

## Resource Management Overview and Water – MARK SCHEME

- 1 (a) One mark for correct calculation.

20% / 6 times greater / 500% more. (*Percentage sign not necessary.*)

AO4 = 1

- (b) Candidates should make reference to the **map showing world oil consumption in 2016** through using continent / continental area name(s) and / or data provided. They should show that they can apply knowledge and understanding in analysing the pattern shown by the map. Expect recognition of a global pattern of higher consumption in wealthier regions / emerging economies, lower in poorer regions. The connection should be made with oil consumption as an indicator of wealth and therefore an ability to secure the goods and services that allow well-being. Credit reference to economic and / or social well-being.

The **map showing world oil consumption in 2016** shows that Asia Pacific has the largest single share of the world oil consumption (1). Countries in this region can use this oil to develop rapidly and improve incomes through employment (1) so people are likely to have improved well-being as they can access more goods and services with this wealth (1).

Africa has the lowest share of world oil consumption at 4% (1). This links to for example Sub-Saharan Africa which has low levels of well-being measured through indicators such as HDI (1).

Richer countries will have the means to purchase oil and therefore energy for personal use and industrial development (1) and this will increase the well-being of the population as they will have a good standard of living as a result (1) as visible in the North American share at 24% when that is just USA and Canada (1).

Max 1 mark if no reference to the **map showing world oil consumption in 2016**.

Reserve 3<sup>rd</sup> mark (AO4) for clear and explicit reference to the **map showing world oil consumption in 2016**.

AO3 = 2

AO4 = 1

**[Total 4 marks]**

- 2 (a) fluctuated coal 1992

3 × 1 marks

AO4 = 3

- (b) Any two reasonable points (2 × 1) or a single developed point (2 marks)

Indicative content

- The relative price.
- Ease of use / flexibility of use or transportation of resource.
- Concerns about the environment.
- Government policy.
- Response to public opinion.

- Increasing drive towards renewables.
- Coal running out / decline, in the UK.
- International carbon agreements.

AO2 = 2

**[Total 5 marks]**

3 One mark for a basic statement, e.g.

- Farmers can make more profit (1)
- Farm to fork' integration allows producers / supermarkets to maximise profits (1)
- Food is cheaper (1)
- Reduces imports (1).

Two marks for a developed idea, e.g.

- Large farms have taken over small ones (1) so they can reduce costs in using machinery across a wider area and increase profits (d)(1)
- Supermarkets and large growing organisations such as Produce World have prospered (1) as they control every stage from growing to final sale (d)(1) and don't lose money to any middle-men (d)(1)
- Reduced costs of production mean prices can be kept lower (1) so food prices are lower in real terms than 30 years ago (d) (1) / so the shopper benefits (d)(1).

*No credit for disadvantages.*

AO2= 2

**[Total 2 marks]**

4 1 mark – basic idea of increasing food miles meaning a greater need for transport.

2nd mark – some development which includes observations about increasing use of fuel or a link to increasing levels of pollution.

AO2 = 1

AO3 = 1

**[Total 2 marks]**

5 The population is expected to increase by 9.7 million between 2014 and 2039 – mark is available for using data. More people will lead to an increased demand for water – for drinking, washing etc – qualification of type of use is needed for mark. More people owned dishwashers – up by 13% in under 10 years and as people have more money and more time saving devices, water use will go up as dishwashers use more water than washing up by hand.

There is no requirement to use both items of data but information must be used, not just lifted to gain marks.

2 × 1 or 1 × (1 = 1)

AO2 = 1

AO3 = 1

**[Total 2 marks]**

6 (a) One mark for any correctly named country:

Algeria, Egypt, Libya, Tunisia.

AO4 = 1

(b) C: 10 (1 mark)

20.8% (1 mark)

*Percentage sign not required. Answer must be to one decimal place.*

If the candidate has made a mistake in the first part then allow the corresponding answer to the second part of the question:

A – 16.7%, B – 18.8%, D – 22.9%

AO4 = 2

(c) Answers should make use of the **map of Africa** through naming countries and affected areas in order to describe the pattern and should be focused on the 76-90% category.

One mark for a basic statement, e.g.

- Nearly all on the coast (1)
- The biggest area is Southern Africa (1)
- Apart from one group of 3 they are all isolated (1)
- 4 out of the 8 are in Western Africa (1).

Second mark may be a second separate point or developed point for further descriptive clarity, e.g.

- Nearly all on the coast (1) except Botswana (d)(1)
- The biggest area is Southern Africa (1) with the 3 largest countries in the category all next to each other (d)(1)
- Apart from one group of 3 they are all isolated (1) and quite evenly spaced along the central and western coastline (d)(1)
- 4 out of the 8 are in Western Africa (1) with the other 3 all grouped together on the southern tip of Africa (d)(1).

*No credit for description of any categories other than 76-90%.*

*No credit for explanation.*

AO4 = 2

**[Total 5 marks]**

7 One mark for a basic statement e.g.

- Some countries have limited rainfall (1)
- Poor countries may not be able to store water for later use (1)
- Poor countries may have economic water scarcity. (1)

Two marks for a developed idea e.g.

- Some countries are located in dry regions (1) with limited rainfall (d)(1) which means that even slight reductions will reduce availability further (d)(1)
- Poor countries may not be able to store water for later use (1) so they are unable to make the most of water available during wet seasons which would increase availability (d)(1)
- Poor countries may have economic water scarcity (1) so that water is unavailable simply because people cannot afford to buy it (d)(1).

AO2 = 2

**[Total 2 marks]**

8 (a) One mark for the correct answer.

**B** 1000-2500 cubic metres per person per year.

*No credit if two or more answers are selected.*

AO4 = 1

(b) The question focuses on distribution of areas with less than 1000 cubic metres of water per capita.

One mark for basic description relating to distribution shown on the map e.g.

- two countries in tropical Africa have less than 1000 cubic metres of water per person per year (1)
- areas of water scarcity (1000 cubic metres or less per person per year) are mainly found in the extreme north and south of the continent (1)
- five countries stretching across the whole of North Africa have total water per capita of 1000 cubic metres or less (1).

Second mark for developed point using detail from the map, e.g.

- two countries in tropical Africa have less than 1000 cubic metres of water per person per year, one in the east (Kenya), the other in the west (Burkina Faso) (2)
- areas of water scarcity (1000 cubic metres or less per person per year) are mainly found in the extreme north and south of the continent, such as Libya and South Africa (2)
- five countries stretching across the whole of North Africa have total water per capita of 1000 cubic metres or less such as Morocco and Tunisia (2).

*No credit for listing names of countries or for describing the areas with high water availability.*

AO4 = 2

**[Total 3 marks]**