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90814



908140

Draw a cross through the box (X) if you have NOT written in this booklet

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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 2 Education for Sustainability 2024

90814 Demonstrate understanding of aspects of sustainability in different contexts

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of aspects of sustainability in different contexts.	Demonstrate in-depth understanding of aspects of sustainability in different contexts.	Demonstrate comprehensive understanding of aspects of sustainability in different contexts.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt BOTH parts of the task in this booklet.

Pull out Resource Booklet 90814R from the centre of this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

Do not write in the margins (// // //). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

Excellence

TOTAL 08

Plan your answers in the box below. Your planning will not be marked.

PLANNING

Context 3

Environmental: Fossil fuels → climate change (rainforest → savannah)

Social: reliance on amazon for food, shelter and medicine

Economic: Demand for real estate (deforestation)
↳ cattle grazing and cropland soybean

Manaakitanga: care and respect for

Kaitiakitanga: guardianship over the Amazon

→ deforestation

Context 2:

Social: Health issues → Particle pollution → Lungs/Bloodstream (increase likelihood)

Environmental: Air pollution, PM (dust, soot, dirt) → open fires, wildfires

Solutions?: Alternative heating systems
eg: heat pumps

↳ destruction of habitats

Q2

1. Explain interrelationship

2. Explain in regards to the context

3. Implications

4. Potential changes/practices

Env/Soc → reliance on nature for life

Env/Eco → reliance on nature for trade/money → longevity vs

Examples:

- Aerok (ocean acidification → effects on fisheries → economic impact)
- Kiribati (rising sea levels → contaminate water → infrastructure)
- Fast fashion
- Kuapa Kokoo Cooperative
- Outdoor Air pollution

→ coral

Resource Booklet 90814R contains resources about sustainability issues in three different contexts:

- **Context 1:** Cobalt mining
- **Context 2:** Outdoor air pollution
- **Context 3:** The tipping points of climate change – deforestation

Read all the information in the resource booklet before you answer the task.

TASK

- (a) What are the likely effects on a sustainable future regarding the contexts provided in the resource booklet?

In your answer, refer to:

- at least two of the contexts provided in the resource booklet
- at least two of the four aspects of sustainability (environmental, social, cultural, economic), for each selected context
- the Māori concepts of manaakitanga and kaitiakitanga.

The content discussed within context 2 poses negative effects on a sustainable future. Within context 2, it can be observed that the effects of outdoor air pollution pose detrimental effects on the health and wellbeing of the public and will continue to increase both in frequency and severity over time. Environmentally, it is clear that the ^{particulate} ~~particle~~ matter dispersed from domestic heating is significantly harmful, with it being a main component of wildfire smoke and the increasing number of wildfires that destroy habitats crucial for many forms of life. Though governments have provided alternatives for domestic heating in an attempt to minimise particulate matter pollution, in future there needs to be a culture shift in the way we, as individuals, show manaakitanga to our physical environment, as well as kaitiakitanga in the way we preserve its beauty and functionality. The gradual decline in the health of our physical environment oftentimes has domino effects on poor health outcomes. Within this context this can be analysed in the way that exposure to these tiny yet harmful particles can enter and ^{deeply} infect the lungs and bloodstream, making the social implications of outdoor pollution negative in the context of a sustainable future. If the frequency of wildfires and particle pollution continues to increase so will the number of deaths associated with air pollution as well as the

number of crucial habitats and natural resources, posing an unsustainable future.

The issues discussed in context 3 propose negative effects on an overall sustainable future. Context 3 analyses the ways in which the burning of fossil fuels and deforestation threatens not only the sustainability of the Amazon's ^{physical} environment but of the people and the economy. Environmentally, the ^{rapid} ~~climate~~ ^{change} in climate due to things like the burning of fossil fuels have led to parts of the Amazon receiving significantly less rain with almost half of the total area at a point where it could classify as a savannah as opposed to a rainforest. Additionally, deforestation due to economic incentives releases significant amounts of carbon into the atmosphere, contributing to global climate change and on a local scale, strips the Amazon of its natural resources. With a continued deficiency of rain and ^{normalisation} ~~popula~~ of deforestation, the effects ^{environmental} on the sustainability of the Amazon are extremely negative. Because there is a lack of manaakitanga and desire to preserve the natural state of the Amazon (kaitiakitanga) due to economic incentives regarding land, the Amazon is rapidly being stripped of its natural resources, resources that ^{are} incredibly important in sustaining the health and wellbeing of people, many are left with a socially unsustainable future, as they can no longer depend on the Amazon for essential resources such as agriculture clothing and medicine. Finally, the deforestation of the Amazon has negative implications on the economic sustainability of the future. Though deforestation is occurring as a result of the economic demand for real estate and more grazing pasture and cropland, it is economically unsustainable in the way that land is finite, meaning that they will eventually run out of it and simultaneously during the process of deforestation, they rob themselves of the opportunity to economically prosper off of the natural resources within the Amazon that people are already reliant on.

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The assessment continues on the following page.**

- (b) How might the relationships between the aspects of sustainability you identified in (a) contribute to sustainability in the future?

In your answer, you could also consider:

- the wider implications of these relationships
- potential changes in local and/or international practices that would promote sustainability.

Use evidence from your own studies and/or the contexts provided.

The first interrelationship I will be analysing is in between the social and environmental aspects of sustainability. This interrelationship is a high indicator of whether or not something is likely contributing to a sustainable future, as it addresses the clear social reliance on our physical environment to both survive and thrive. On the flip side of things, when the environment is not doing good, people in turn tend to suffer as a result. This can be applied to both previously discussed contexts, as in context 2 we observe how environmental issues like wildfires and air pollution can contaminate people's lungs and bloodstreams and in severe cases, kill them and as in context 3 we observe how the destruction and deforestation of the amazon takes away many people's source of food, shelter, medicine and other essential resources. The wider implication of this interrelationship is that for as long as human activity contributes to the destruction of our physical environment, humans as well as other living organisms will likely be unable to sustain themselves. We can firstly observe this implication in regards to context 2 and the way that negative environmental occurrences such as wildfires and air pollution ultimately lead to the destruction of habitats many species may rely on to sustain their existence as well as the loss of countless lives to breathing in pollutants. However, we can see many instances of this wider implication in places like Kiribati, where rising sea levels threaten not only the sustainability of the island itself but also the safety of drinking water and infrastructure for its civilians. Additionally, This is also the case for many coastal communities like in New Zealand whose homes, resources and taonga are constantly vulnerable to rising sea levels. Finally, this

implication can be observed in instances like Aerok, an atoll in the Marshall Islands that faces many natural disasters as a result of climate change. These natural disasters pose great threats to the habitation of Aerok, specifically in regards to the resilience of their infrastructure and how faulty infrastructure can pose negative impacts on their health. Though the interrelationship between the social and environmental aspects of sustainability can be greatly threatening to the overall sustainability of our future, it is important to remember that when we show manakitanga and prioritise kaitiakitanga over our physical environment whether that's through international efforts to normalise green energy or to tax fossil fuels, we can ensure that our people as well as our biophysical environment thrive and have a sustainable future.

The ~~second~~ interrelationship between the environmental and economic aspects of sustainability contribute to sustainability by evaluating the ways in which we rely on the environment to trade, sell and prosper economically and the determinant of sustainability within this interrelationship lies within whether we choose to preserve and nurture the environment around us or exploit it. The instance of exploiting our environment for short term gains over long term sustainability can be observed in many instances like fast fashion, however we can also observe this in context 3, where in exchange for real estate profits, ^{deforestation} ~~the~~ ^{occurs} ~~occurs~~, which in turn will only temporarily be financially beneficial, as in the long run land is finite, while the natural resources the Amazon has to offer for as long as it's taken care of, is not. The wider implication of this interrelationship is that the destruction of the physical environment in exchange for temporary ~~econ~~ ^{monetary} gains hurts the economy in the long run, while preserving the longevity of natural resources, is more effective in contributing to a sustainable future. This can be seen in examples like context 3, where the ^{deforestation} ~~destructi~~ of the Amazon in exchange for finite land ultimately stops prospering at a certain point. Additionally,

Extra space if required.

Write the question number(s) if applicable.

QUESTION
NUMBER

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(b) on a global scale the burning of finite resources like fossil fuels cause things like ~~etc~~ drastic changes in temperatures and rising sea levels which affect the most vulnerable of countries like Kiribati, who are economically unable to bounce back especially because rising sea levels have a tendency to destroy infrastructure. Environmental phenomena like ocean acidification can also have bearing effects on places like Aerok that rely on fisheries to economically sustain themselves, as ocean acidification weakens and decreases the amount of coral in the ocean that acts as habitation for organisms such as fish. As for the flipped side of the implication, preserving the longevity of our natural environmental resources is far more economically sustainable like we see in instances like Kuapa Kokoo Cooperative, where extra profits go towards educating farmers on and investing in sustainable farming practices. Though the short term economic trade off may be a marginal increase in product price, in the long term they are able to farm as much cocoa without compromising the health of their environment. Though at first it may seem like there's an economic trade off in preserving the environment, with international and local collaboration to care for our planet through things like policy and encouraging sustainable practices, it is possible to have sustainability within both our environment and economy.

Excellence

Subject: Education for Sustainability

Standard: 90814

Total score: 08

Task	Grade score	Marker commentary
One	E8	<p>The candidate showed strong engagement with the resources, addressing the question in a focused and coherent way. This included a discussion of the wider implications of the interrelationships between aspects of sustainability through the lens of kaitiakitanga and manaakitanga.</p> <p>The candidate primarily expressed their response in their own words, but also consistently incorporated relevant supporting evidence from both the resources and their own studies, in their discussion of how practices could be changed to promote sustainability.</p>