Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2019

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours

XGEOE1

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions.
2. Answer ANY THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Leave a line between subsections of questions answered.
5. Start EACH question on a NEW page.
6. Number the answers correctly according to the numbering system used in this question paper.
7. Number the answers in the centre of the line.
8. Do NOT write in the margins of the ANSWER BOOK.
9. Draw fully labelled diagrams when instructed to do so.
10. Answer in FULL SENTENCES, except where you have to state, name, identify or list.
11. Write neatly and legibly.

SECTION A: THE ATMOSPHERE AND GEOMORPHOLOGY

QUESTION 1

1.1 Refer to FIGURE 1.1 on global warming and answer the questions below.

1.1.1 The increase in average temperature on earth is called …

1.1.2 Name TWO greenhouse gases (GHGs) in the atmosphere.

1.1.3 The type of gas that is produced by cattle is (CFC/methane).

1.1.4 One major consequence of global warming that causes topsoil to become dry is (flood/drought).

1.1.5 The amount of carbon dioxide that a household, individual, company or other group emits through their activities is called (carbon footprint/climate change).

1.1.6 According to FIGURE 1.1, which living organism absorbs carbon?

1.1.7 State ONE possible solution to global warming that is evident in FIGURE 1.1 (8 x 1) (8)

1.2 Refer to FIGURE 1.2 showing continental drift to answer the questions that follow. Choose a letter from **A** to **C** that suits the statements below. A letter may be used more than once.

1.2.1 The world in the present day

1.2.2 The name of the supercontinent that existed about 200 million years ago

1.2.3 This supercontinent is divided into two

1.2.4 The world was one large landmass

1.2.5 All seven continents are clearly indicated

1.2.6 The Atlantic Ocean is evident between the continents

1.2.7 Large prehistoric continents in the southern and northern hemispheres (7 x 1) (7)

1.3 Refer to FIGURE 1.3 showing a synoptic weather map and answer the following questions.

1.3.1 Name the front labelled **B.** (1 x 1) (1)

1.3.2 Identify the high-pressure cell labelled **C** as South Atlantic or South Indian High pressure. (1 x 1) (1)

1.3.3 Describe TWO characteristics of the low-pressure cell labelled **D**. (2 x 2) (4)

1.3.4 Refer to the front labelled **A.**

(a) Identify the front labelled **A**. (1 x 1) (1)

(b) What type of rainfall is associated with front **A**? (1 x 1) (1)

(c) Discuss THREE possible weather conditions associated with front **A**. (3 x 2) (6)

1.4 Study FIGURE 1.4 showing the layers of the atmosphere and answer the questions that follow.

1.4.1 Name the layers labelled **A**, **B**, **C** and **D**. (4 x 1) (4)

1.4.2 State the approximate distance at layer **A**. (1 x 1) (1)

1.4.3 Mention the layer that contains the ozone (O_3). (1 x 1) (1)

1.4.4 Explain why commercial flights (aeroplanes) usually fly just below layer **B**. (1 x 2) (2)

1.4.5 In a paragraph of approximately EIGHT lines, discuss the importance of the atmosphere. (4 x 2) (8)

1.5 Refer to FIGURE 1.5 showing intrusive igneous activity and features to answer the following questions.

1.5.1 Define the term *intrusive igneous activity.* (1 x 1) (1)

1.5.2 Name the features labelled **B, C** and **D** as a volcanic pipe, lopolith or laccolith respectively. (3 x 1) (3)

1.5.3 When the feature labelled **A** is very large, it is known as a (monolith/sill). (1 x 1) (1)

1.5.4 List TWO landforms associated with intrusive igneous activity. (2 x 1) (2)

1.5.5 Describe the feature labelled **B.** (1 x 2) (2)

1.5.6 Discuss the formation of features **B**, **C** and **D**. (3 x 2) (6)

1.6 Carefully read the case study in FIGURE 1.6 about volcanic eruption in Mount Sinabung, Indonesia.

1.6.1 How many people were killed in the 2010 eruption? (1 x 1) (1)

1.6.2 Complete the sentence below by choosing the correct word in brackets:

Sinabung was (dormant/active) before it erupted in 2010 and has now become one of this South East Asian nation's most (dormant/active) volcanoes. (2 x 1) (2)

1.6.3 Why is Indonesia likely to have more volcanic activities? (1 x 2) (2)

1.6.4 Provide reasons why residents had been warned (told) to stay indoors. (2 x 2) (4)

1.6.5 Discuss the positive effects of volcanoes for the people of Indonesia. (3 x 2) (6)

[75]

QUESTION 2

2.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question number (2.1.1–2.1.7) in the ANSWER BOOK, for example, 2.1.8 D.

2.1.1 A sudden overflow of water which covers land:

A Floods
B Drought
C Climate change
D Ozone depletion

2.1.2 The temperature at which water condenses is …

A dew point.
B air temperature.
C cloud cover.
D precipitation.

2.1.3 This is the deliberate removal of trees:

A Preservation
B Conservation
C Afforestation
D Deforestation

2.1.4 The heat energy that the earth radiates is called …

A conduction.
B heat balance.
C latent.
D terrestrial radiation.

2.1.5 Incoming solar … is known as insolation.

A radiation
B absorption
C reflection
D scattering

2.1.6 Which of the following is a greenhouse gas?

A Nitrogen
B Oxygen
C Carbon dioxide
D Argon

2.1.7 The amount of water vapour in the air is …

A humidity.
B dehydration.
C crystallisation.
D sublimation. (7 x 1) (7)

2.2 Match the terms in COLUMN B with the descriptions in COLUMN A. write only the correct letter (A–I) next to the corresponding question number (1.2.1–1.2.8) in the ANSWER BOOK, for example, 1.2.8 K.

	COLUMN A		COLUMN B
2.2.1	A rock that has been changed by heat, pressure or both	A	Rock cycle
2.2.2	A molten rock	B	Metamorphic rock
2.2.3	The cycle of processes that causes rocks to form, break down, change and reform over time	C	Anticline
2.2.4	An example of igneous rock	D	Syncline
2.2.5	The bottom part of a fold	E	Igneous rock
2.2.6	Mountains formed by the compression of sedimentary rock strata during plate movement	F	Basalt
2.2.7	Rocks which form when magma cools	G	Gneis
2.2.8	Metamorphic rock which changes from granite	H	Fold mountain
		I	Magma

(8 x 1) (8)

2.3 Refer to FIGURE 2.3 showing factors affecting temperatures and answer the following questions.

2.3.1 Name the ocean currents on the:

(a) East coast of South Africa (1 x 1) (1)

(b) West coast of South Africa (1 x 1) (1)

2.3.2 Name the oceans along the coast of Amanzimtoti and Hondeklip Bay. (2 x 1) (2)

2.3.3 Differentiate between *maritime climate* and *continental climate.* (2 x 1) (2)

2.3.4 Calculate the temperature range (difference in temperature) between Hondeklip Bay and Amanzimtoti. (3 x 1) (3)

2.3.5 Give THREE reasons why the temperature in Amanzimtoti is higher than that of Hondeklip Bay although they are both located on the same latitudinal position. (3 x 2) (6)

2.4 Refer to FIGURE 2.4 showing relief rainfall.

2.4.1 This type of rainfall is common in the (Western Cape/ KwaZulu-Natal) province of South Africa. (1 x 1) (1)

2.4.2 Name the type of cloud indicated in FIGURE 2.4. (1 x 1) (1)

2.4.3 Mention the type of precipitation shown in FIGURE 2.4. (1 x 1) (1)

2.4.4 Explain how relief rainfall is formed. (2 x 2) (4)

2.4.5 Relief rainfall can be good and bad for farmers in the province where it occurs. In a paragraph of approximately EIGHT lines, discuss the positive and negative impacts of relief rainfall on farming. (4 x 2) (8)

2.5 Read the case study in FIGURE 2.5 and answer the questions that follow.

2.5.1 Define the term *earthquake*. (1 x 1) (1)

2.5.2 Why was the earthquake in Nepal the deadliest? (1 x 1) (1)

2.5.3 State the number of people who were injured in the earthquake. (1 x 1) (1)

2.5.4 Discuss the negative effects of the earthquake in Kathmandu. (2 x 2) (4)

2.5.5 Describe how buildings can be improved to withstand the effects of earthquakes. (1 x 2) (2)

2.5.6 The survivors of the earthquake asked for assistance (help) from all over the world. Suggest THREE ways to assist the survivors. (3 x 2) (6)

2.6 Refer to FIGURE 2.6 showing the internal structure of the earth and answer the following questions.

2.6.1 Identify the layers labelled **1**, **2**, **3**, and **4**. (4 x 1) (4)

2.6.2 List THREE main types of rocks that form within layer **1** or below earth surface. (3 x 1) (3)

2.6.3 Describe TWO uses of any of the rocks listed in QUESTION 2.6.2. (2 x 2) (4)

2.6.4 Explain TWO important uses of layer **1** to humans. (2 x 2) (4)

[75]

SECTION B: POPULATION AND WATER RESOURCES

QUESTION 3

3.1 Select the correct answer from the list provided below to match the statements (3.1.1–3.1.8). Write only the correct word next to each question number, for example, 3.1.9 pyramid.

demographer; informal settlements; polygamy; regional migration; rural depopulation; mortality; overpopulation; HIV; xenophobia

3.1.1 The practice of having more than one wife at the same time

3.1.2 The movement of people within a country or a region

3.1.3 The decline (decrease) in the number of people living in rural areas

3.1.4 Unplanned settlements that are made of low-cost materials

3.1.5 Deaths within a given population

3.1.6 A virus that attacks CD4 cells which are part of the body's immune system

3.1.7 Areas where there are too many people for the resources available to support them

3.1.8 A person who studies populations (8 x 1) (8)

3.2 Match the term/concept in COLUMN B with the correct relevant descriptions in COLUMN A. Write only the correct letter (A–I) next to the corresponding number (3.2.1–3.2.7) in the ANSWER BOOK, for example, 3.2.9 K.

COLUMN A		COLUMN B	
3.2.1	The farming of fish or other marine life for food in the sea	A	Grey water
3.2.2	The amount of salt in the ocean	B	Marine pollution
3.2.3	Large-scale movements of water from one part of an ocean to another	C	Hydrological cycle
3.2.4	Used water which is still clean	D	Water transfer
3.2.5	The natural cycling of water between the oceans, the atmosphere and the land	E	Ocean currents
3.2.6	Introduction of harmful materials into the ocean	F	Mariculture
3.2.7	Moving water from one drainage basin to another	G	Salinity
		H	Ocean

(7 x 1) (7)

3.3 Refer to the case study in FIGURE 3.3 about HIV/Aids and answer the questions that follow.

3.3.1 When (date and month) is World Aids Day? (1 x 1) (1)

3.3.2 (a) What does the acronym ARV stand for? (1 x 1) (1)

(b) Give the number of people who were on ARV treatment in 2018. (1 x 1) (1)

(c) Mention TWO Aids-awareness campaigns according to the case study. (2 x 1) (2)

3.3.3 Comment on the trend of HIV infection rate from 2016 to 2018. (1 x 2) (2)

3.3.4 Discuss the impact of HIV/Aids on the population structure. (2 x 2) (4)

3.3.5 Describe TWO strategies that can be used to reduce the high HIV prevalence rate in the country. (2 x 2) (4)

3.4 Refer to FIGURE 3.4 showing average life expectancy among males in South Africa.

3.4.1 Define the term *life expectancy.* (1 x 1) (1)

3.4.2 Which province has respectively the lowest and highest life expectancy between 2011–2016? (2 x 1) (2)

3.4.3 Compare the life expectancy for the years 2011–2016 with 2016–2021. (1 x 2) (2)

3.4.4 Explain TWO factors that can decrease life expectancy among males. (2 x 2) (4)

3.4.5 Discuss THREE ways to advise males to improve life expectancy. (3 x 2) (6)

3.5 Read the extract below and answer the questions that follow.

> The ocean economy has been recognised by the government as an engine of growth because it serves as an important natural resource for humans, tourism, holidays, transport, fishing and scientific research. Ocean pollution is, however, a major concern as this decreases the quality of the activities mentioned above. It is predicted that by 2050, plastics will be more than the fishes in the ocean.

3.5.1 List any TWO tourism-related activities that can be undertaken in the oceans. (2 x 1) (2)

3.5.2 Name ONE pollutant in the ocean from the extract. (1 x 1) (1)

3.5.3 How can oceans be of benefit to the people of South Africa? (2 x 2) (4)

3.5.4 In a paragraph of approximately EIGHT lines, discuss measures that can be put in place to reduce ocean pollution. (4 x 2) (8)

3.6 Read the case study in FIGURE 3.6 and answer the questions that follow.

3.6.1 According to the case study, what was the cause of the floods?(1 x 1) (1)

3.6.2 Mention the effects of the flooding on the economy of KwaZulu-Natal Province. (2 x 1) (2)

3.6.3 How did Dube-Ncube warn residents and visitors to the province? (1 x 2) (2)

3.6.4 How would you advise motorists to be careful on roads that have been flooded? (2 x 2) (4)

3.6.5 Discuss THREE management strategies to minimise (reduce) the effects of floods. (3 x 2) (6)

[75]

QUESTION 4

4.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question number (4.1.1–4.1.7) in the ANSWER BOOK, for example, 4.1.8 D.

4.1.1 A person who migrates for political reasons is called a …

A political migrant.
B economic migrant.
C socio-economic migrant.
D social emigrant.

4.1.2 A sum of money sent by a worker to their families back home is …

A tax.
B remittance payment.
C black tax.
D pocket money.

4.1.3 A person who visits a place for the purpose of taking a holiday is a(n) …

A migrant worker.
B tourist.
C refugee.
D assailant.

4.1.4 A(n) … is an undocumented migrant.

A legal migrant
B migrant labour
C economic migrant
D illegal migrant

4.1.5 Which of the following can be used to control a high birth rate?

A Polygamy
B Migration
C Contraception
D Polyandry

4.1.6 A graph showing a country's population according to age groups and gender is called …

A population distribution.
B population density.
C population geography.
D population pyramid.

4.1.7 …occurs when there more people than available resources.

A Under-population
B Over-population
C Optimum population
D Even population (7 x 1) (7)

4.2 Refer to FIGURE 4.2 showing the different states of water to answer the following questions.

4.2.1 Give ONE example of the states of water below:

(a) Solid

(b) Liquid

(c) Gas

4.2.2 Select the most appropriate term/word below that matches the Greek number (i–v) in FIGURE 4.2. Use the following terms/words:

freezing; melting; crystallisation; condensation; evaporation

(8 x 1) (8)

4.3 Read the excerpt below and answer the questions that follow.

Somali refugee Hakeem has been living in South African for the past 20 years. 'We fled persecution in our birth countries and we are grateful that South Africa allows us to stay. There are challenges but they can be solved with us living among each other and not separately,' Hakeem said.

[Adapted from https://www.iol.co.za/dailynews]

4.3.1 Define the term *refugee.* (1 x 1) (1)

4.3.2 (a) Why did Hakeem flee his country of birth? (1 x 1) (1)

(b) Name ONE business activity refugees in South Africa engage in. (1 x 1) (1)

4.3.3 List TWO challenges that refugees encounter in South Africa. (2 x 2) (4)

4.3.4 Explain how South Africans can assist refugees. (2 x 2) (4)

4.3.5 Discuss how South Africa can benefit from the influx of refugees in the country. (2 x 2) (4)

4.4 Refer to FIGURE 4.4 showing rural-urban migration and answer the following questions.

4.4.1 What is *rural-urban migration?* (1 x 1) (1)

4.4.2 (a) List TWO push factors shown in FIGURE 4.4. (2 x 1) (2)

(b) List TWO pull factors shown in FIGURE 4.4 (2 x 1) (2)

4.4.3 Explain the problems that cities will experience as a result of too many people in urban areas. (2 x 2) (4)

4.4.4 Discuss THREE strategies government can adopt to keep people in rural areas. (3 x 2) (6)

4.5 Refer to FIGURE 4.5 and answer the questions that follow.

4.5.1 Refer to the bar graph and write down the following:

(a) The driest dam (1 x 1) (1)

(b) The fullest dam (1 x 1) (1)

4.5.2 List TWO ways Makhanda Municipality is currently using to manage the water crisis. (2 x 1) (2)

4.5.3 Explain TWO uses of dams. (2 x 2) (4)

4.5.4 In a paragraph of approximately EIGHT lines, discuss how people can sustainably save water at home. (4 x 2) (8)

4.6 Refer to FIGURE 4.6 and answer the following questions.

4.6.1 What does WWF stand for? (1 x 1) (1)

4.6.2 According to the extract, South Africa's fishing industry is worth how much? (1 x 1) (1)

4.6.3 Explain TWO important economic factors of the fishing industry. (2 x 2) (4)

4.6.4 How does overfishing negatively affect people and oceans? (2 x 2) (4)

4.6.5 Suggest TWO ways the government can use to ensure that the fishing industry is sustainable. (2 x 2) (4)

[75]

GRAND TOTAL: 225

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GEOGRAPHY P1 ANNEXURE

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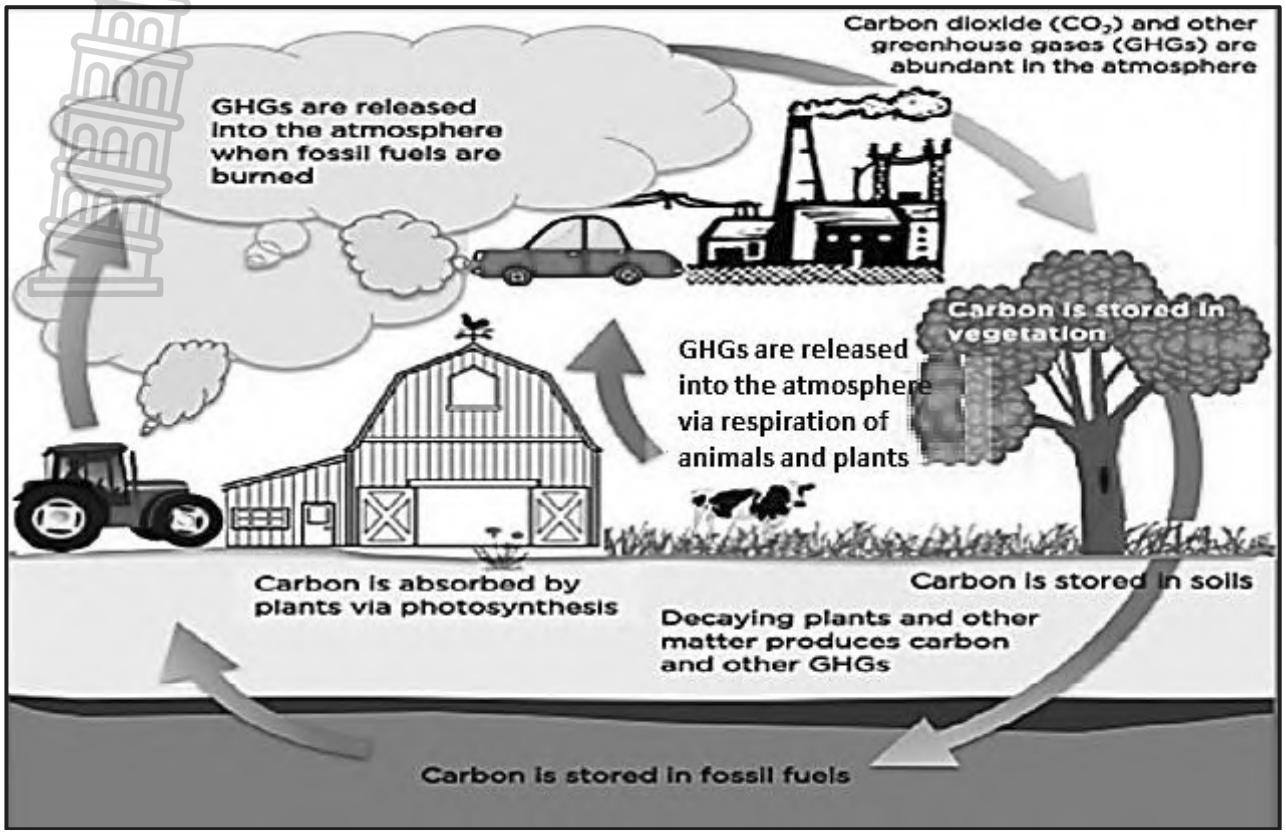
* X G E 0 E 3 *

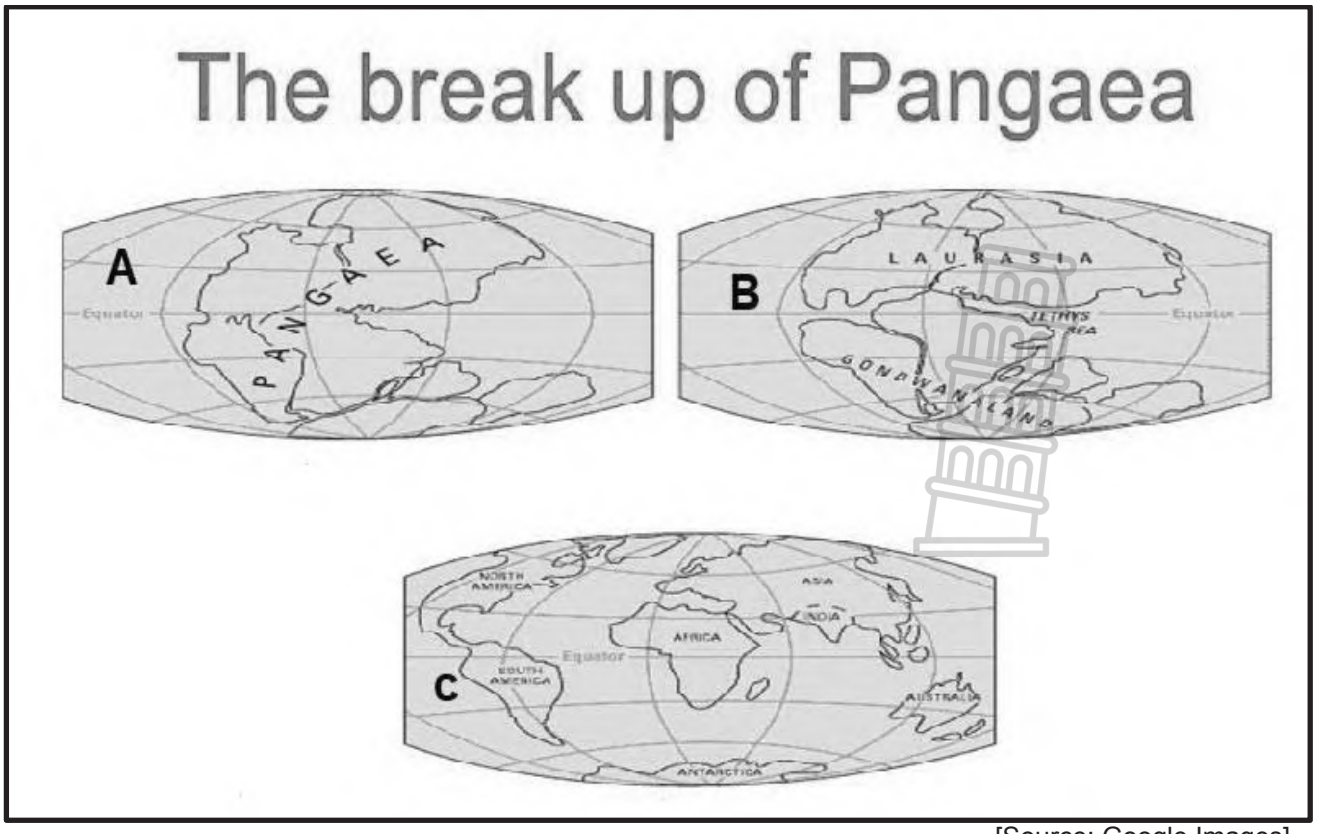
This annexure consists of 10 pages.

FIGURE 1.1: GLOBAL WARMING



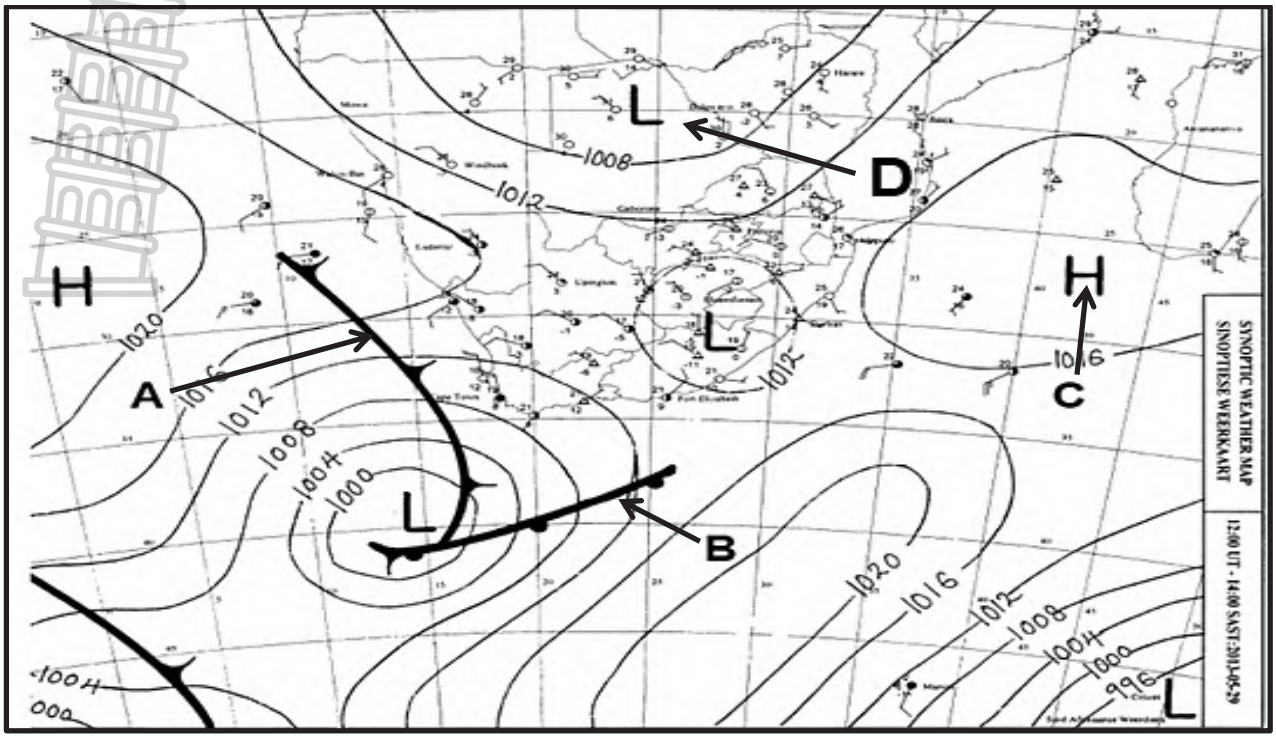
[Source: Google Images]

FIGURE 1.2: CONTINENTAL DRIFT



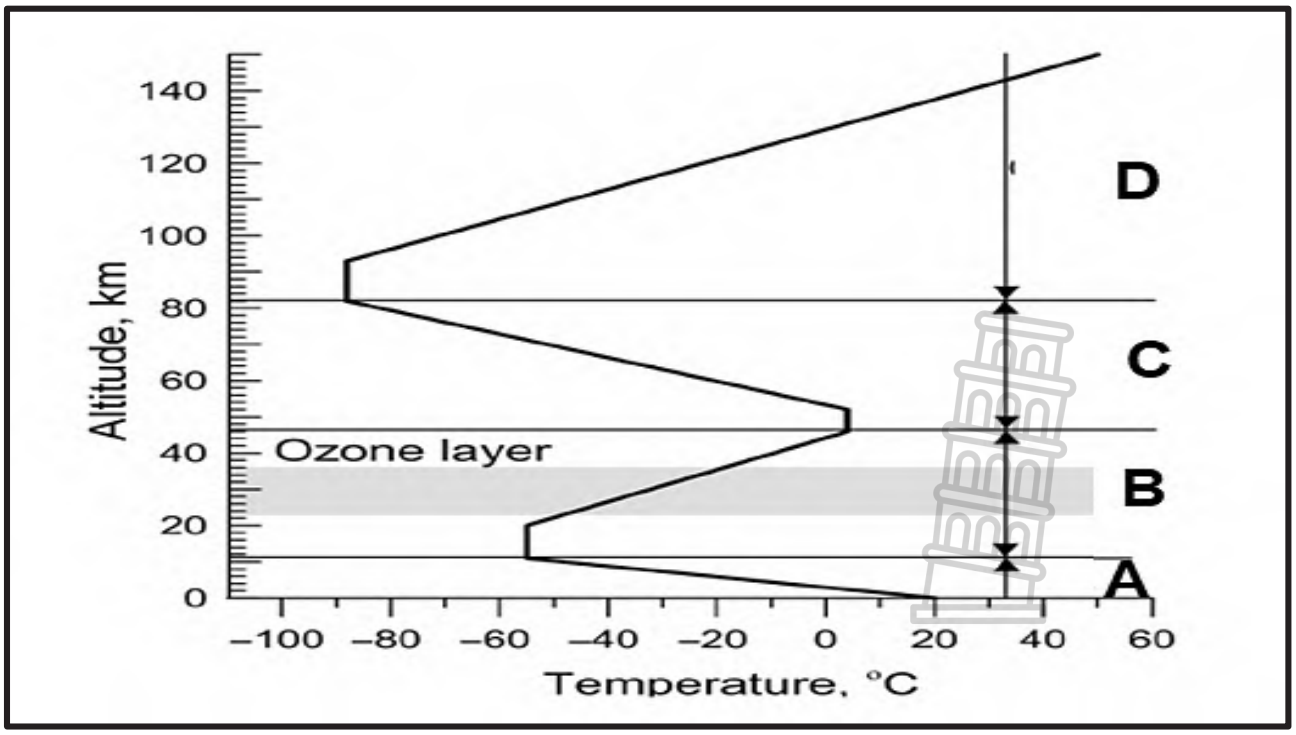
[Source: Google Images]

FIGURE 1.3: SYNOPTIC WEATHER MAP



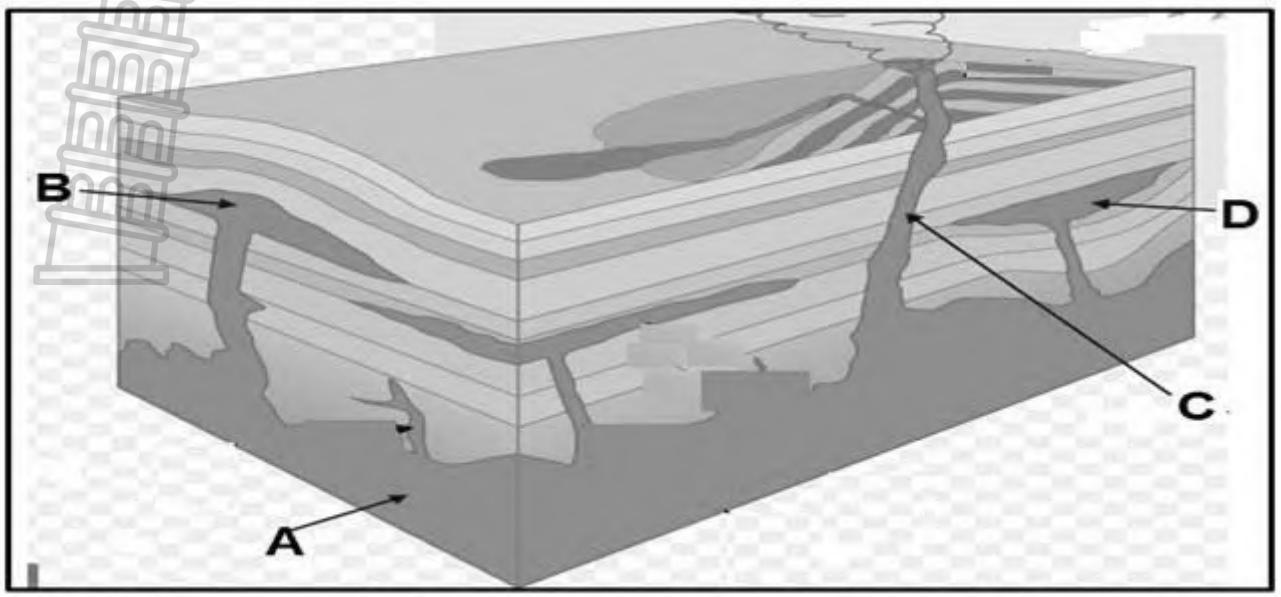
[Source: Google Images]

FIGURE 1.4: LAYERS OF THE ATMOSPHERE



[Source: Google Images]

FIGURE 1.5: INTRUSIVE IGNEOUS ACTIVITY AND FEATURES



[Source: Google Images]

FIGURE 1.6: VOLCANIC ERUPTION

Mount Sinabung: Volcano eruption warnings after huge column of ash prompts panic in Indonesia

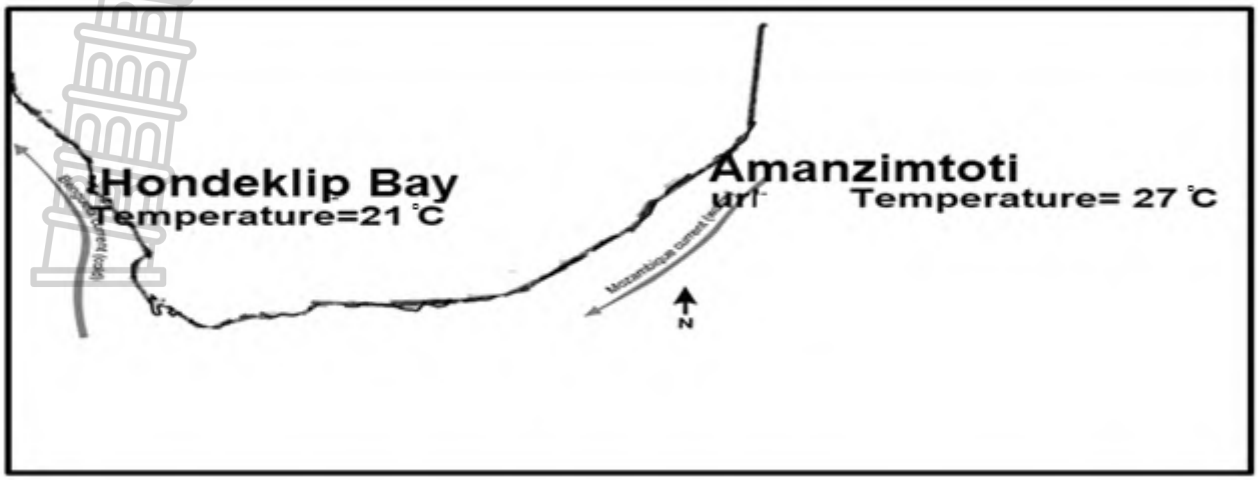
A huge column of ash was blasted almost five miles into the sky above the Indonesian island of Sumatra after an active volcano erupted. Indonesian officials warned that further volcanic activity was possible although the volcano's alert level remained unchanged.

Residents have been told to stay indoors and to wear face masks, if venturing outside, to protect themselves from volcanic ashfall. Sinabung was inactive for around 400 years before it erupted in 2010, killing two people. Since then it has become one of this South East Asia's most active volcanoes, bringing both negative and positive effects to the nation.

More than a dozen people were killed and thousands were forced to flee when it erupted in 2014. Indonesia is particularly prone to seismic activity due to its location on the 'Ring of Fire', an arc of volcanoes and fault lines encircling the Pacific Basin.

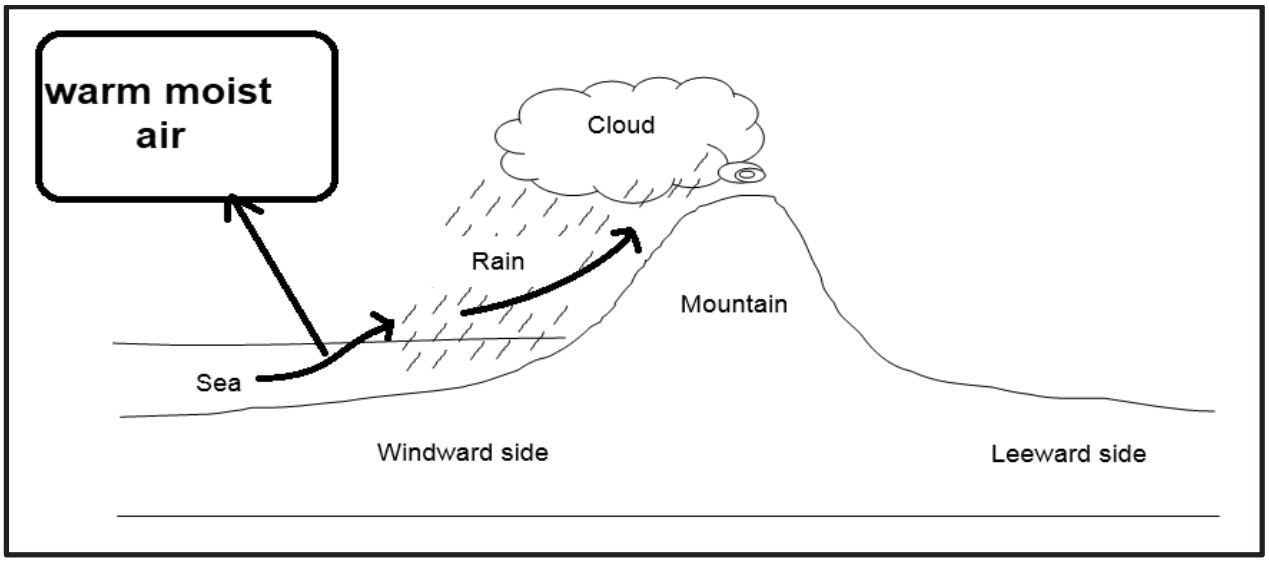
[Source: https://www.independent.co.uk/news/world/asia/mount-sinabung-volcano-eruption]

FIGURE 2.3: FACTORS AFFECTING TEMPERATURE – OCEAN CURRENTS



[Source: Google Images]

FIGURE 2.4: RELIEF (OROGRAPHIC) RAINFALL



[Source: Google Images]

FIGURE 2.5: EARTHQUAKE IN NEPAL

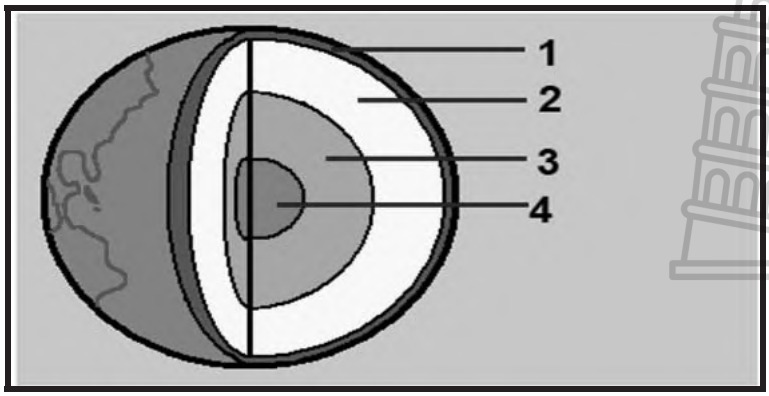
An earthquake, which measured 7,8 on the Richter scale, struck Nepal on April 25, 2015, toppling multi-story buildings in Kathmandu and creating landslides and avalanches in the Himalaya Mountains. It was the deadliest earthquake in the region in 81 years because nearly 9 000 people died and more than 22 000 suffered injuries.

Humanitarian organisations responded quickly to the disaster with search and rescue teams and immediate aid deliveries. Work is still underway to rebuild schools, health clinics, houses, livelihoods, and to help families and communities gain more resilience to environmental shocks. The survivors asked for assistance (help) from people all over the world.

[Source: www.worldvision.org/disaster-relief-news-stories/2015-nepal-earthquake-facts]

FIGURE 2.6: THE INTERNAL STRUCTURE OF THE EARTH

The earth is like a boiled egg with different layers, namely: *the outer core, inner core, crust and mantle*. The crust is a thin layer made up of different types of rocks.



[Source: Google Images]

FIGURE 3.3: KHOMANANI 'CARING TOGETHER' ON HIV/AIDS

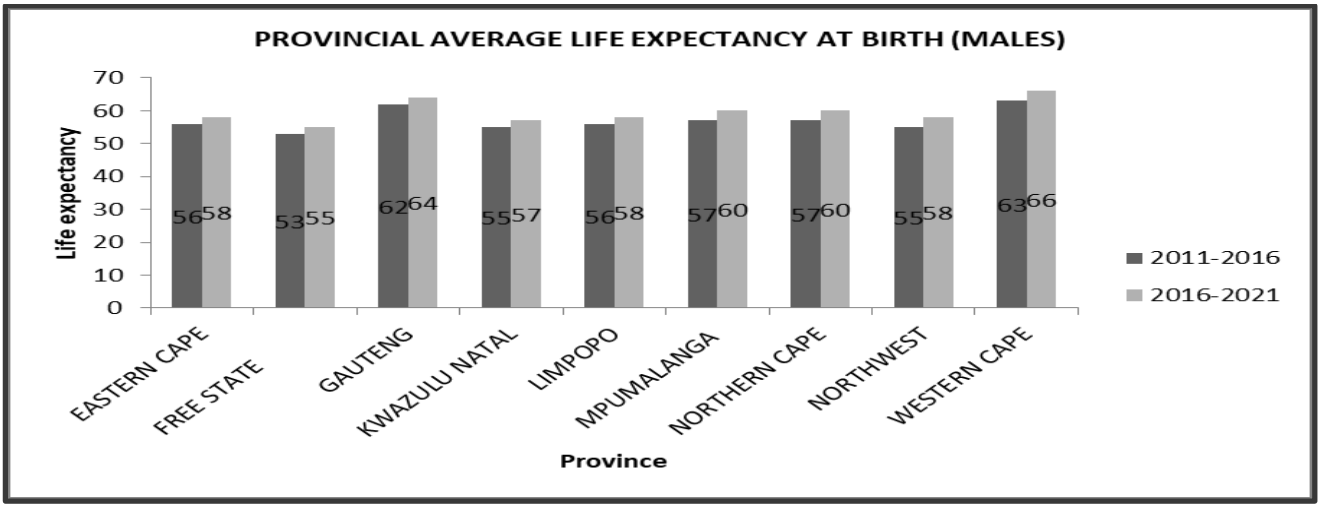
The campaign loveLife has run since 1999 and uses a wide range of media directed mainly towards teens. Aids is one of the main contributors to South Africa's infant mortality rate. In 2016, deaths due to HIV/Aids were estimated to be about 150 376 and 3,7 million people were taking ARV treatment for HIV. By 2018, more than 4,5 million people were taking ARVs.

There are several large-scale communication campaigns related to raising awareness of HIV and Aids, as well as broader health-related issues.

Khomanani, meaning 'caring together', ran since 2001 and was the government Health Department's premier Aids – awareness campaign. Soul City and Soul Buddyz are two multi-media campaigns – targeted at adults and children, respectively – that have a combined annual budget of R100 million, and utilise broadcast, print and outdoor media to promote good sexual health and well-being.

[Source: www.southafrica-pig.blogspot.com]

FIGURE 3.4: PROVINCIAL AVERAGE LIFE EXPECTANCY AMONG MALES



[Source: Statistics South Africa]

FIGURE 3.6: FLOODS IN KWAZULU-NATAL

At least 51 confirmed dead in KZN floods – reports

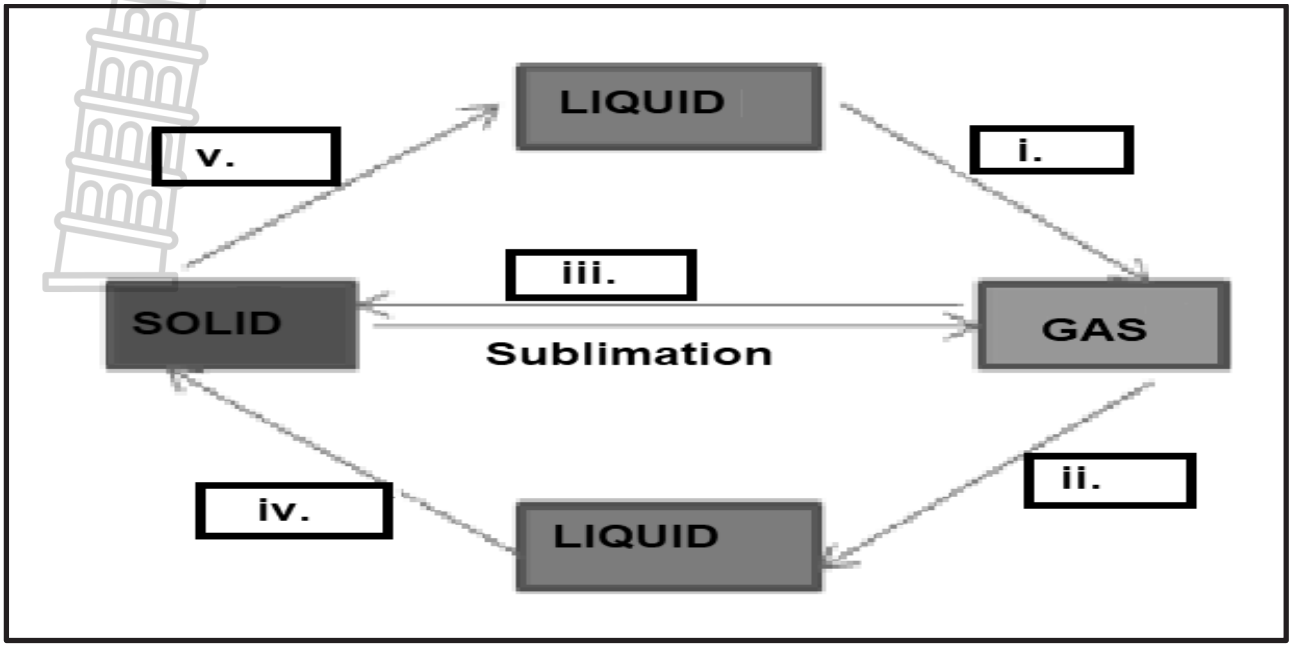
At least 51 people have been confirmed dead following flooding in KwaZulu-Natal which was triggered by heavy rains, EWN has reported. KwaZulu-Natal Cooperative Governance MEC Nomusa Dube-Ncube reportedly said that more bodies had been discovered under the rubble as rescue operations continued throughout Tuesday night. Five more people remain unaccounted for, she said.

'Dozens of cases of collapsed walls and flooded homes have been reported, with 235 Durban homes already assessed as damaged. Roads have been flooded too, disrupting traffic. Motorists and pedestrians are urged to exercise utmost caution on the roads that are already flooded or where there is high risk of flash flooding,' said Dube-Ncube. Authorities had reported 145 displaced persons, some of whom had already found shelter with relatives.

Dube-Ncube urged residents and visitors to the province to remain on full alert and to move to higher ground if under threat.

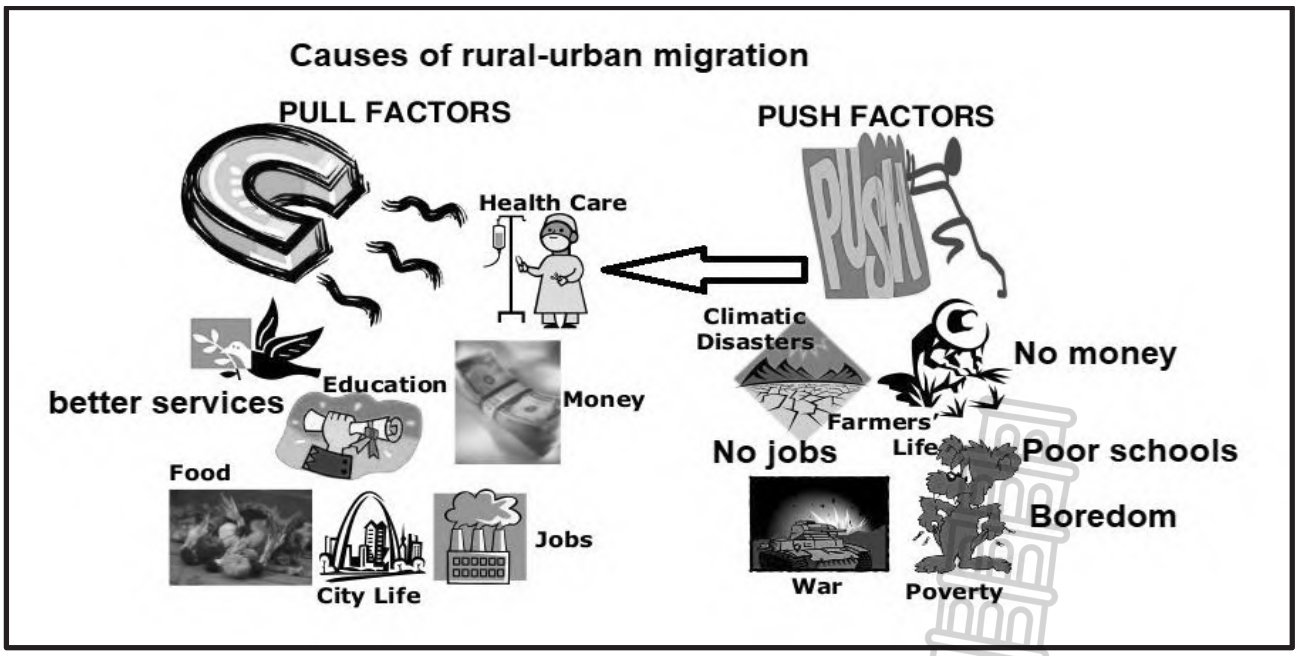
[Source: https://www.news24.com/SouthAfrica/News]

FIGURE 4.2: THE DIFFERENT STATES OF WATER



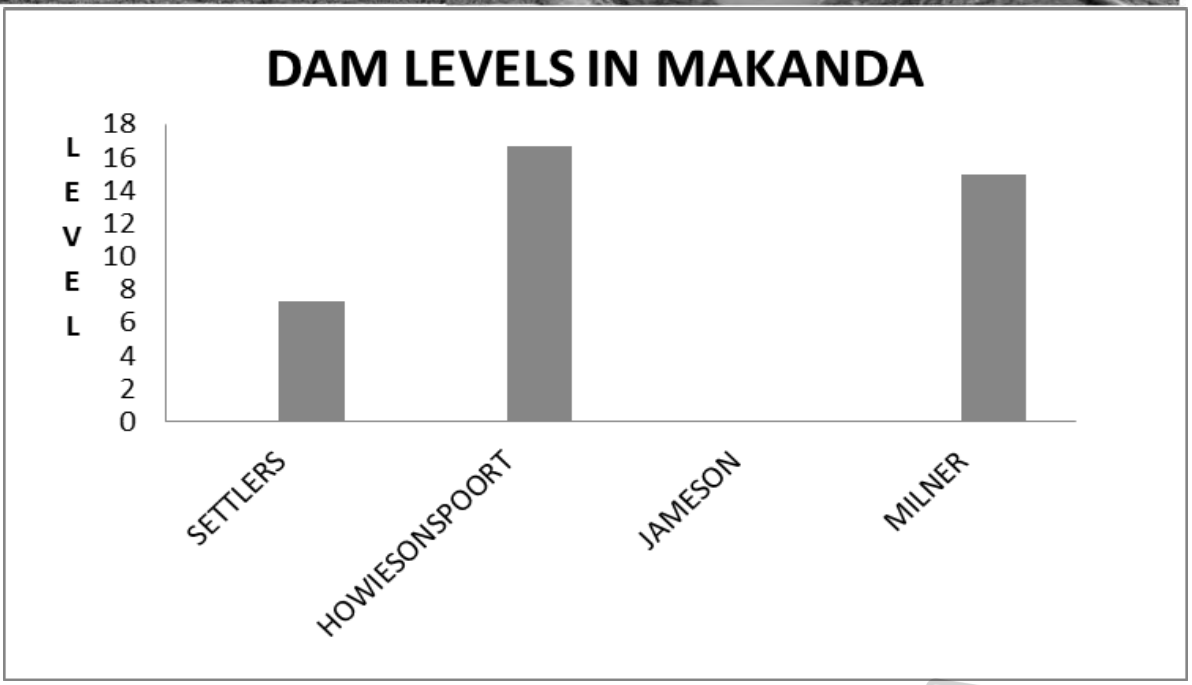
[Adapted from Google images]

FIGURE 4.4: RURAL-URBAN MIGRATION



[Source: Google images]

FIGURE 4.5: WATER CRISIS IN MAKHANDA, EASTERN CAPE



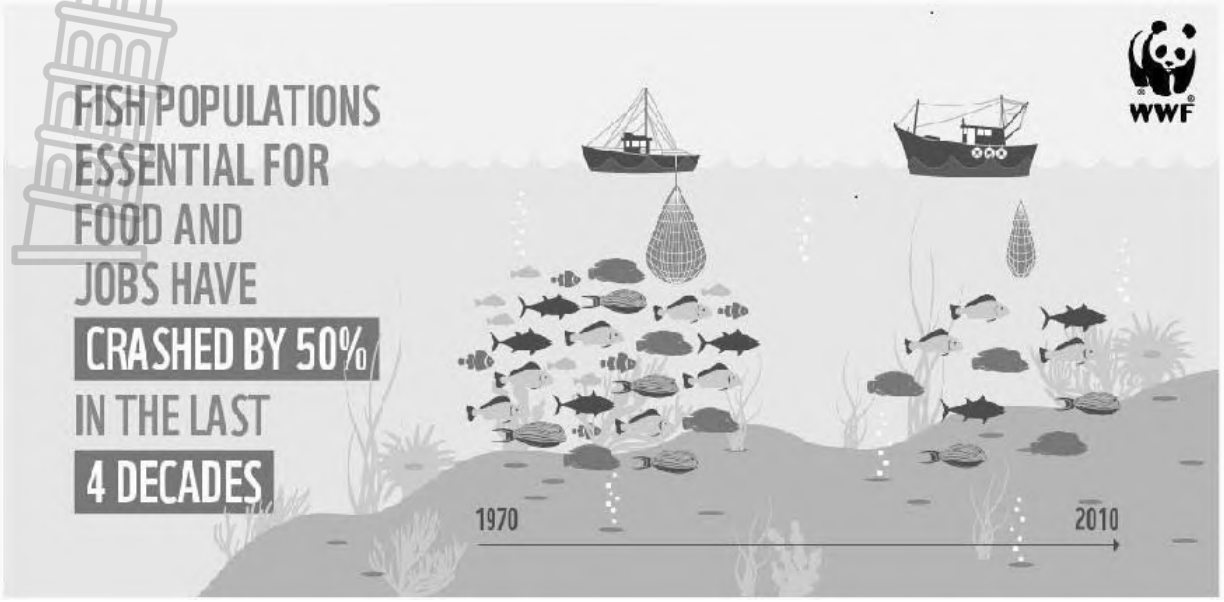
Makhanda is currently using 18 megalitres of water each day – about 180 litres per person. The crippling drought has nearly emptied dams and it is unlikely to recover until/unless we receive significant rainfall.

And so we are restricting consumption to 50 litres per person a day with immediate effect, to be able to use the Settlers supply for longer and push back the date at which it ceases to be viable.

We are also trying to stabilise the output as well as increase the number of town reservoirs filled by the James Kleynhans Purification Works to supply parts of the city immediately, alleviating some pressure on Settlers.

[Source: http://www.makana.gov.za/water-crisis/]

FIGURE 4.6: FISHING POPULATION CRUSHED BY 50%



Many people in South Africa depend on fish as a source of food and income. In South Africa the fisheries industry is worth R6 billion and employs over 27 000 people. Overfishing and illegal fishing threatens the livelihoods of people employed in the industry. It also threatens vulnerable ecosystems and marine animals such as seals, coastal birds, and larger fish that depend on fish as a source of food.

There's only a limited amount of fish in our oceans, and those resources are becoming depleted.

According to the World Wildlife Fund (WWF) more than 30% of the world's fisheries have been overfished and is in need of strict management to restore them. Target fishing of top predators like tuna is changing marine communities. Because of commercial fishing, populations of the Atlantic Bluefin tuna have declined to the point where their survival as a species is threatened. However, we can solve this problem by reforming fisheries management.

[Source: https://www.westerncape.gov.za/general-publication/overfishing]

Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2019

GEOGRAPHY P1
MARKING GUIDELINE

MARKS: **225**

This marking guideline consists of 12 pages.

QUESTION 1

1.1	1.1.1	Global warming		
	1.1.2	Carbon dioxide Methane Nitrous oxide CFCs	(Any TWO)	
	1.1.3	Methane		
	1.1.4	Drought		
	1.1.5	Carbon footprint		
	1.1.6	Plants		
	1.1.7	Tree planting/Vegetation/Afforestation	(8 x 1)	(8)
1.2	1.2.1	C		
	1.2.2	A		
	1.2.3	B		
	1.2.4	A		
	1.2.5	C		
	1.2.6	C		
	1.2.7	B	(7 x 1)	(7)
1.3	1.3.1	B – Warm front	(1 x 1)	(1)
	1.3.2	South Indian High Pressure		(1)
	1.3.3	The letter L Isobars are decreasing towards the centre It is circular in shape	(Any 2 x 2)	(4)
	1.3.4 (a)	Cold front	(1 x 1)	(1)
	(b)	Frontal rainfall	(1 x 1)	(1)
	(c)	It is associated with cold weather Temperature drops Snow may fall Heavy rainfall Strong winds Cumulonimbus cloud	(Any 3 x 2)	(6)

1.4 1.4.1 A – Troposphere
B – Stratosphere
C – Thermosphere
D – Mesosphere (4 x 1) (4)

1.4.2 10 to 12 km (1 x 1) (1)

1.4.3 B (Stratosphere) (2)

1.4.4 The low temperatures in this layer help to reduce fuel consumption
Bad weather is less in this layer
Less turbulence/shaking of the aeroplane due to clear weather
(Any 1 x 2) (2)

1.4.5 **Importance of the atmosphere**
It helps to experience different weather conditions and climate
It absorbs dangerous radiation from the sun
It protects people against extremely high and extremely cold temperatures
It contains gases that are necessary for life on earth
It contains ozone that protects the earth from ultraviolet rays (Any 4 x 2) (8)

1.5 1.5.1 Intrusive igneous activity is a rock that forms below the earth's surface
(1 x 1) (1)

1.5.2 B – Laccolith
C – Volcanic pipe
D – Lopolith (3 x 1) (3)

1.5.3 Monolith (1 x 1) (1)

1.5.4 Granite domes
Karoo landscapes (Mesa, butte and conical hill) (2 x 1) (2)

1.5.5 It is mushroom shaped (1 x 2) (2)

1.5.6 B is formed when magma cools slowly
C is formed when magma forces the overlying strata upwards
D is formed when magma solidifies in a carrot shaped feature (3 x 2) (6)

1.6 1.6.1 2 (1 x 1) (1)

1.6.2 Dormant
Active (2 x 1) (2)

1.6.3 Due to its location on the 'Ring of Fire,' an arc of volcanoes and fault lines encircling the Pacific Basin (1 x 2) (2)

1.6.4 To protect themselves from volcanic ashfall
To protect them from injuries
To avoid inhaling ash
To prevent death of people (Any 2 x 2) (4)

1.6.5 **Positive effects of volcanoes**
Hot springs attract tourists
Hot springs and geysers can be used to generate electricity
Volcanic lava forms fertile soil
Increased output due to fertile soil
More income generated
It serves as fertiliser for soil (Any 3 x 2) (6)
[75]

QUESTION 2

2.1 2.1.1 A (Floods)

2.1.2 A (Dew point)

2.1.3 D (Deforestation)

2.1.4 D (Terrestrial radiation)

2.1.5 A (Radiation)

2.1.6 C (Carbon dioxide)

2.1.7 A (Humidity) (7 x 1) (7)

2.2 2.2.1 B (Metamorphic rock)

2.2.2 I (Magma)

2.2.3 A (Rock cycle)

2.2.4 F (Basalt)

2.2.5 D (Syncline)

2.2.6 H (Fold mountain)

2.2.7 E (Igneous rock)

2.2.8 G (Gneis) (8 x 1) (8)

2.3 2.3.1 (a) Mozambique Current (1 x 1) (1)

(b) Benguela Current (1 x 1) (1)

2.3.2 Amanzimtoti = Indian Ocean
Hondeklip Bay = Atlantic Ocean (2 x 1) (2)

2.3.3 *Maritime climate* is a climate with moderate temperatures due to the influence of the oceans while *continental climate* is a climate with extreme temperatures which occurs in places far from the sea
(2 x 1) (2)

2.3.4 27 °C – 21 °C = 6 °C (3 x 1) (3)

2.3.5 Durban is along the Indian Ocean which is warm and raises the temperature
Warm Mozambique current flows along the Coast of Amanzimtoti
Hondeklip Bay is along the Atlantic Ocean which is cold and lowers the temperature
Cold Benguela current flows along the Coast of Hondeklip Bay
(Any THREE. Must refer to both Amanzimoti and Hondeklip Bay) (3 x 2) (6)

2.4 2.4.1 KwaZulu-Natal (1 x 1) (1)

2.4.2 Cumulonimbus cloud (1 x 1) (1)

2.4.3 Rain (1 x 1) (1)

2.4.4 Warm moist air blows towards the mountain and is forced to rise
The rising air cools, condenses and forms Cumulonimbus clouds
Rain then falls on the windward side (Any 2 x 2) (4)

2.4.5 **Positive impacts of relief rainfall**
The rainfall will fill dams for irrigation
There will be enough water for crops and livestock
Water for domestic use
Rainfall ensures the fertility of the soil
Farmers will spend less income on water
(Any TWO)
Negative impacts of relief rainfall
Heavy rains may cause floods
Floods may cause erosion of soil
Infrastructure of farms may be destroyed
Increase expenditure to repair infrastructure
Heavy rains destroy crops and livestock may drown in flash floods
(Any TWO) (4 x 2) (8)

2.5 2.5.1 Earthquake is a vibration in the earth's crust (1 x 1) (1)

2.5.2 Nearly 9,000 people died and more than 22,000 suffered injuries (1 x 1) (1)

2.5.3 22 000 (1 x 1) (1)

2.5.4 Damage to infrastructure
Loss of lives
Injury to people
Buildings destroyed
Destroys farmlands
Destroys the natural environment
Objects swallowed by the earth (Any 2 x 2) (4)

2.5.5 The foundations of buildings must be designed to absorb ground movements
Buildings with wood and use other flexible materials
Use super-strong materials that can bend, stretch and compress without breaking
Building must be strong to withstand seismic waves (Any 1 x 2) (2)

2.5.6 Provide them with shelter
Provide them with food
Doctors and social workers must be sent there to treat those who were injured
Firefighters must be sent to Nepal
Give them money to start their lives again
Provide them with clean water (Any 3 x 2) (6)

2.6 2.6.1 1 – Crust
2 – Mantle
3 – Outer Core
4 – Inner Core (4 x 1) (4)

2.6.2 Igneous rocks
Sedimentary rocks
Metamorphic rocks (3 x 1) (3)

2.6.3 **Uses of igneous rocks**
Contains valuable metals such as copper, gold, iron and manganese
Mining activities can take place to generate income
Provides building materials
Can be used to make tombstones
Uses of Sedimentary rocks
Used to make cements
Can be used for building materials
Can be used to make tiles and bricks
Can be used to make statues and sculptures
Uses of metamorphic rocks
Used for roofs and garden paths
Used in road construction
Minerals are found in this rock
For beautification and sculptures (Any 2 x 2) (4)

2.6.4 It is suitable for building
It contains humus
It supports the growth of crops (Any 2 x 2) (4)
[75]

QUESTION 3

3.1	3.1.1	Polygamy		
	3.1.2	Regional migration		
	3.1.3	Rural depopulation		
	3.1.4	Informal settlements		
	3.1.5	Mortality		
	3.1.6	HIV		
	3.1.7	Overpopulation		
	3.1.8	Demographer	(8 x 1)	(8)
3.2	3.2.1	F		
	3.2.2	G		
	3.2.3	E		
	3.2.4	A		
	3.2.5	C		
	3.2.6	B		
	3.2.7	D	(7 x 1)	(7)
3.3	3.3.1	1st December	(1 x 1)	(1)
	3.3.2	(a) ARV = Anti-Retro Viral	(1 x 1)	(1)
		(b) 4,5 million	(1 x 1)	(1)
		(c) LoveLife Soul City Soul Buddyz	(Any 2 x 1)	(2)
	3.3.3	An increasing trend	(1 x 2)	(2)
	3.3.4	Affects mainly the age group 20 to 49 Affects more women than men Creates child-headed families Increase in the number of orphans Death rates rise quickly Life expectancy drops Increases mortality rate	(Any 2 x 2)	(4)

3.3.5 People must be educated to better understand the virus
People must be educated to practise safe sex and monogamy
People must be educated to do HIV tests regularly
People must abstain from sex until they are married
Abstinence is the surest way to reduce HIV since contraceptives can have defects
Free supply of condoms
Remove stigma through education
Continue research to help find a cure or vaccine or new method of treatment
Encourage voluntary testing
Encourage people to take ARVs (Any 2 x 2) (4)

3.4 3.4.1 Life expectancy is the average number of years a person is expected to live.
(Concept) (1 x 1) (1)

3.4.2 Lowest life expectancy = Free State
Highest life expectancy = Western Cape (2 x 1) (2)

3.4.3 All nine provinces had a higher life expectancy from 2016–2021 than 2011–2016 (1 x 2) (2)

3.4.4 Access to healthcare
Poverty
Access to food
Diseases
Malnutrition
War
Natural disasters
Accidents
Lack of education
Crime rate
Drug abuse (Any 2 x 2) (4)

3.4.5 Regular check-up
Do not abuse drugs
Live a responsible life such as not over-speeding, not abusing alcohol, not having multiple relationships
Do not do crime
Eat a balanced diet
Improve their literacy rate (Any 3 x 2) (6)

3.5 3.5.1 Fishing
Swimming
Scuba diving (Any 2 x 1) (2)

3.5.2 Plastics (1 x 1) (1)

3.5.3 It can be used to generate electricity
Oil and gas can be derived from the ocean
It serves as a source of oxygen
For scientific research
For trade
For tourism
It serves as source of food (Any 2 x 2) (4)

3.5.4 Reduce/ban the use of plastics
Promote recycling
Participate in ocean/beach clean-up
Educate beachgoers, hotels and ship owners to avoid pollution
Fine/punish those who pollute the ocean
Reduce carbon footprint (Any 4 x 2) (8)

3.6 3.6.1 Heavy rains (1 x 1) (1)

3.6.2 Roads washed away
Homes destroyed
Families left homeless
Walls broken down
Livestock drown
Soil erosion
Infrastructure destroyed
Cars washed away
Increase government expenditure to repair infrastructure (Any 2 x 1) (2)

3.6.3 To remain on full alert and to move to higher ground if under threat (2)

3.6.4 Switch on headlights
Switch on fog lights
Wiper blades must be in good condition
Take extra care when overtaking
Do not drive through deep water
Avoid abrupt acceleration, braking and steering which can result in a skid (Any 2 x 2) (4)

3.6.5 Introduce better flood warning systems
Modify homes and businesses to help withstand floods
Install and maintain drains
Houses must be built above flood levels
Tackle climate change
Increase spending on flood defences
Protect wetlands and introduce plant trees strategically
Restore rivers to their natural courses
Plant or preserve trees
Educate people about the dangers of floods (Any 3 x 2) (6)

[75]

QUESTION 4

4.1 4.1.1 A (Political migrant)

4.1.2 B (Remittance payment)

4.1.3 B (Tourist)

4.1.4 D (Illegal migrant)

4.1.5 C (Contraception)

4.1.6 D (Population pyramid)

4.1.7 B (Over population) (7 x 1) (7)

4.2 4.2.1 (a) Solid = ice, hail and snow, frost

(b) Liquid = cloud, fog, rain, drizzle

(c) Gas = water vapour

4.2.2 (i) Evaporation

(ii) Condensation

(iii) Crystallisation

(iv) Freezing

(v) Melting (8 x 1) (8)

4.3 4.3.1 A refugee is a political migrant who is forced to move to another country **(Concept)** (1 x 1) (1)

4.3.2 (a) Persecution (1 x 1) (1)

(b) Spaza shops
Salon
Shoe making
Car guarding
Hawking
Bottle stores (Any 1 x 1) (1)

4.3.3 Lack of housing
Unemployment among refugees is high
Crime rate is high
Poor safety
Hatred (xenophobia)
Refugees are robbed
Refugees' shops are looted (Any 2 x 2) (4)

4.3.4 Invite refugees in your home
Volunteer to assist refugees
Help refugees to integrate into a new culture
Encourage universities, churches, mosques and other religious bodies to offer refugee scholarships and shelter
Offer refugees jobs
Hold awareness and fundraising events
Donate clothes, food etc. to refugees (2 x 2) (4)

4.3.5 They are a source of cheap labour
Refugees fill the skills gap
Sell goods in smaller quantities
Sell goods to consumers on credit (Any 2 x 2) (4)

4.4 4.4.1 Rural-urban migration is the movement of people from rural areas to towns and cities
(Concept) (1 x 1) (1)

4.4.2 (a) **Push factors**
Health care
Education
Money
Better services
Food
Jobs
City life (Any 2 x 1) (2)

(b) **Pull factors**
No money
Boredom
Poor schools
No jobs
Poverty
War
Climatic conditions (Any 2 x 1) (2)

4.4.3 Overcrowding
Air and noise pollution
High rate of unemployment
Increase in informal settlement/shacks
High crime rate
Increase in social vices – drug abuse, prostitution, etc.
Traffic congestion (Any 2 x 2) (4)

4.4.4 Encourage investment in rural development farming projects
Establish agricultural schools and colleges
Improve skills and provide training for farmers
More research to improve food production
Provide irrigation schemes
Provide employment opportunities
Implement rural development
Improve infrastructure
Provide proper services (Any 3 x 2) (6)

4.5	4.5.1	(a)	Jameson	(1 x1)	(1)
		(b)	Howiesons Poort	(1 x 1)	(1)
	4.5.2	Restricting consumption to 50 litres per person To stabilise the output Increase the number of town reservoirs		(Any 2 x 1)	(2)
	4.5.3	Dams control flow of water, helping to prevent floods Dams store water for domestic, agricultural and industrial use Regulate the flow of water in rivers Dams serve as habitat for aquatic life Dams can be used for fishing and other recreational activities		(Any 2 x 2)	(4)
	4.5.4	Close taps when not using water Fix dripping taps and leaks Use water saving showerheads Flush toilets less often Rather take a shower and fewer baths Reuse dirty water for cleaning Recycle water Use grey water to flush toilets Switch the water off while shaving or brushing your teeth		(Any 4 x 2)	(8)
4.6	4.6.1	World Wildlife Fund		(1 x 1)	(1)
	4.6.2	R6 billion		(1 x 1)	(1)
	4.6.3	It provides employment opportunities for people who engage in aquaculture Source of protein and nutrients Serves as a source of income It provides food to reduce hunger and poverty Improves food security Promotes economic growth		(Any 2 x 2)	(4)
	4.6.4	Overfishing reduces the amount of available food for people to eat Overfishing affects other marine life that depends on fish for survival A decline in fish stocks leads to job losses and hardship		(Any 2 x 2)	(4)
	4.6.5	Implement fishing quotas Have closed seasons for fishing Buy fish that is in season to give the fish time to replenish their numbers Only allow fishing nets with larger holes for fishing Only people with permits must be allowed to fish Heavy fines for non-compliance		(Any 2 x 2)	(4)
					[75]
				TOTAL:	**225**