacts are most severe.

(Total for Question 15 is 8 marks)

Mark scheme · GEO.HU19 Impacts of Food Insecurity: Drought and Famine in the Horn of Africa

Question 1

- (a) **B1** Ethiopia
- (a) **Answer: Ethiopia.**
- (b) **B1** Somalia
- (b) **Answer: Somalia.**
- (c) **B1** Kenya
- (c) **Answer: Kenya.**

Question 2

- **B1** insufficient reliable access to enough safe and nutritious food to meet dietary needs and live an active, healthy life, oe
- **Answer: Food insecurity is insufficient reliable access to enough safe and nutritious food to meet dietary needs and live an active, healthy life.**

Question 3

- **B1** El Nino or other sea-surface temperature anomalies that change regional rainfall patterns, oe
- **B1** shifts or variability in the Intertropical Convergence Zone (ITCZ) leading to reduced seasonal rains, oe
- **Answer: For example, El Nino or other sea-surface temperature anomalies that alter regional weather, and variability in the position of the Intertropical Convergence Zone causing reduced seasonal rains.**

Question 4

- **B1** soil erosion, loss of vegetation and overgrazing reduce soil fertility and pasture cover, oe
- **B1** reduced productivity means crops and pasture cannot recover after poor rains, causing crop failure and livestock losses that increase famine risk, oe
- **Answer: Soil erosion and overgrazing reduce vegetation and soil fertility, so land productivity falls and crops and pasture cannot recover after poor rains, increasing crop failure and livestock loss and raising vulnerability to famine.**

Question 5

- (a) **B1** August
- (a) **Answer: August.**
- (b) **M1** 4200 - 2300 seen, oe
- (b) **A1** 1900 KES cao
- (b) **Answer: 1900 KES.**

Question 6

- **B1** overgrazing by livestock, leading to loss of pasture and soil degradation, oe
- **B1** linked detail, e.g. pastoralists lose animals or must travel further, reducing food and income and increasing vulnerability, oe
- **B1** conflict over scarce water and grazing resources or restricted access due to political boundaries, oe
- **B1** linked detail, e.g. conflict displaces communities from productive land, interrupting farming and markets and worsening food shortages, oe
- **Answer: For example, overgrazing reduces pasture and causes soil degradation so pastoralists lose animals or must travel further for feed, reducing food and income; and conflict or restricted access to water and grazing displaces communities from productive land, interrupting farming and markets and worsening food shortages.**

Question 7

- **B1** increased child malnutrition or stunting, oe
- **B1** higher child mortality or greater susceptibility to disease, oe
- **Answer: Increased child malnutrition or stunting, and higher child mortality or greater susceptibility to disease.**

Question 8

- **M1** 8700 / 12400 seen, oe
- **M1** answer x 100 and rounding to 1 dp seen, oe
- **A1** 70.2% cao
- **Answer: 70.2%.**

Question 9

- **B1** reduced purchasing power, e.g. households spend a higher share of income on basic food, leaving less for other needs, oe
- **B1** linked detail, e.g. this can push vulnerable families into debt or force them to reduce quantity/quality of food, worsening nutrition, oe
- **Answer: Households have reduced purchasing power and must spend a higher share of income on basic food, leaving less for healthcare or education; this can push families into debt or force them to reduce the quantity and quality of food, worsening nutrition.**

Question 10

- **B1** it can undermine local markets and farmers by lowering prices or creating reliance, oe
- **Answer: Because it can undermine local markets and farmers by lowering prices for local produce or creating dependency on aid rather than local production.**

Question 11

- **B1** desertification or increased soil erosion, oe
- **B1** loss of biodiversity or vegetation cover, oe
- **Answer: Desertification or increased soil erosion, and loss of biodiversity or vegetation cover.**

Question 12

- **B1** displaced groups may move into areas with limited water and grazing, increasing competition for scarce resources, oe
- **B1** linked detail, e.g. this competition can lead to clashes between communities or with security forces, disrupting livelihoods further, oe
- **Answer: Displaced groups move into areas with limited water and grazing, increasing competition for scarce resources; this competition can lead to clashes between communities or with security forces, disrupting livelihoods further.**

Question 13

- **B1** e.g. supporting water infrastructure like boreholes, or providing drought-resistant seeds, or livestock vaccination and fodder support, oe
- **Answer: For example, supporting water infrastructure such as boreholes to improve water access, or providing drought-resistant seeds, or livestock vaccination and fodder support.**

Question 14

- **B1** any correct named example, e.g. the Somali Region (Ogaden) in Ethiopia, Puntland or Somaliland regions of Somalia, or northern Kenya (e.g. Turkana), oe
- **Answer: For example, the Somali Region (Ogaden) of Ethiopia, Puntland or Somaliland regions in Somalia, or Turkana in northern Kenya.**

Question 15

- **Level 3** (7-8): A detailed, well-developed response that explains a wide range of impacts across physical, human, economic and social dimensions with clear, specific reference to the Horn of Africa case-study; evaluates which impacts are most severe with justified reasoning and reaches a supported conclusion.
- **Level 2** (4-6): A clear answer that explains several relevant impacts with some case-study detail; includes a judgement about severity but with limited justification or less specific evidence.
- **Level 1** (1-3): One or two relevant impacts are described with limited or generalised detail and little or no assessment of severity.
- **Level 0** (0): No relevant content.
- **Indicative content:**
 - Physical impacts: land degradation, loss of pasture and soil fertility, desertification and reduced water table from overuse of boreholes; reduced agricultural yields and livestock mortality during repeated rainfall failure.
 - Human impacts: undernutrition and malnutrition, especially wasting and stunting in children; increased child mortality and higher susceptibility to disease; displacement of pastoralist and farming communities seeking water and food.
 - Economic impacts: rising local food prices that reduce purchasing power for urban and rural households; loss of livestock and crop income for pastoralists and farmers; increased household debt and reduced spending on education and healthcare.
 - Social impacts: increased competition and conflicts over scarce grazing land and water points; breakdown of traditional pastoralist movement patterns and social networks; stress on community cohesion and increased migration to towns.
 - Effects on pastoralists: loss of animals reduces wealth and mobility, forces asset sales, and can lead to cultural and livelihood change; some pastoralists become sedentary or seek casual labour in towns.
 - Effects on children: immediate malnutrition leading to wasting, longer term stunting affecting development, interruption to schooling, and higher mortality in severe famines.
 - Effects on markets and food systems: dependence on international food aid can depress local prices and discourage production, while market disruption and transport issues increase price volatility and food scarcity in remote areas.
 - Assessment of severity: consider timescale and reversibility, e.g. child malnutrition can have long-term irreversible effects, while some economic losses may be recovered; loss of life and long-term impacts on children and livelihoods are likely to be judged most severe, with evidence drawn from named regions and recent drought cycles.
 - A strong answer will link causes and impacts and reach a balanced judgement on which impacts are most severe in the Horn of Africa, supported by specific examples such as Turkana, Somali Region or Puntland where appropriate.