

# Environmental Science

## Assignment #01

How environment Thoughts helped shaping environmental science as a discipline?

### 1- INTRODUCTION:

Climate change and environmental threat has become the biggest threat in 21st century.

However, its roots originate from the aftermath of Industrial Revolution.

The evolution of environmental thoughts regarding its threats in 19<sup>th</sup> century

began the development of 'environmental science' as a separate discipline. From

the sense of nature conservation in late 1900s to the Industrial and

population threat to environment in

the beginning of 20<sup>th</sup> century, the undeclared base of environmental

science developed over the time. Second half of 20<sup>th</sup> century marks the introduction of 'ecology' as a

structured science. However, it was the creation of United Nations Environment Program at Stockholm Conference 1972 which marked the beginning of environmental science as a policy-linked discipline. Alongside, the energy crisis of 1970s linked it with renewable studies. Furthermore, the development of environmental justice in 1990s, climate shift policies in early 2000s, and SDGs since 2015 shaped the environmental science as a multidisciplinary subject of utmost importance.

INTRO IS  
TOO  
LONG

## 2- Definition of Environmental Science:

Britannica defines environmental science as follows:

"Environmental science is an interdisciplinary academic field that utilizes the tools of different disciplines to study environmental problems and human impacts on the environment."

The historical discourse of the development of environmental science as a discipline is as follows:

### 3- History of Environmental thoughts that shaped Environmental science as a discipline:

#### 3.1. Conservation Ethics leading to the origin of Ecology (19<sup>th</sup> - 20<sup>th</sup> century).

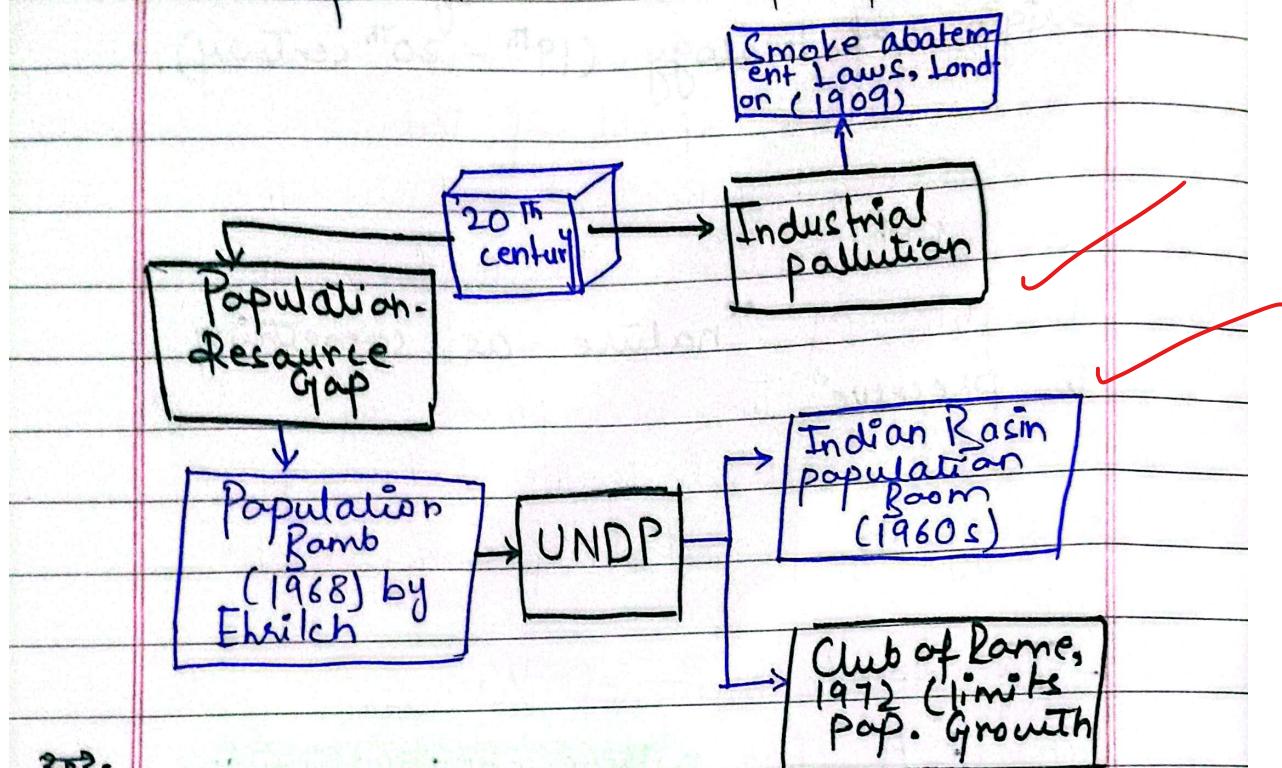
The impacts of industrial revolution began to reveal in the late 19<sup>th</sup> centuries. It lead to the thoughts of "nature as something to preserve". The development of conservation science lead to the origin of ecology; the precedent of Environmental Science.

- The development of Yellowstone park in USA for nature conservation in 1872 marked the practical steps to conserve nature. -

#### 3.2. Industrialisation and resource-population Debate (1900s-1960s).

Beginning of 20<sup>th</sup> century witnessed the debate regarding industrial pollution and resource to population imbalance debate. It sparked the studies

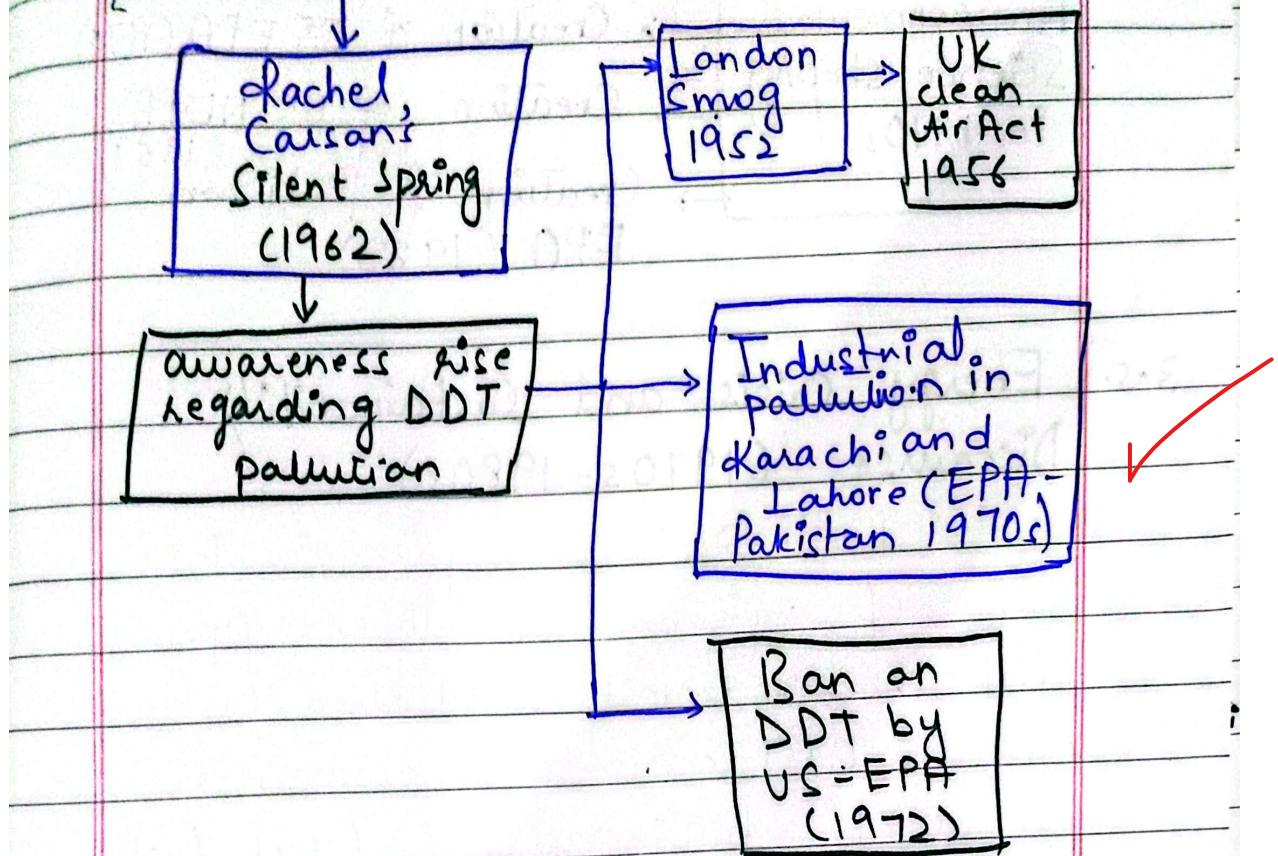
related to environmental economics and carrying capacity. In this regard, informal environment conservation steps were taken to certain negative impacts and shape the contours for future discipline.



### 3.3 Pollution Awareness and Toxicology (1960s)

Ecology was developed as a structured science till 1960s. It began to enhance the awareness regarding pollution especially from industrial products such as pesticides, smog, chemical hazards and DDT. It laid the foundations of environmental chemistry and toxicology.

## Environmental Thoughts in 1960s



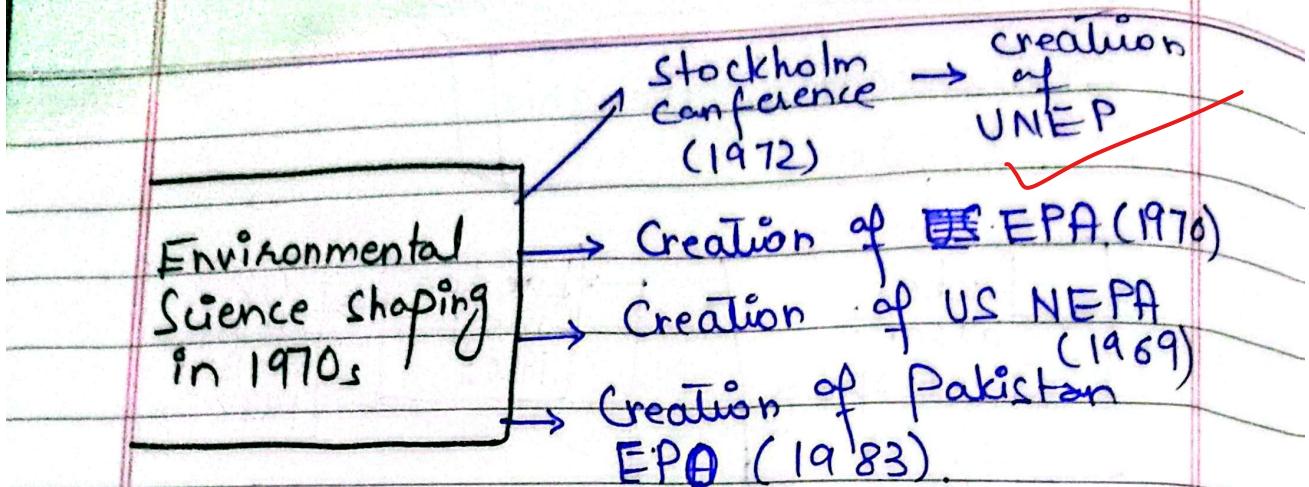
## 3.4 Institutionalization of Environmental Governance (1970s)

Environmental Science became a policy-linked discipline by the creation of United Nations Environmental Program in Stockholm

Conference 1972. It marks the

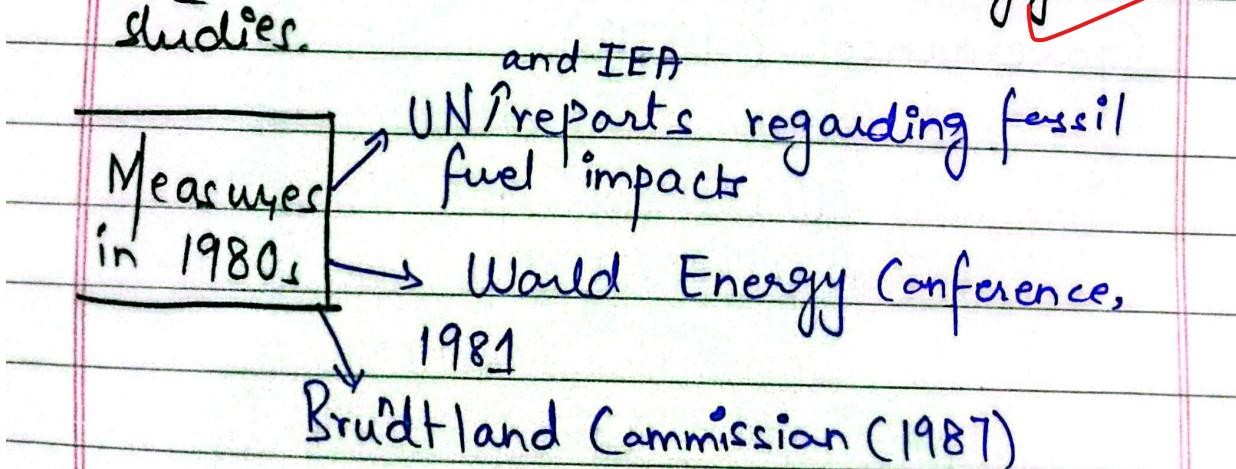
recognition of environment in

Governance. The measures of various countries are as follows:



### 3.5. Energy Crisis and Sustainability Discourse (1970s-1980s).

Late 20<sup>th</sup> century marks the nexus of environment with energy. Oil shocks from 1973-79 due to middle East crisis and awareness about harmful impacts of fossil fuels led to the redirection of environmental science towards renewable energy studies.



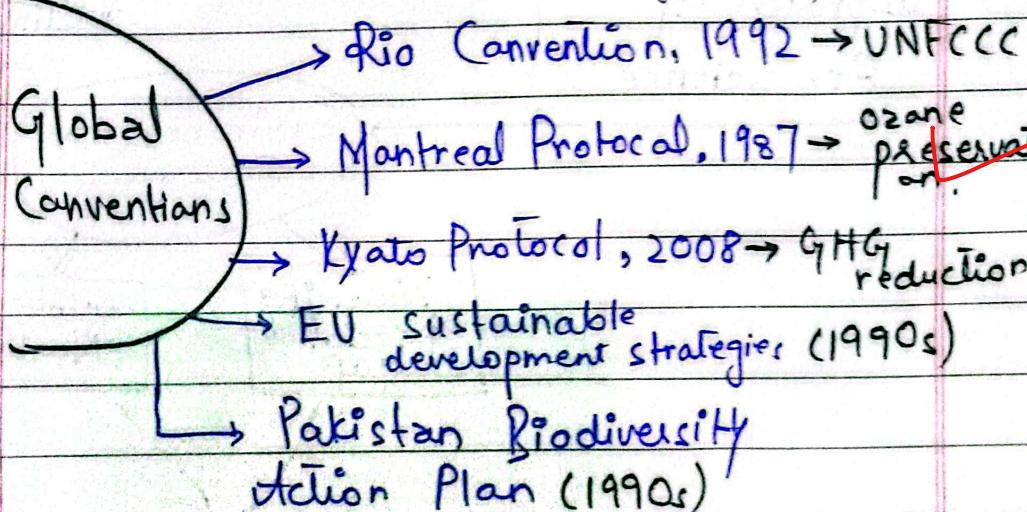
### 3.6 Sustainable Development and Global Conventions (1990s - 2000s).

The famous article "Our Common Future", published in 1987, raised

the awareness regarding timely measures to abate and preserve environmental changes before reaching the time of no return. In this respect various

Global Conventions were held to

ensure environmental preservation making environmental science a global subject



### 3.7. Climate Change and interdisciplinary development of Environmental Science. (21st century).

Beginning of 21st century marked the climate change despite various national and international

measures including floods, glacier melting and global warming. To combat these impacts, the tools of various disciplines were used to preserve environment. It turned environmental science into a multi-disciplinary subject.

Multi-disciplinary approach of Env. Science

Environmental Technology

use of satellites

predictive environmental studies

Climate Science

Environmental Economy

Widening of social gap

Global South-North divide

Climate / Environmental Justice

## 3.8. Recent Measures and Future Direction (2015 - present).

The evolution of environmental science marked the Paris Agreement (2015) which not only aimed for the environment preservation but also included environmental justice and economic pledges. Alongside, United Nations presented 17 Sustainable Development Goals to ensure global environmental preservation. However, man-made environmental hazards have continued to show the wrath which makes that environmental science has significantly evolved as a discipline. However, the practical implementation of its proposed measures is still lagging.

Recent Environmental Wraths

Pakistan floods (2022, 2025)

Wild fires (California, US → 2025)  
Turkey, Australia

Sudden volcanic eruption in dormant volcanoes of Russia.

## Conclusion:

Environmental science has emerged as a crucial interdisciplinary subject over time. With its origin in late 1900s, youth in 2000s and mature approach in 2025, it has continued to aid humans in developing environmental protection measures. However, the environmental hazards in 2025 signifies the binding and global consensus <sup>need of</sup> towards the environmental preservation measures.

**WELL DONE**

**ANSWER IS VERY WELL COMPOSED**

**OVER ALL CONTENT IS COHERENT AND GOOD**

**SATISFACTORY**

**12/20**