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LAND MANAGEMENT, ENVIRONMENT & SOLID-WASTE: INSIDE EDUCATION AND BUSINESS IN CENTRAL ASIA
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MICRO-CREDENTIAL

CLIMATE CHANGE FOR SUSTAINABLE LAND MANAGEMENT IN CENTRAL ASIA

7.- Cities, Air Quality and Human Health

Quiz

Week 7 – Key Pollutants, health endpoints, and co-benefit examples

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1. Which air pollutant is most strongly associated with respiratory and cardiovascular diseases due to its ability to penetrate deep into the lungs?

a) Carbon dioxide (CO_2)

b) Particulate matter ($PM_{2.5}$)

c) Nitrogen (N_2)

d) Water vapor (H_2O)

2. Ground-level ozone (O_3) is primarily formed through:

a) Direct emissions from vehicles

b) Evaporation of water bodies

c) Chemical reactions involving nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in sunlight

d) Soil erosion processes

3. Which of the following is a common health endpoint associated with long-term exposure to air pollution?

a) Improved lung function

b) Reduced cardiovascular risk

c) Chronic respiratory disease

d) Increased oxygen uptake

4. Nitrogen dioxide (NO_2) is mainly emitted from:

a) Agricultural soils

b) Vehicle exhaust and combustion processes

c) Ocean evaporation

d) Forest growth

5. Which population group is generally considered most vulnerable to the health impacts of air pollution?

a) Healthy adults aged 20–30

b) Professional athletes

c) Children and older adults

d) Tourists

6. What is a co-benefit of promoting walking and cycling in urban areas?

a) Increased fossil fuel consumption

b) Higher emissions of particulate matter

c) Reduced air pollution and improved public health

d) Increased traffic congestion

7. Exposure to high levels of $PM_{2.5}$ can contribute to:

a) Cardiovascular disease

b) Asthma exacerbation

c) Premature mortality

d) All of the above

8. Which urban policy can provide both climate and air-quality co-benefits?

a) Expanding coal-fired power generation

b) Increasing urban green spaces

c) Encouraging private car use

d) Removing public transport systems

9. Sulfur dioxide (SO_2) exposure is most commonly associated with:

a) Respiratory irritation and breathing difficulties

b) Improved lung capacity

c) Reduced inflammation

d) Increased soil fertility

10. Why are climate mitigation measures often considered beneficial for public health?

a) They only reduce greenhouse gas emissions

b) They often reduce exposure to harmful air pollutants while lowering emissions

c) They eliminate all environmental risks

d) They have no impact on human health

Answers

1.	B
2.	C
3.	C
4.	B
5.	C
6.	C
7.	D
8.	B
9.	A
10.	B