



Lesson 2: Climate Change and Pakistan (1.3.1 What are the natural and human causes of climate change?)

Learning objective	To gain knowledge and understanding of human activities that contribute to the enhanced greenhouse effect
Lesson objectives	By the end of the lesson, learners will be able to: <ul style="list-style-type: none"> • define the enhanced greenhouse effect • describe human activities that contribute to greenhouse gas emissions • explain how fossil fuels, deforestation, urbanisation and agriculture increase global warming
Vocabulary	<p>Enhanced greenhouse effect: the intensified warming of the Earth caused by increased greenhouse gases in the atmosphere due to human activity</p> <p>Fossil fuels: coal, oil and gas that are burned to produce energy, releasing carbon dioxide</p> <p>Urbanisation: the growth of towns and cities, increasing energy use, transport emissions and land use change</p> <p>Deforestation: the removal of trees, reducing carbon dioxide absorption from the atmosphere</p> <p>Agriculture: farming activities that release greenhouse gases such as methane and nitrous oxide</p>
Previous learning	Learners have previously studied natural causes of climate change and understand the basic concept of climate change.

Plan

Activities		Resources
Beginning (5 mins)	Learners complete a starter activity identifying human activities that may affect the environment (e.g. transport). Ideas are recorded on paper and briefly shared with the class.	The greenhouse effect: https://ugc.berkeley.edu/background-content/greenhouse-effect/ https://www.nrdc.org/stories/greenhouse-effect-101
Middle (50 mins)	<ul style="list-style-type: none"> • Teacher builds on learners' ideas from the starter activity and introduces the concept of the enhanced greenhouse effect using a diagram and definition. Learners identify key terms and distinguish it from the natural greenhouse effect. • Introduce the four main human activities: usage of fossil fuels, deforestation, urbanisation, and agriculture. For each, learners describe how it contributes to 	Human causes of climate change:

	<p>greenhouse gas emissions and complete guided explanation tasks using sentence starters such as “This increases global warming because...”.</p> <ul style="list-style-type: none"> Learners analyse visual examples (e.g. power stations, cleared forests, cities, farms) and link each to the correct human activity and gas produced. 	https://www.nrdc.org/stories/what-are-causes-climate-change#human https://fsc.org/en/blog/how-deforestation-affects-climate-change
End (5 mins)	Learners complete a summary table comparing the four human activities, including the source, greenhouse gases produced, and its effect on climate change.	

Reflection and evaluation

Reflection:

Summary evaluation:

What two things went really well? (Consider both teaching and learning.)

1.

2.

What two things would have improved the lesson? (Consider both teaching and learning.)

1.

2.

What have I learned from this lesson about the class or individuals that will inform my next lesson?

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