90814R



Level 2 Education for Sustainability 2024

90814 Demonstrate understanding of aspects of sustainability in different contexts

Credits: Four

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Education for Sustainability 90814.

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

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

CONTEXT 1: Cobalt mining

Cobalt is a crucial part of rechargeable batteries that can be found in most electronic devices, **Figure 1:** Cobalt ore



Figure 2: An artisanal miner carries a sack of ore at the Shabara artisanal mine near Kolwezi, DRC



demand for mined metals such as cobalt.

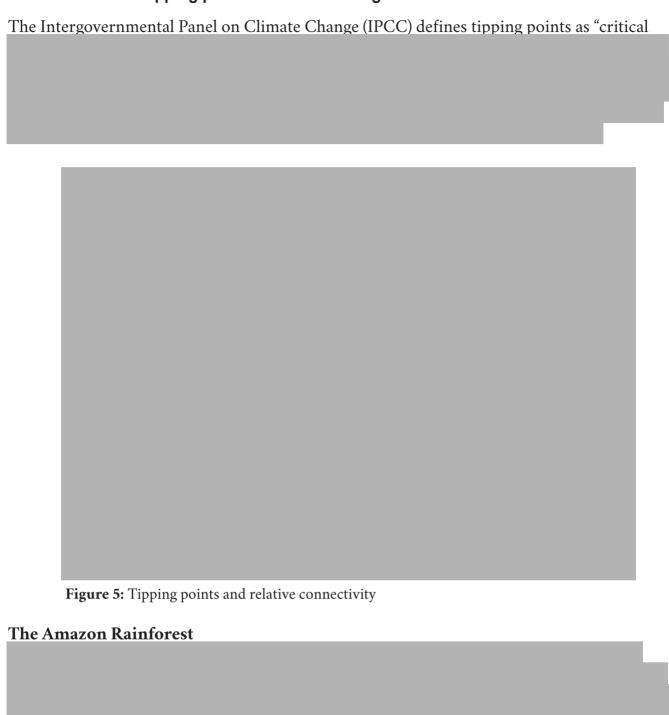
CONTEXT 2: Outdoor air pollution

Outdoor air pollution remains one of the most significant environmental and social problems	3
Figure 3: Comparison between 2005 and 2021 WHO air quality guidelines and recommendations of limit values for specific air pollutants, developed to help countries achieve air quality that protects public health	
Particulate matter	

New Zealand hectares of bush, destroyed houses and property, and resulted in the loss of one life.			
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Figure 4: Port Hills wildfire, 2017

CONTEXT 3: The tipping points of climate change – deforestation





Rainforest is referred to by some as 'the lungs of the planet'.

Acknowledgements

Material from the following sources has been adapted for use in this booklet:

Context 1

https://www.leighday.co.uk/news/blog/2023-blogs/cobalt-mining-in-the-democratic-republic-of-congo-where-next/

https://earth.org/cobalt-mining-in-congo/

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https://www.pbs.org/newshour/science/mining-is-necessary-for-the-green-transition-heres-why-experts-say-we-need-to-do-it-better

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https://news.mongabay.com/2023/10/its-a-real-mess-mining-and-deforestation-threaten-unparalleled-drc-wildlife-haven/https://earth.org/norway-deep-sea-mining-exploration-environmental-cost

Images

Figure 1: https://www.npr.org/sections/goatsandsoda/2023/02/01/1152893248/red-cobalt-congo-drc-mining-siddharth-kara

Figure 2: https://www.npr.org/sections/goatsandsoda/2023/02/01/1152893248/red-cobalt-congo-drc-mining-siddharth-kara

Context 2

https://www.lawa.org.nz/explore-data/air-quality/#/tb-region

https://www.iqair.com/th-en/newsroom/2021-who-air-quality-guidelines

https://www.yalemedicine.org/news/how-bad-is-wildfire-smoke-for-your-health

https://www.tewhatuora.govt.nz/assets/Publications/Environmental-health/Response-to-Wildfires-Guidelines-for-Public-Health-Officers.pdf

https://www.theguardian.com/us-news/2023/oct/02/new-york-city-air-quality-smoke-canada-wildfires

https://ourworldindata.org/london-air-pollution

https://www.fireandemergency.nz/incidents-and-news/news-and-media/joint-new-zealand-fire-service-and-national-rural-fire-authority-national-co-ordination-centre-for-port-hills-fire-response/

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https://environment.govt.nz/news/new-report-shows-significant-changes-to-new-zealands-climate

Context 3

https://earth.org/tipping-points-of-climate-change/

https://www.esa.int/Applications/Observing the Earth/Space for our climate/Understanding climate tipping points

https://www.worldwildlife.org/photos/devastated-amazon-forest

https://education.nationalgeographic.org/resource/resource-library-biomes/

https://research.noaa.gov/2021/07/14/deforestation-warming-flip-part-of-amazon-forest-from-carbon-sink-to-source

https://ourworldindata.org/drivers-of-deforestation

https://weforum.org/agenda/2024/07/positive-tipping-points-climate-tim-lenton