

## Noa Mock Test

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Subject: Environmental Science

### Part-II :-

Q2:-

What are the environment - - - - -  
Explain?

Ans:-

### Introduction:-

Environmental management involves systematic approaches to mitigate, adapt, and resolve issues arising from human-induced and natural environmental problems. The growing global concern for sustainable development necessitates integrated solutions that balanced ecological health, economic growth and social equity.

## ● Environment Management

### Options:-

## I- Sustainable Resource Management:-

Since natural resources are limited, their availability for future generations should be ensured. This encompasses renewable resource management, efficient water use and sustainable agriculture. According to UN Environment Programme (UNEP),

“Sustainability is not an option but an imperative for survival”

### a- Examples:-

In 2024, Pakistan introduced the Indus River Basin Conservation Plan focusing on water efficiency and reforestation to combat declining water levels and ~~def~~ desertification in Sindh and Punjab.

## II- Pollution Control Strategies:-

Mitigating air, water and soil pollution involves regulations, technology adaption and community engagement. Policies like the

Polluter pays principle and extended producer responsibility (EPR) are widely recognized. According to World Resources Institute (WRI) report,

“Preventing pollution is more cost-effective than cleaning up pollution.”

### a- Local Examples:-

Pakistan's Karachi Coastal Clean-Up Initiative in 2024 tackled marine plastic pollution, collecting over 200 tons of waste through public-private partnerships.

### b- Case Study (India):-

Pakistan can also follow the measures that are adopted by other countries for environmental protection.

A case in point is India's National Clean Air Programme (NCAP) is significant in reducing particulate matter levels in urban centres.

### III - Climate Change Mitigation and Adaptations -

Adapting to and mitigating climate change involves strategies like renewable energy adoption, carbon sequestration and climate-resilient infrastructure.

Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report of 2024 highlights that adaptation investments can reduce climate-related risks by up to 50%. For e.g.

Pakistan launched its **Climate Resilient Housing Program** in

2024 to construct flood resistant homes in Khyber Pakhtunkhwa following devastating monsoon floods in 2022 and 2023.

Pakistan can also learn some measures from COP29 Summit (2024).

### IV - Biodiversity Conservation -

~~Protecting~~  
Protecting ecosystems and species ensures ecological balance and resilience. Initiatives such as

afforestation, wildlife corridors and community based conservation play a vital role. Emphasizing on ~~conserving~~ conserving biodiversity, Chief Seattle said:

"The Earth does not belong to us; we belong to the Earth."

Pakistan can start a forest program based on increasing the forest cover for future generations in order to conserve the natural resources.

## V- Waste Management and Circular

### Economy:-

Transitioning from a linear economy to a circular economy reduces waste and promotes recycling. This includes innovations like composting, e-waste recycling and industrial symbiosis.

Pakistan can adopt the model of Netherlands in recycling municipal solid waste. Although paper bags are used in Islamabad, still more efforts are required to recycle

other types of wastes.

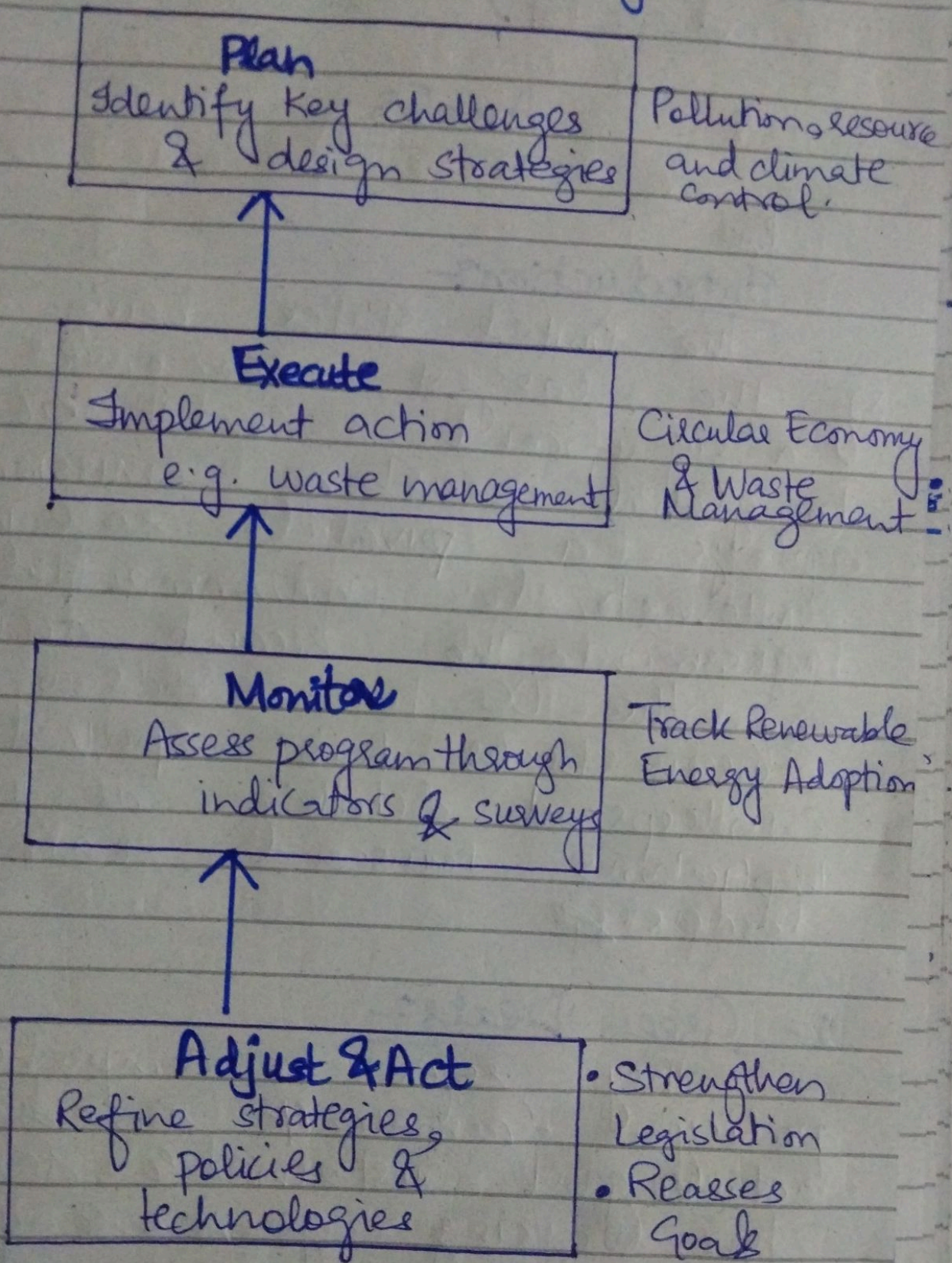
## VI - Technological Innovations and Green Energy Transitions

Technological advancements such as renewable energy, carbon capture and storage CCS and artificial intelligence AI devices should be installed in industries and cities at a greater level especially in industrial areas like Lahore, Faisalabad etc. We can learn by following US's first Direct Air Capture Facility.

## VII - Environmental Legislation and Green Governance

Pakistan should focus on providing policies and acts that can help improve environmental protection.

# Environmental Managements



Q50

The latest US -----  
- - - see it?

Ans 5:-

### Introduction:-

The United States, being one of the largest economies and a significant contributor to global carbon emissions, plays a pivotal role in international environmental agreements. The recent decision of the US to withdraw from Green Deals has sparked widespread debate as its implications transcend national borders.

### 1- Green Deals:-

They refer to comprehensive policy frameworks aimed at achieving sustainable development by reducing greenhouse gas emissions. These align with the UN's SDG's.

### 2- Rationale Behind US Withdrawal:-



The US administration cited economic concerns, energy independence and industrial competitiveness as reasons for its withdrawal. This decision highlights the persistent conflict between economic growth and environmental sustainability often termed the "economic-environmental trade-off".

### 3- Global Impacts of the Withdrawals:

#### I- Weakening of Global Climate Leadership:-

The US withdrawal undermines international climate governance and disrupts collaborative efforts under agreements such as the Paris Accord. As stated by Dr. Christiana Figueres, former Executive Secretary of the UNFCCC,

"Global climate action requires unified leadership. Any withdrawal sends a message of disunity."

#### II- Rise in Carbon Emissions:

The US accounts for approx.

14% of global carbon emissions. Without its ~~own~~ commitments to Green Deals achieving the target of limiting global warming to 1.5°C above pre-industrial level become increasingly challenging.

### III - Funding Deficits in Climate Finance

Green Deals often involve significant financial commitments such as the ~~\$100~~ \$100 billion annual climate finance goal set by developed countries. The US withdrawal creates a funding void hindering climate resilience projects in vulnerable regions.

### IV - Domino Effect on Other Nations?

This decision may embolden other high-emission countries to relax their environmental commitments leading to a 'race to the bottom' in global climate action. According to Bill McKibben, an environmental expert, **Leadership Vacuums**

in climate action are costly. The US exit burdens developing countries disproportionately.

## V - Impacts on Pakistan:

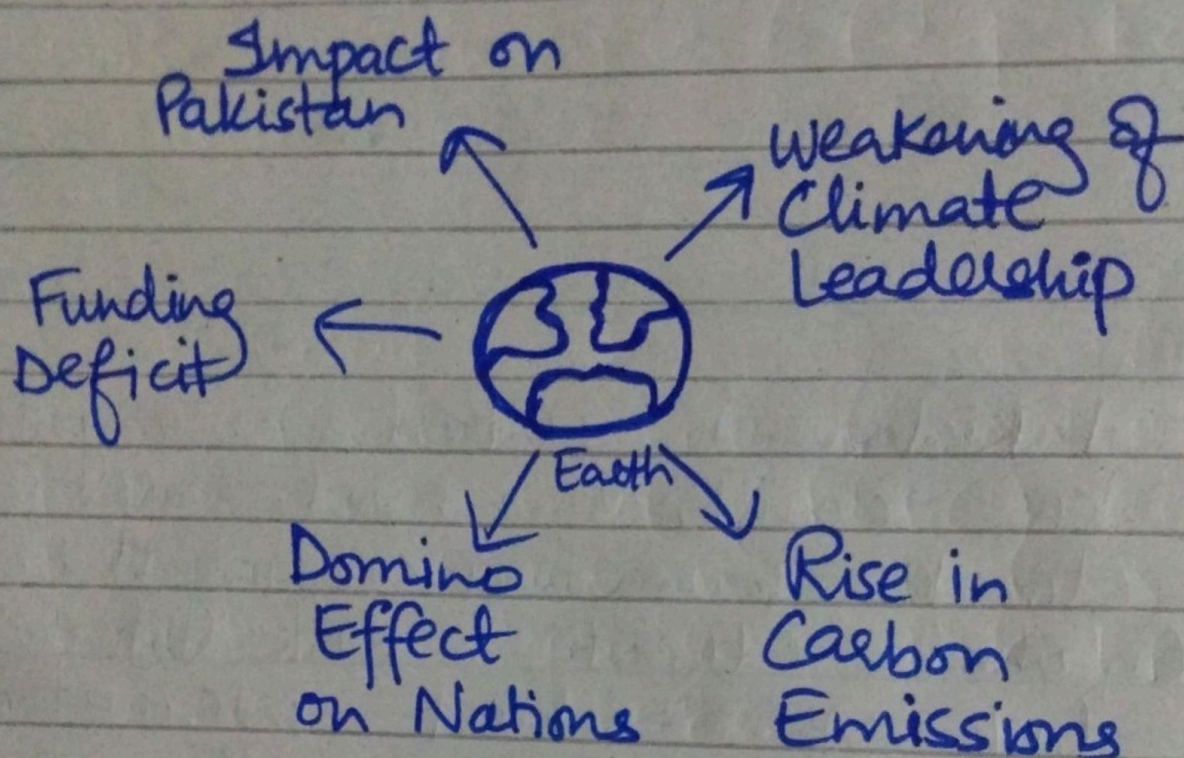
### a - Increased Vulnerability to Climate Change:-

Pakistan is ranked among the top ten countries most affected by climate change according to Global Climate Risk Index. The lack of robust international support exacerbates challenges like glacial melting, erratic monsoons and rising sea levels.

### b - Socio-Economic Repercussions:

Environmental degradation directly impacts Pakistan's agriculture sector. Reduced global action amplifies food insecurity and economic instability.

# Impact of US Withdrawal from Green Deals



## Conclusion:-

The US withdrawal from Green Deals can hamper the global climate governance.

Q7:-

What is . . . . . cores.

Ans 7:-

PEPA Act:-

The Pakistan Environmental Protection Act (PEPA) of 1997 is the cornerstone legislation for environmental protection in Pakistan. It provides a comprehensive framework for safeguarding the country's environmental and sustainable development.

### 1- Core Objectives

1. The primary goal is to protect and conserve the environment including air, water, soil and biodiversity.

2. The act aims to prevent and control pollution in all its forms, from industrial emissions to hazardous waste disposal.

3- It promotes sustainable ~~deve~~ development practices that balance economic growth with environmental protection.

## 2- Key Provisions:-

1- Establishment of institutions like Pakistan Environmental Protection Council (PEPC) and Pakistan Environmental Protection Agency (Pak-EPA) to oversee matters.

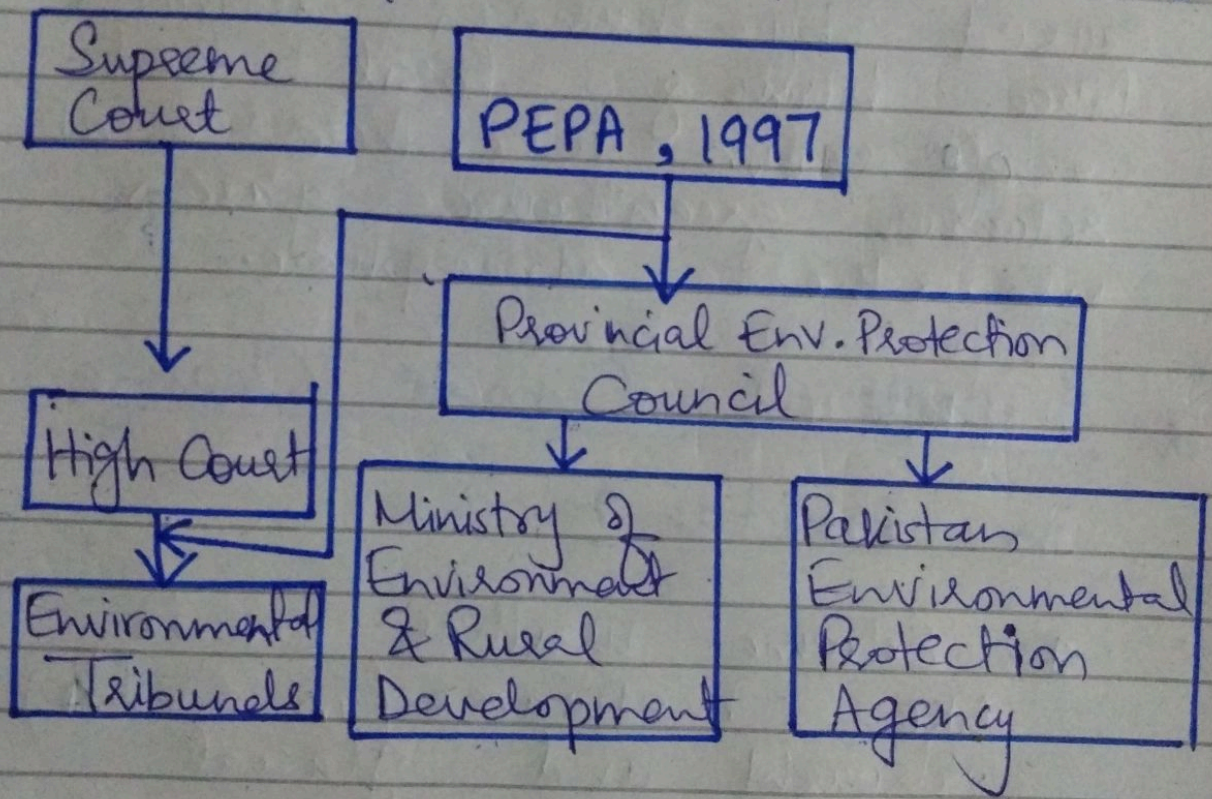
2- It mandates that any project with potential environmental impacts undergo an Environmental Impact Assessment (EIA) to assess and mitigate potential risks.

3- The act empowers the government to set and enforce National Environmental Quality Standards (NEQS) for various environmental parameters such as air and water quality.

4- It aims to regulate the hazardous waste management.

5- PEPA encourages public participation

6- It provides a legal framework for enforcing environmental regulations including ~~penalties~~ penalties for ~~violations~~ violations.



### PEPA ~~Act~~ Implementation Structure

Q68  
Explain climate change, give -- --  
Pakistan.

## Ans 68

### 1- Climate Change:

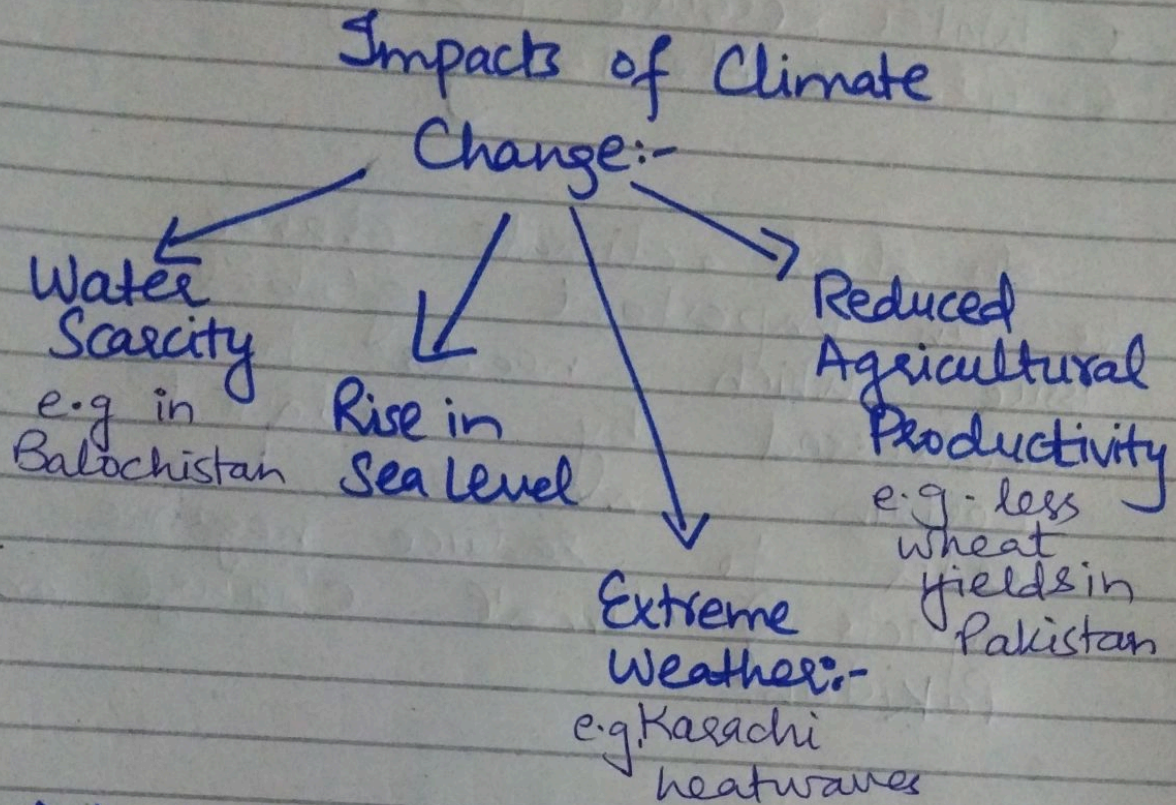
Climate change refers to long term shifts in temperatures and weather patterns primarily caused by human activities like burning fossil fuels & deforestation etc. These activities release greenhouse gases into the atmosphere.

### 2- Impacts of Climate Change in Pakistan:

- 1- Extreme weather events like heatwaves (in Sindh) & drought and glacial outbursts.
- 2- Water scarcity due to reduce snowfalls.
- 3- Change in agricultural productivity due to climate impact.
- 4- Rise in sea level due to



Coastal erosion and inundation.



### 3- Adaptation Measures in Pakistan:-

1- Use of Renewable Energy to reduce fossil fuel usage and mitigate green house gas emissions.

2- Implement coastal protection measures like mangrove restoration and embankments.

3- Disaster Risk Reduction.

4- Climate Resilient Crops usage

(UN report)

- 5- Water Resource Management
- 6- Glacier Monitoring

In short, climate change is an important global issue which needs to be addressed by adopted certain measures in order to reduce negative impacts of climate change on Pakistan.