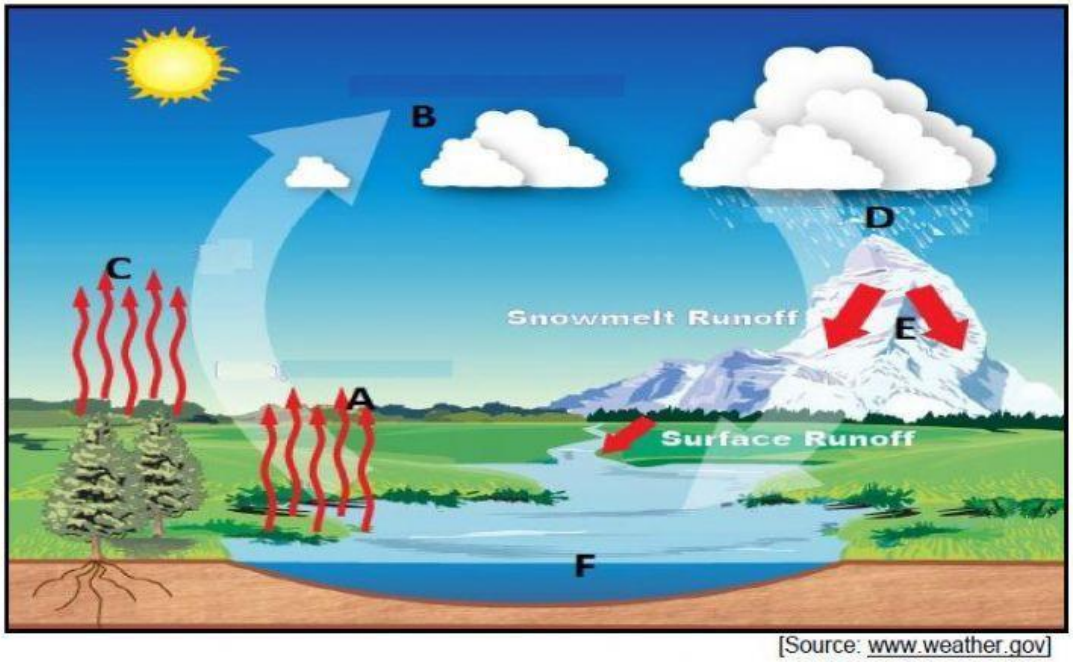
SECTION A: POPULATION AND WATER RESOURCES

QUESTION 2: WATER RESOURCES

FIGURE 2.1: THE WATER CYCLE



[Source: www.weather.gov]

2.1 Refer to FIGURE 2.1, showing the water cycle.

(a) The larger percentage of the earth's water is found on the (atmosphere/earth's surface).

(b) (Hail/Condensation) is a form of precipitation.

(c) (Snow/Vapour) is water in a solid state.

2.1.2 State the processes that are represented by the letters **A**, **B**, **C** and **D**

2.2 Choose ONE word/phrase from the box that matches with the statements below.

Ecosystem; marine pollution; desalination; overfishing; acidification; fish quotas; grey water; inter-basin transfer; sustainability

2.2.1 The removal of salts from ocean water to make it more usable

2.2.2 Used water that can still be used for other purposes

2.2.3 Catching more fish than they reproduce therefore reducing their population

2.2.4 Linked pipes transferring water from a high rainfall area to a dry area

2.2.5 Using resources carefully to ensure their future availability

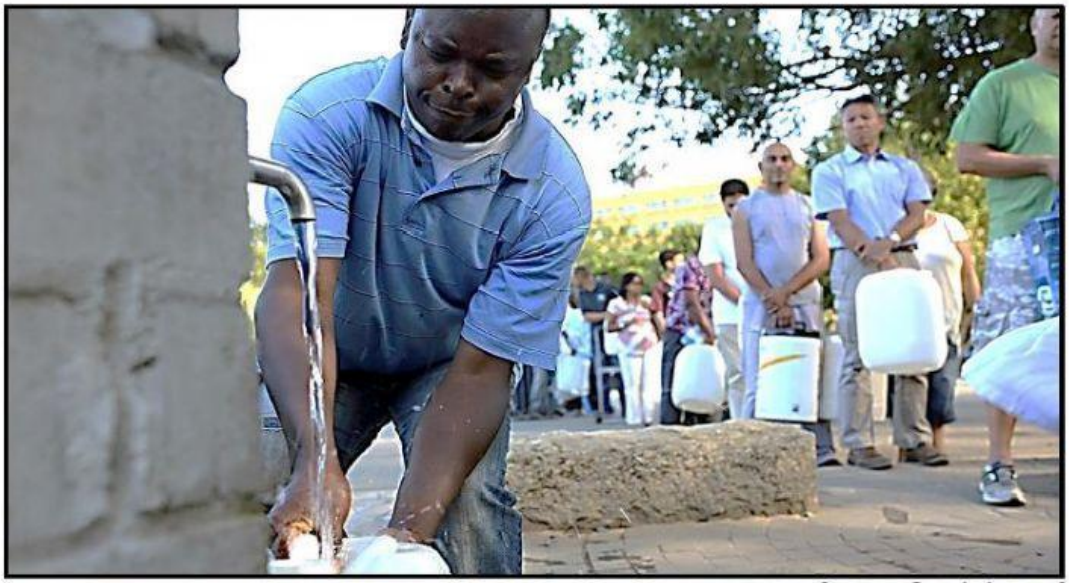
2.2.6 Dumping of waste products in oceans

2.2.7 The control in the numbers of fish which fishermen may catch

2.2.8 The community where living and non-living things exist together

(8 x 1) (8)

FIGURE 2.3: WAITING FOR DAY ZERO, CAPE TOWN



[source: Google Images]

Daily Maverick: 29 January 2018
Marelise Van Der Merwe
Cape Water Gate Explainer: What do we know about Cape Town's disaster management plan?

On Sunday morning, officials gathered at the disaster Risk Management Centre in Goodwood, Cape Town, to brief media on preparations for day Zero. This followed hot on the heels of the launch of the #Defeat Day Zero campaign in Athlone the previous week. Information is trickling in bit by bit.

The date, as we know, can shift, but City officials have confirmed that it will kick in when dam levels hit 13.5%. The member of Safety and Security said it would take approximately two weeks to shut down water systems and similarly take a couple of weeks to activate the water points and other disaster management systems, so those two processes would overlap, although preparations were already underway.

It should be noted that Day Zero is not the day Cape Town 'runs out' of water. It is the day officials move from Phase One preservation restrictions to Phase Two, what the City has termed disaster restrictions.

2.3 Refer to FIGURE 2.3 showing water problems in Cape Town, to answer the questions below.

2.3.1 Name the province that is affected by water shortage. (1 x 1) (1)

2.3.2 Provide the name of the campaign for water management that was launched in Cape Town. **(1 x 1) (1)**

2.3.3 According to the article, what is Day Zero? (1 x 2) (2)

2.3.4 Why does the people illustrated in the article look so desperate? (2 x 2) (4)

2.3.5 In a paragraph of approximately eight lines, provide strategies that the people of Cape Town and the municipalities of the region should implement to reduce water shortages. (4 x 2) (8)

FIGURE 2.4: FLOOD IN PORT ST JOHNS

Residents evacuated amid heavy rainfall

Port St Johns, on the Wild Coast in the Eastern Cape, has been battered by heavy rains and localised flooding, leading to large scale evacuations. The region of Green Farm, situated along the Mzimvubu River, which burst its banks on Monday, has been particularly hard-hit by flash flooding.

According to SABC News, large portions of the low-lying rural settlements have been left inaccessible.

[Source: www.thesouthafrican.com]

2.4 Refer to FIGURE 2.4 that shows flooding in Port St Johns, Eastern Cape to answer the questions that follow.

2.4.1 What is a *flood*? (1 x 1) (1)

2.4.2 Name the type of flood that affected Port St Johns. (1 x 2) (2)

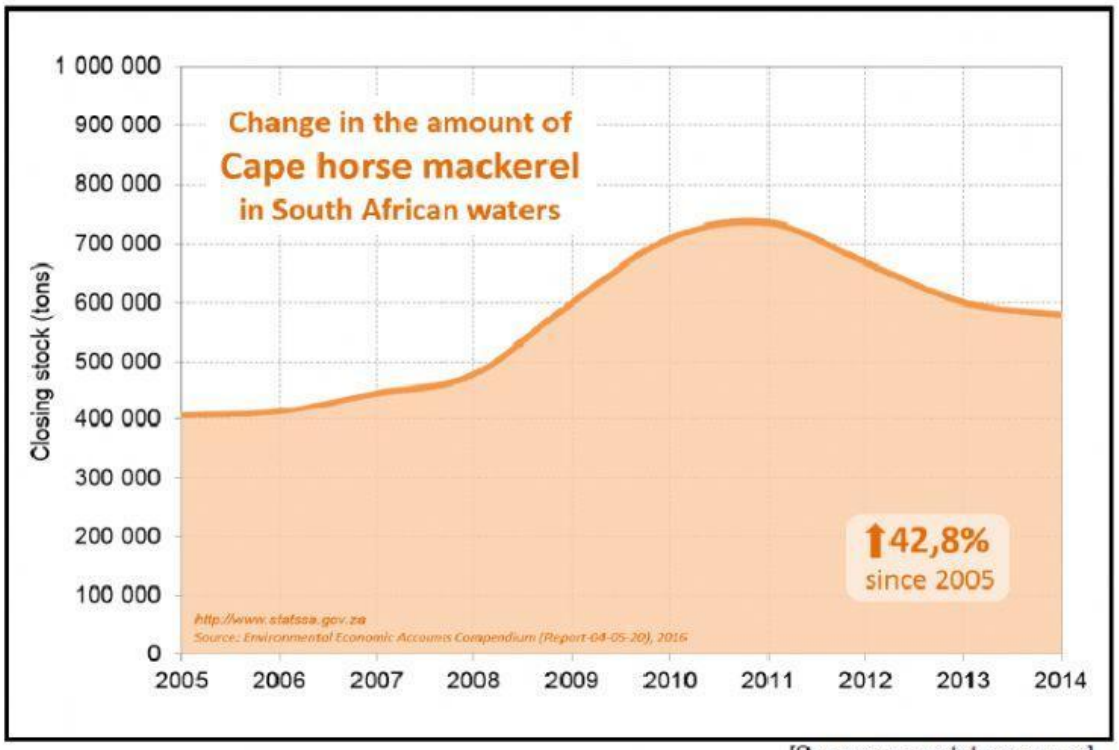
2.4.3 Explain why large portions of low-lying rural land settlements were left inaccessible (no-go-areas). (1 x 2) (2)

2.4.4 Describe the causes of floods such as the one shown on the article.
(2 x 2) (4)

2.4.5 Explain the effects this flood caused to the people of Port St Johns as shown on the diagram. (2 x 2) (4

2.4.6 Suggest ONE precautionary measure the people of Port St Johns could have taken to reduce the damages caused by this flood in their area.
(1 x 2) (2)

FIGURE 2.5: CHANGE IN THE AMOUNT OF CAPE HORSE MACKEREL IN SOUTH AFRICAN WATERS



[Source: www.statssa.gov.za]

List of words of some of the Afrikaans and English words and their translation that appear on the topographical map.

ENGLISH	AFRIKAANS
Landing strip	Vliegveld
Furrow	Voor
Caravan park	Karavaanpark
Canal	Kanaal
Sewerage works	Rioolwerke
Golf course	Gholfbaan
Excavation	Uitgrawing
Nature reserve	Natuurreservaat
Rifle range	Skietbaan
Aerodrome	Vliegveld
Ravine	Kloof

2.5 Study FIGURE 2.5 that shows the change in the amount of Cape horse mackerel in South African waters.

2.5.1 What was the closing stock of mackerel in year 2013? (1 x 1) (1)

2.5.2 According to information on the graph, does the closing stock of mackerel increase or decrease from year 2005 to 2014? (1 x 1) (1)

2.5.3 State the year in which the closing stock of mackerel was the highest. (1 x 1) (1)

2.5.4 Calculate the difference of stock (in tonnes) between year 2005 and 2009. (1 x 2) (2)

2.5.5 Describe the benefits to South Africa, if the stock of Cape horse mackerel would continue to increase. (1 x 2) (2)

2.5.6 Suggest the possible reasons for the increase in the stock of mackerel and other fish stock. (2 x 2) (4)

2.5.7 Explain the negative results from overfishing of South Africa's coasts in the long run. (2 x 2) (4)

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