

Global Warming



Global warming' is an expression which refers to the effect of human activities that produces the unnatural change on the climate.

- Global warming is the increase in average temperature of the earth's near surface air and oceans.
- Most of the observed temperature increase is caused by increased concentration of greenhouse gases
- Major gases

water vapor – 36-70%

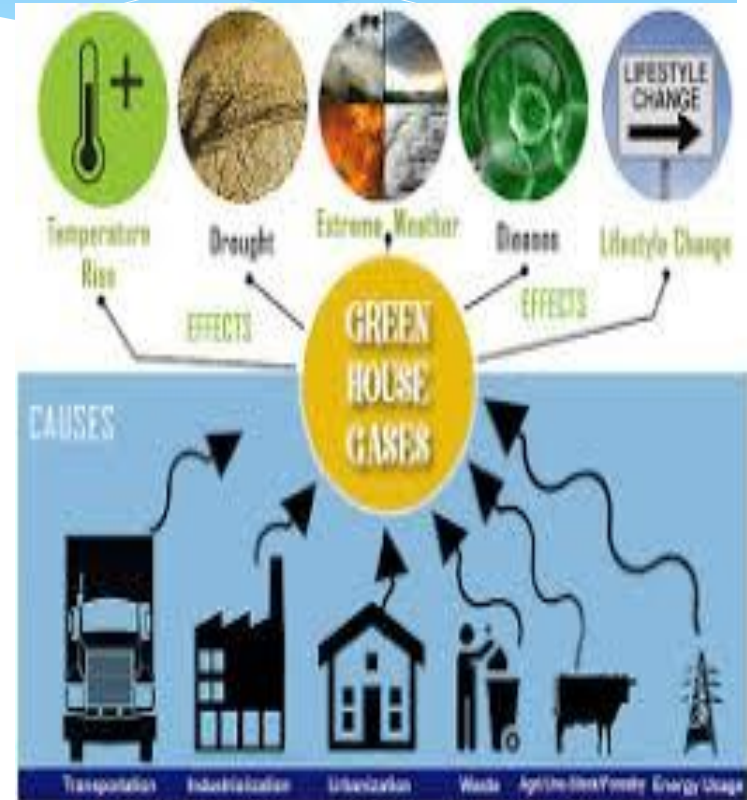
carbon dioxide- 9 – 26 %

methane - 4- 9 %

ozone - 3 – 7 %

CAUSES GLOBAL WARMING

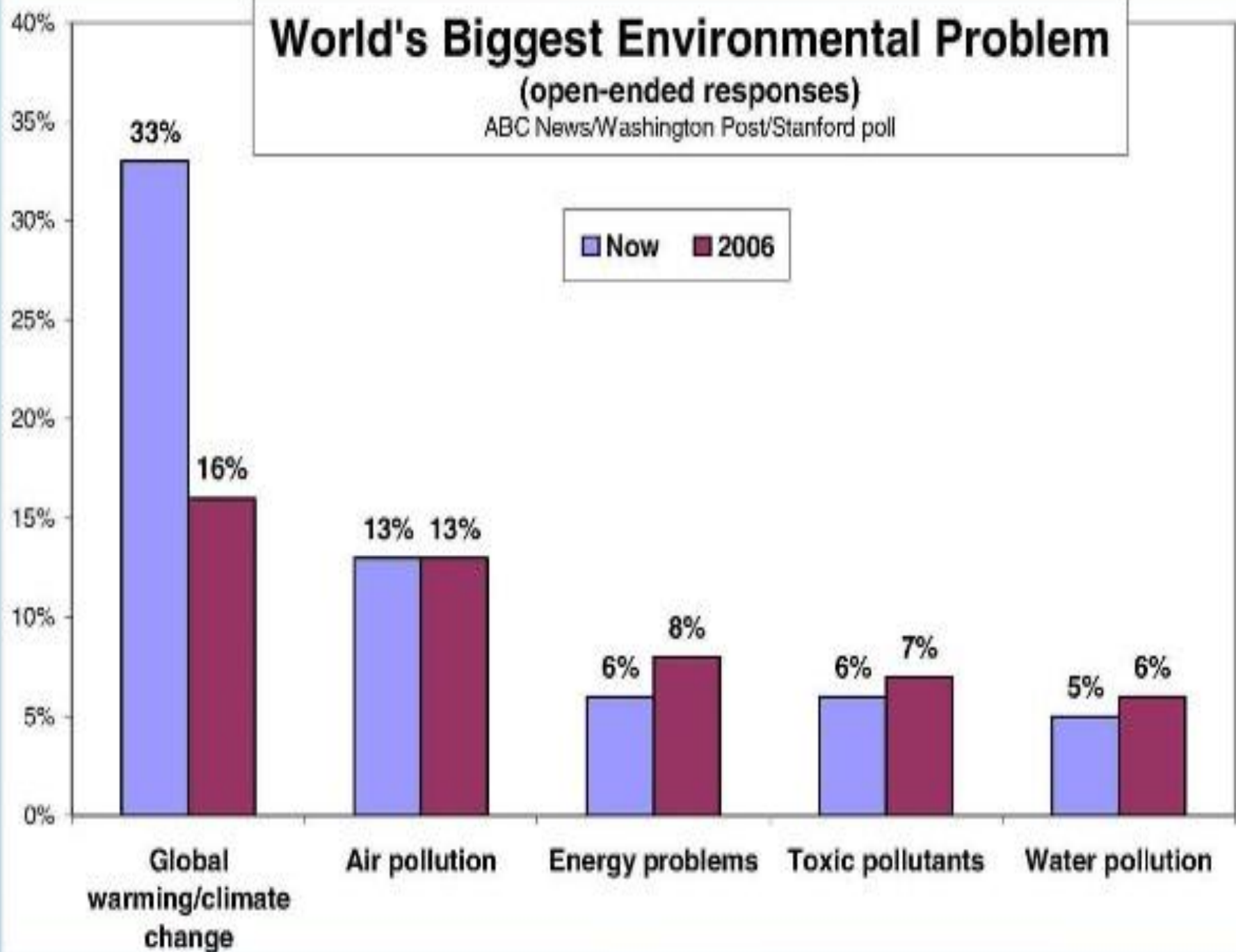
- According to Scientists and Government organisations, Concentration of Greenhouse Gases in the atmosphere due to greenhouse effect is the major causes of Global Warming.
- These gases especially CO₂ have heat trapping capability. So they trap heat and cause the greenhouse effect, rising global temperatures.



World's Biggest Environmental Problem

(open-ended responses)

ABC News/Washington Post/Stanford poll



Causes Global Warming

➤ **Natural**

- Climate Change
- Rotation of the earth
- Volcanoes
- Change in ocean currents
- Solar cycles and sunspots

➤ **Man-made**

- Power plants
- Deforestation
- Automobiles
- Fertilizers
- Ozone depletion

Causes of global warming

- Emission of green house gases like carbon dioxide, methane, nitrous oxide etc into the atmosphere.
- The major source is carbon dioxide (80%)
- 20% by methane and nitrous oxide.

Carbon dioxide

- The major source of carbon dioxide is the power plants.
- Burning of fossil fuels for the purpose of electricity generation.
- About twenty percent of carbon dioxide emitted in the atmosphere comes from burning of gasoline in the engines of the vehicles.



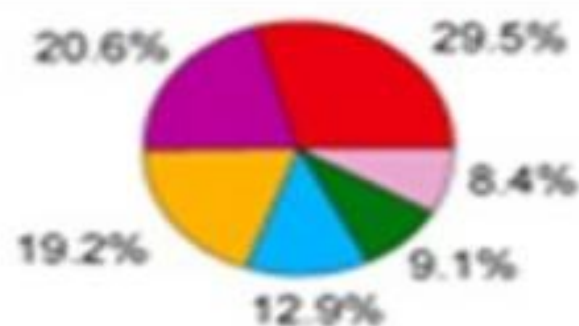
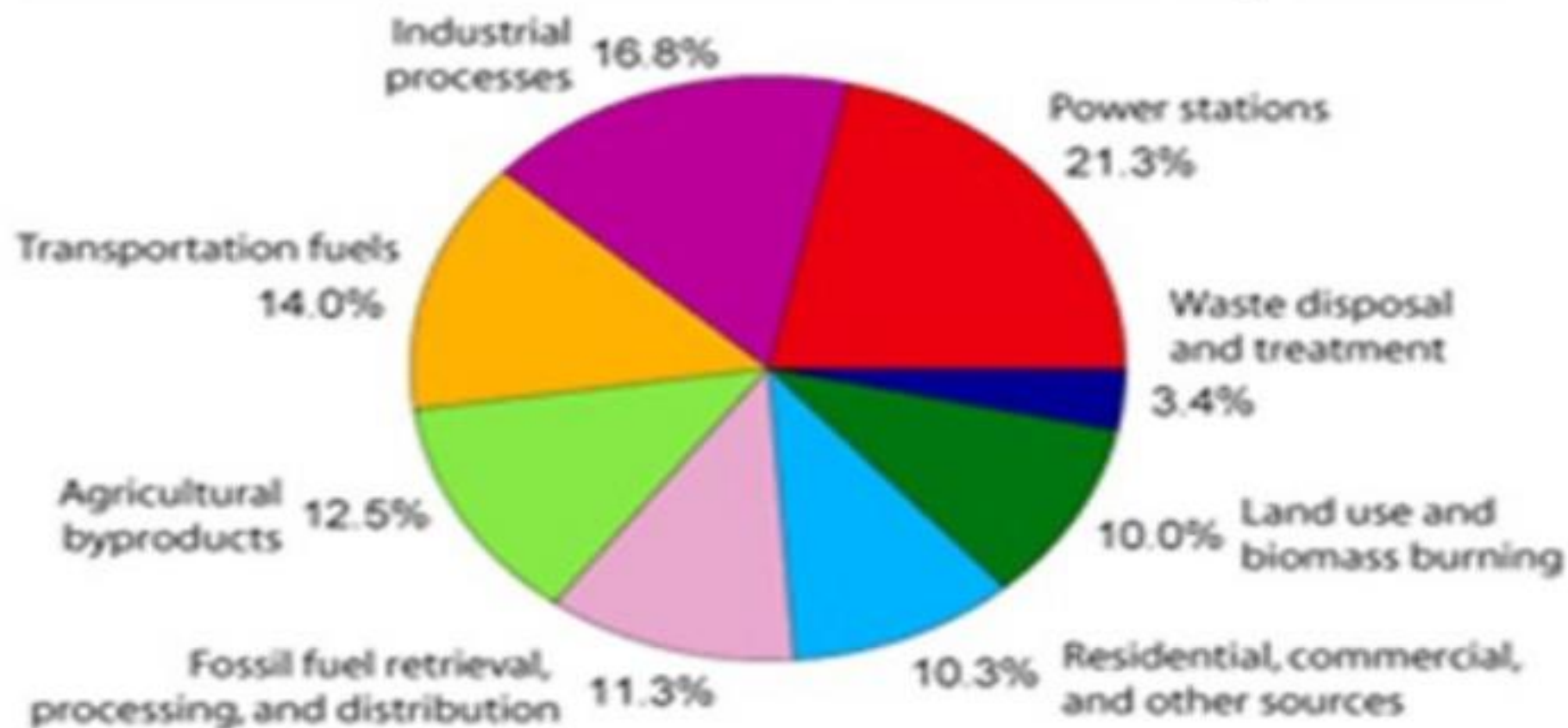
Methane

- Methane is more than 20 times as effectual as CO₂ at entrapping heat in the atmosphere
- Methane is obtained from resources such as rice paddies, bovine flatulence, bacteria in bogs and fossil fuel manufacture.

Nitrous oxide

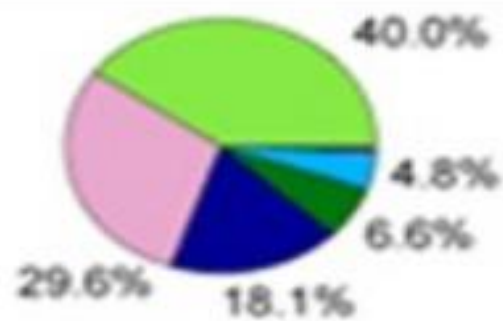
- The main sources of nitrous oxide include nylon and nitric acid production, cars with catalytic converters, the use of fertilizers in agriculture and the burning of organic matter.

Annual Greenhouse Gas Emissions by Sector



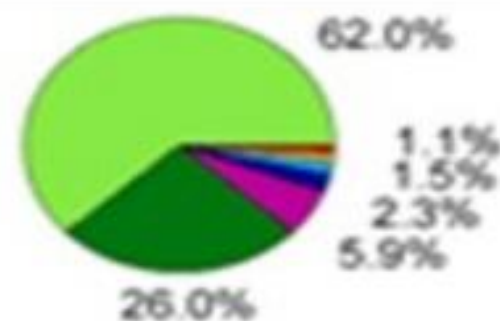
Carbon Dioxide

(72% of total)



Methane

(18% of total)



Nitrous Oxide

(9% of total)

Deforestation

- Cutting and burning of forests for the purpose of residence and industrialization

Consequences

The effect of global warming is


- Increasing the average temperature of the earth.
- Alterations in the ecology, including an increasing sea level and modifying the quantity and pattern of rainfall.
- Boost the occurrence and concentration of severe climate events, such as floods, famines, heat waves, tornados, and twisters.

- Glacier melting, lesser summer stream flows, genus extinctions and rise in the ranges of disease vectors.
- Various new diseases have emerged.
- The global warming is extending the distribution of mosquitoes due to the increase in humidity levels and their frequent growth in warmer atmosphere.
- Effects the marine life.



Responses to global warming

1. MITIGATION
2. ADAPTATION
3. GEOENGINEERING
4. UNFCCC (United nations framework convention on climate change)

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- The **Kyoto Protocol** is aimed at stabilizing greenhouse gas concentration to prevent a “dangerous anthropogenic interference”
 - As of November 2009 **187 states had signed and ratified** the protocol.

Reduce global warming

By 10 simple steps....

- **Reduce, Reuse, Recycle**
- **Use Less Heat and Air Conditioning**
- **Change a Light Bulb by CFL**
- **Drive Less and Drive Smart**
- **Buy Energy-Efficient Products**
- **Use Less Hot Water**
- **Use the "Off" Switch**

- **Plant a Tree**
- **Get a Report Card from Your Utility Company**
- **Encourage Others to Conserve**

