

VCE Health and Human Development

SCHOOL-ASSESSED COURSEWORK

Introduction

OUTCOME 1

Analyse factors contributing to variations in health status between Australia and developing countries, evaluate progress towards the United Nations' Millennium Development Goals and describe the interrelationship between health, human development and sustainability.

Task

Data Analysis

This task will be marked out of 30.

It will contribute 50% of the marks (60) allocated for this outcome. A second task will be completed for this outcome.

The task has been designed to allow achievement up to and including the highest level in the Performance Descriptors.

You have 50 minutes to complete the task and your teacher will decide the conditions under which the task will be completed.

Answer in space provided.

The following **key knowledge** is the focus of this task:

- definitions of developing countries, sustainability and the human development index;
- similarities and differences in health status and human development between developing countries and Australia in relation to morbidity, mortality, life expectancy, burden of disease and human development index;
- the influence of income, gender equality, peace, education, access to healthcare, global marketing and physical environments on health status of developing countries and Australia;

The following **key skills** are the focus of this task:

- define human development and sustainability concepts;
- use, interpret and analyse data to draw informed conclusions about the health status and human development of developing countries compared to Australia;
- compare factors that influence the health status and human development of Australia and developing countries.

NAME:

Task

Question 1

Define the following terms

- a Developing country with high mortality strata

- b Sustainability

(2 marks)

Question 2

Explain the Human Development Index (HDI) and how it is calculated.

Human Development Index:

How the HDI is calculated:

(1+2=3 marks)

Task

Question 3

Figure 1: Indicators of Health Status for a Range of Developing Countries compared to Australia

Country	Life Expectancy Males	Life Expectancy Females	Infant Mortality Rate (per 1,000)	U5MR (per 1,000)	Maternal Mortality per 100,000	GNI Per capita \$	HDI	% pop. with access to improved drinking water
Australia	80	84	4	5	8	37,250	.926	100
Timor-Leste	64	69	46	56	370	4,690	.487	69
Papua New Guinea	62	65	54	71	250	2,030	.457	40
Sudan	59	59	69	108	750	1,990	.403	57
Mexico	73	78	15	17	85	14,100	.762	94
Haiti	60	63	64	87	300	NA	.449	63

Source: Adapted from: World Health Organisation 2011. World Health Statistics 2011.

- a Using the data in Figure 1, compare the health status of Australia to that of **two** developing countries listed.

(2 marks)

- b Using the information in Figure 1, explain one example of how income might impact on health status.

(2 marks)

Task

- c i Using the data from Figure 1 identify the relationship between infant mortality rates and access to improved drinking water.

(1 mark)

- ii Discuss how access to improved drinking water might impact on human development.

(2 marks)

- d Explain two ways access to health care could contribute to the difference in maternal mortality rates between Australia and a developing country such as Sudan.

1

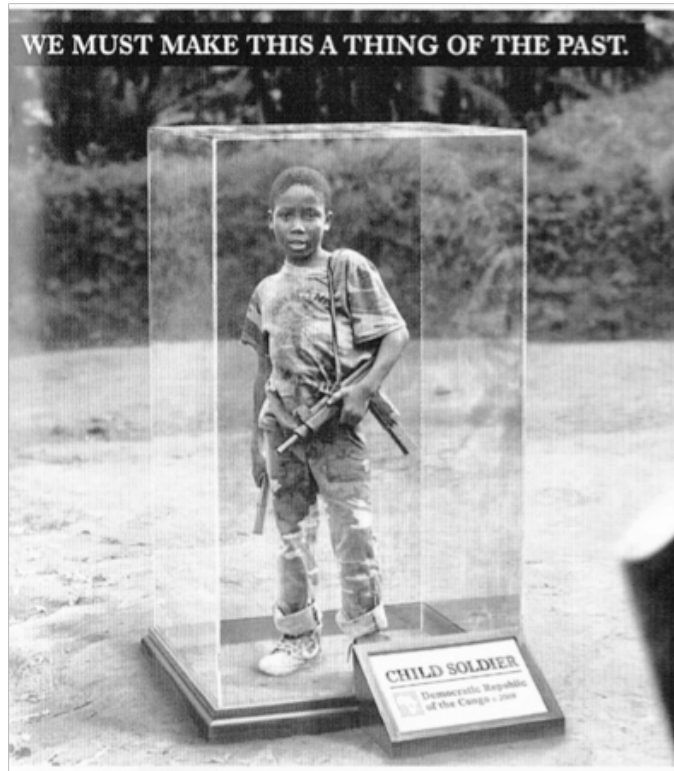
2

(4 marks)

Task

Question 4

Save the Children has been campaigning against the use of children as soldiers for many years. The photograph below is from its exhibition titled ‘Things of the Past’.



Source: AusAID 2012. Focus Magazine February-May 2012 p.17 Photo: Paul Torcello and *Save the Children*.

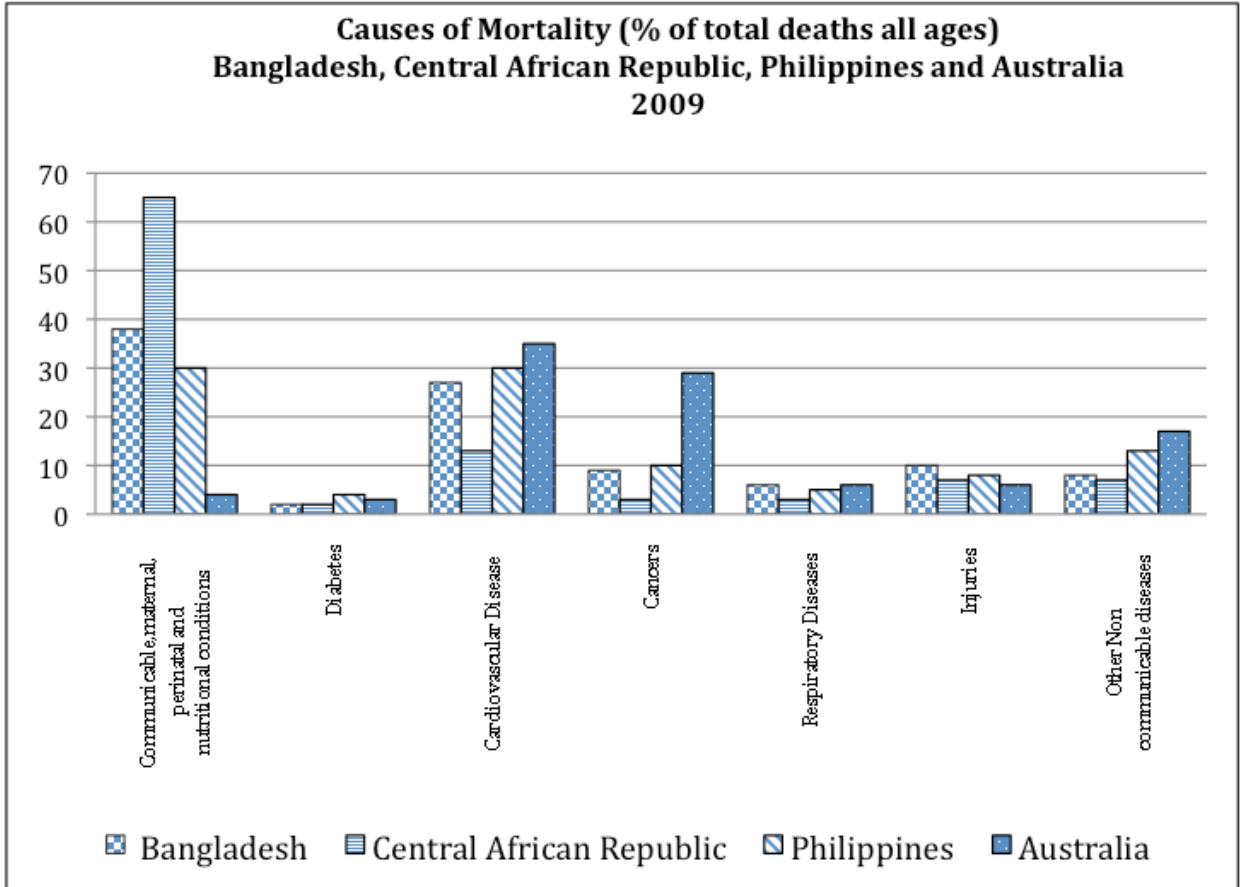
Explain how the campaign to make ‘child soldiers a thing of the past’ could impact on health and human development.

(4 marks)

Task

Question 5

Figure 2



Source: Adapted from World Health Organisation: Country profiles NCD www.who.int.

a Identify one similarity and one difference in the causes of mortality shown in Figure 2.

Similarity:

Difference:

(2 marks)



Task

- b Outline two ways global marketing could have contributed to the similarities and/or differences in the causes of mortality shown in Figure 2.

1 _____

2 _____

(4 marks)

Question 6

Figure 3: % of Children who Completed Primary School 2010.

Country	Male	Female
Mali	61%	49%
Mozambique	66%	55%
Angola	53%	40%
Australia	100%	100%

Adapted from: World Bank 2012. www.worldbank.org/indicators.

- a Briefly outline two reasons that might explain the differences between the primary school completion rates of boys compared to girls.

1 _____

2 _____

(2 marks)



Task

- b Describe how the education of girls can contribute to improved health of those living in developing countries.

(2 marks)

Total: 30 marks

Teacher Advice

The following table indicates the relationship between the highest level of the Performance Descriptor and the questions in this QAT.

Aspect of Highest Performance Descriptor	Question/s
Comprehensive understanding and consistent application of the concepts of human development and sustainability.	1a, 1b, 2
Wide range of evidence used to draw detailed conclusions about the health status and human development of developing countries compared to Australia.	3a, 5a
Critical analysis of the factors that lead to similarities and differences in the health status and human development of Australia and developing countries.	3b, 3ci, 3cii, 3d, 4, 5b, 6a, 6b

Note: This is **one of two tasks** for this outcome.

Solution Pathway

Below are suggested responses. Teachers should consider the merits of alternative responses.

Question 1a

To receive one mark for this question students need to explain that a developing country with high mortality strata is a country that has high mortality rates for both adults and children.

Question 1b

Students receive one mark for correctly defining sustainability as ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs’.

Question 2

Students are awarded one mark for their explanation of the human development index.

The Human Development Index (HDI) is a single statistic or index that is used to measure the social and economic development of a country. It measures a country's average achievements in three basic aspects of human development: health, knowledge, and income.

To be awarded the remaining two marks students need to explain the data used to calculate the Human Development Index. Students must use the new measurement that includes two sets of measurements for education.

The HDI is calculated using the three dimensions of health, education and living standards. The health dimension uses data on life expectancy at birth; the education dimension now uses data relating to the mean years of schooling for adults aged 25 years and expected years of schooling for children of school age and living standards uses data on gross national income per capita or per person.

Question 3a

Students can choose any two of the developing countries listed in the table or Figure 1 to compare health status. To be awarded two marks students must use the data in their comparison and should use at least two of any of the key indicators from the table. A sample response might be:

Australia has a much higher health status than Timor-Leste and Papua New Guinea. This is shown in all key indicators on the table. The life expectancy for males in Australia is 80 compared to Timor-Leste and Papua New Guinea with life expectancies of 64 and 62. Infant mortality rates are low in Australia with 4 per 1,000 compared to 46 and 54 in Timor-Leste and Papua New Guinea. Under 5 mortality rates in Australia are a low 5 per 1,000 compared to Timor-Leste and Papua New Guinea with 56 and 71 per 1,000.

Question 3b

To be awarded two marks, students need to use the information in Figure 1 to explain how income could impact on at least one example of health status. There are many examples students can use. A sample response could be:

GNI per capita is a measurement of the income of a country and the poorer the country, the poorer their health status.

Solution Pathway

Sudan has the lowest GNI per capita with only \$1,990 and has the lowest male and female life expectancy, highest levels of infant mortality rates, U5 mortality rates and maternal mortality rates. Low income at a national level means not enough money to provide the community with health care services, infrastructure such as safe water and sanitation and education all of which contributes to high rates of mortality from infectious diseases such as cholera, diarrhoea and respiratory infections and from complications during pregnancy and childbirth. Families who are poor are unable to afford nutritious food or essential medications which can lead to malnutrition and premature death.

Question 3ci

To be awarded one mark students must be able to interpret the pattern in the data that relates to access to improved drinking water and infant mortality rates. A sample response might be:

In general, the higher the % of the population with access to improved drinking water, the lower the rates of infant mortality. Australia has the lowest rate of infant mortality with 4 per 1,000 and has 100% access to safe drinking water whilst Papua New Guinea and Sudan have the lowest % of the population with access to safe drinking water and have the highest infant mortality rates with 54 and 69 per 1,000.

Question 3cii

To be awarded two marks students must be able to link access to safe drinking water to one or more aspects of human development. A sample response might be:

In many developing countries where access to safe drinking water is low, it is the responsibility of the women and children to spend many hours collecting water for the family. This affects their ability to be able to attend school or to work to either earn an income or produce food for the family. Poor quality drinking water also contributes to ongoing illness. All these factors interfere with the ability for children and women to develop to their potential and have a decent standard of living, all of which impacts on human development.

Question 3d

To be awarded four marks students need to compare the maternal mortality rates in Australia to those of one developing country and then describe two examples of how access to health care can contribute to the differences.

Sample responses could include:

In countries, such as the Sudan, where there is a high rate of maternal mortality, they also lack access to health care services compared to Australia where maternal mortality rates are much lower.

- *During pregnancy, it is important for the mother to have access to health care services for ongoing monitoring such as weight gain, urine tests to determine early signs of pre-eclampsia which can be life threatening for the mother and also for sugar in the urine which might indicate diabetes.*
- *Screening tests can be carried out to ensure the placenta has not formed over the cervix which can lead to haemorrhaging and death.*
- *The placement of the baby in the uterus is also important. If a baby is in a breach position, it may be necessary to perform a caesarean birth to ensure the health of the mother is maintained.*
- *In developing countries such as Sudan, women often give birth at home using unsterilized equipment which increases the risk of death from tetanus.*

Solution Pathway

Question 4

Students need to explain how peace, and in particular the use of children as soldiers, could impact on health for two marks and on human development for a further two marks.

Sample responses could include:

When people live in countries that do not experience peace, the health status of everyone, particularly children, is greatly affected. Children are often used as soldiers which means they are at great risk of being killed or injured and often losing limbs. This will contribute to enormous grief for families impacting not only on physical health but also greatly impacting on mental health.

Being injured will impact on children's ability to attend school and gain the knowledge needed to contribute to a decent standard of living and the opportunity to participate in the community. Children often help with the household chores. If they are injured, not only is this no longer possible, but they place a burden on the family to care for them and this may be a lifelong responsibility. Living with conflict does not enable the creation of an environment where children can develop to their full potential and lead creative and productive lives.

Question 5a

To be awarded two marks, students need to interpret the data and list one example of a similarity and one example of a difference. There are many examples that students could select. Some examples include:

Similarities:

- *The percentage of deaths due to diabetes is similar for all countries listed in the graph.*
- *The percentage of deaths due to respiratory diseases is similar for all countries listed in the graph.*
- *In the Philippines, the percentage of deaths due to communicable, maternal, perinatal and nutritional conditions is the same as the percentage of deaths due to cardiovascular disease, with both being 30%.*

Differences:

- *The percentage of deaths from communicable, maternal, perinatal and nutritional conditions is much lower in Australia than for all other countries listed in the table.*
- *The percentage of deaths from communicable, maternal, perinatal and nutritional conditions is much higher in the Central African Republic than in Bangladesh, Philippines and Australia.*
- *The percentage of deaths from cardiovascular disease in the Philippines is much lower than in Bangladesh, Central African Republic and Australia.*

Solution Pathway

Question 5b

To be awarded four marks students need to use the data in Figure 2 to outline two ways that global marketing could account for any similarities or differences evident in the causes of death. These similarities and/or differences do not have to relate to those identified in Question 5a.

Sample responses could include:

- *Tobacco is being marketed globally by large transnational companies, with developing countries being their main targets for expansion. Tobacco is heavily advertised and marketed to children and adults. In Australia, deaths from cancer are higher than other countries due to the time taken for cancer to develop. However, deaths from cancer in developing countries could be rising as the promotion of tobacco. Similarly, deaths from cardiovascular disease which are quite high in all countries, can also be due in part to the promotion of tobacco increases.*
- *Global alcohol consumption has increased as a result of global marketing including in developing countries. Increased alcohol consumption contributes to cancer deaths which may account for the similarities between Bangladesh and the Philippines and in injury deaths in all countries.*
- *Food consumption patterns are also changing, particularly in developing countries as large transnational companies market their fast foods. This may be contributing to the similarities in the % of deaths due to cardiovascular disease in Bangladesh, Philippines and Australia and to the similarities in death from diabetes across all countries in the table.*
- *Infant formula is also promoted by large multinational corporations to women in developing countries. This can lead to mothers choosing to bottle feed rather than breast feed their newborn. Where women do not have access to safe water the formula is mixed with contaminated water which contributes to high rates of infectious and parasitic diseases which might account for the significant difference in the % of deaths due to communicable, maternal, perinatal and nutritional conditions in Bangladesh, the Central African Republic and Philippines compared to Australia.*

Question 6a

To be awarded two marks, students need to briefly outline two reasons to explain why girls are less likely than boys to have completed primary school in developing countries compared to Australia.

Sample responses could include:

- *Compared to Australia, in developing countries there is often inequality between males and females. Women are often valued only for their role in childbearing and domestic work and it is therefore not considered important for girls and women to be educated.*
- *In developing countries girls are often responsible for the collection of water and firewood which can take many hours to collect which limits opportunities for them to attend school.*
- *Where there is a lack of private sanitation facilities, families are less willing to send girls to school than boys.*
- *Education is not provided free by the government in developing countries and families must pay for the education of their children. Families with limited income are more likely to send male children to school rather than girls.*

Solution Pathway

Question 6b

To be awarded two marks students should outline at least one example of how the education of girls contributes to improved health. Examples could include any or all dimensions of health. There are many examples students can use.

A sample response could include:

- *When girls are educated they are more likely to delay marriage and childbearing, use family planning methods and have fewer and healthier children. This improves the physical health of girls by reducing the risks of anaemia, malnutrition and a poorly functioning immune system. Social health is improved as girls can attend school, which increases opportunities for employment and social interaction. Mental health can be improved as education builds the confidence and self-esteem of girls.*
- *As women are the primary caregivers, children of an educated mother are more likely to be physically healthy and survive. This is because they are more likely to seek medical care, ensure their children are immunised and have greater knowledge of nutrition and hygiene practices.*
- *When girls are educated, there is a lower risk of being infected with HIV. Being educated slows and reduces the spread of HIV/AIDS by raising awareness of the dangers associated with unprotected sex and understanding of how the disease is transmitted. Reducing the rates of HIV infection improves physical health by reducing the symptoms of HIV and the onset of AIDS.*