GREEN HOUSE EFFECT

DEFINITIONS

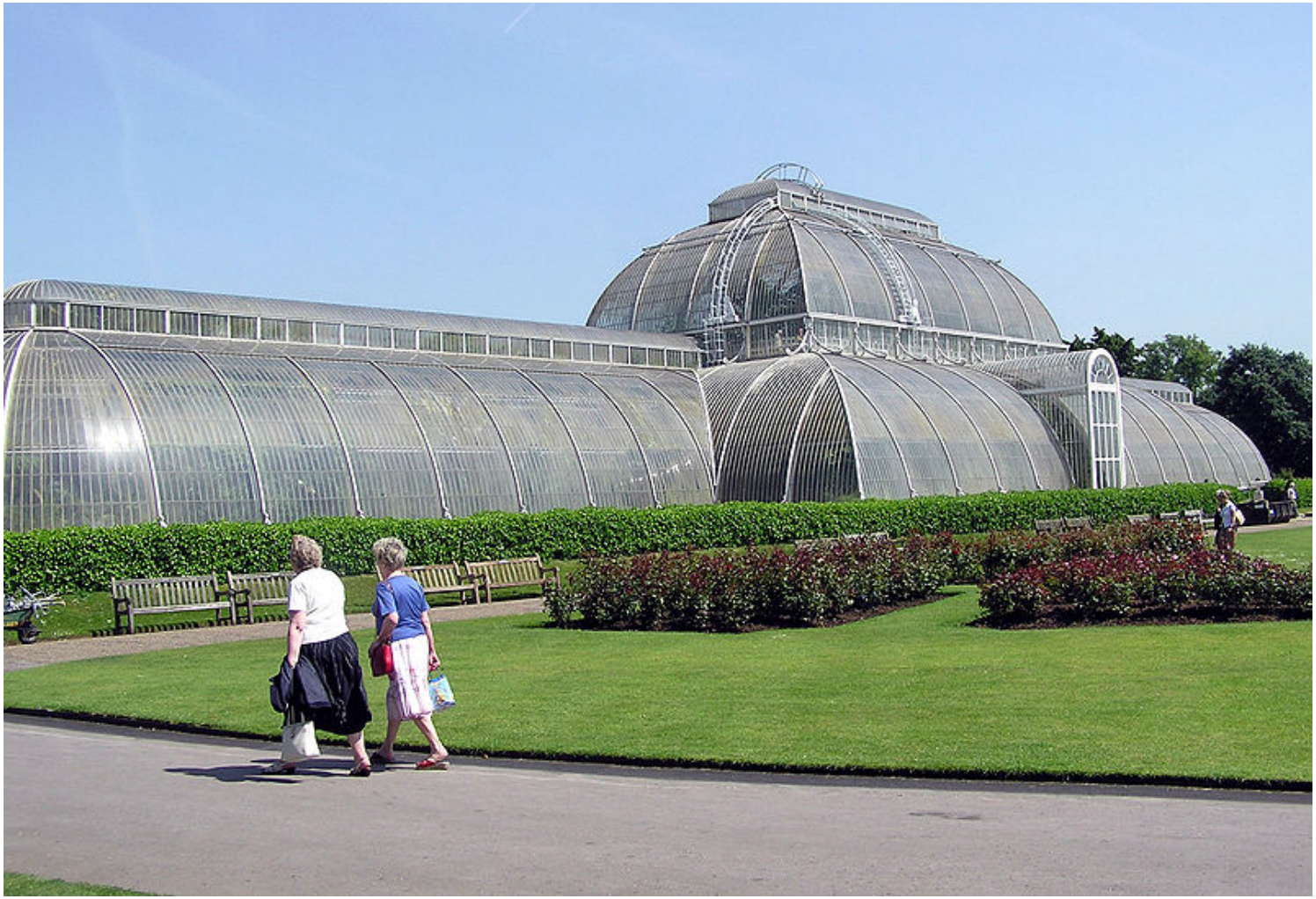
- Warming up of the earth's surface due to greenhouse gases is called **Greenhouse Effect**.

- The increase in earth's average temperature is called **Global Warming**.

WHAT IS A GREENHOUSE?

- Greenhouse is a building constructed mainly of glass to grow and protect plants.
- Glass allows visible light to pass through but not infra red rays.
- When light is absorbed into the greenhouse, it is converted to IR radiation which cannot escape.

THE EXTERIOR OF A GREENHOUSE



THE INTERIOR OF A GREENHOUSE

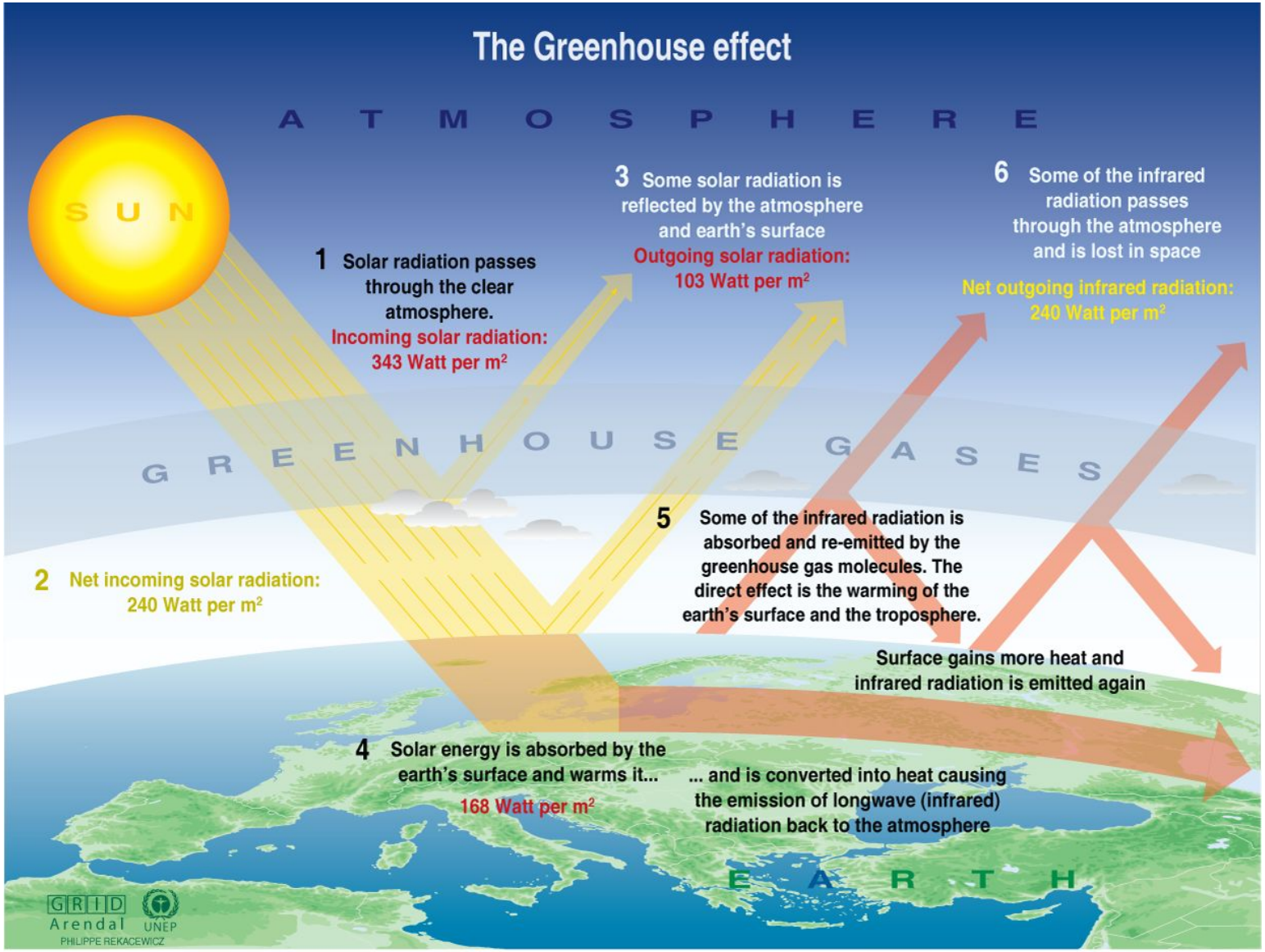
GREENHOUSE GASES

Major Greenhouse gases are

- Carbon dioxide (CO_2)
- Water vapour
- Methane (CH_4)
- Chlorofluoro carbons (CFCs)
- Hydro chlorofluoro carbons (HCFC)
- Ozone (O_3)
- Nitrous oxide (N_2O)
- Carbon tetrachloride (CCl_4)

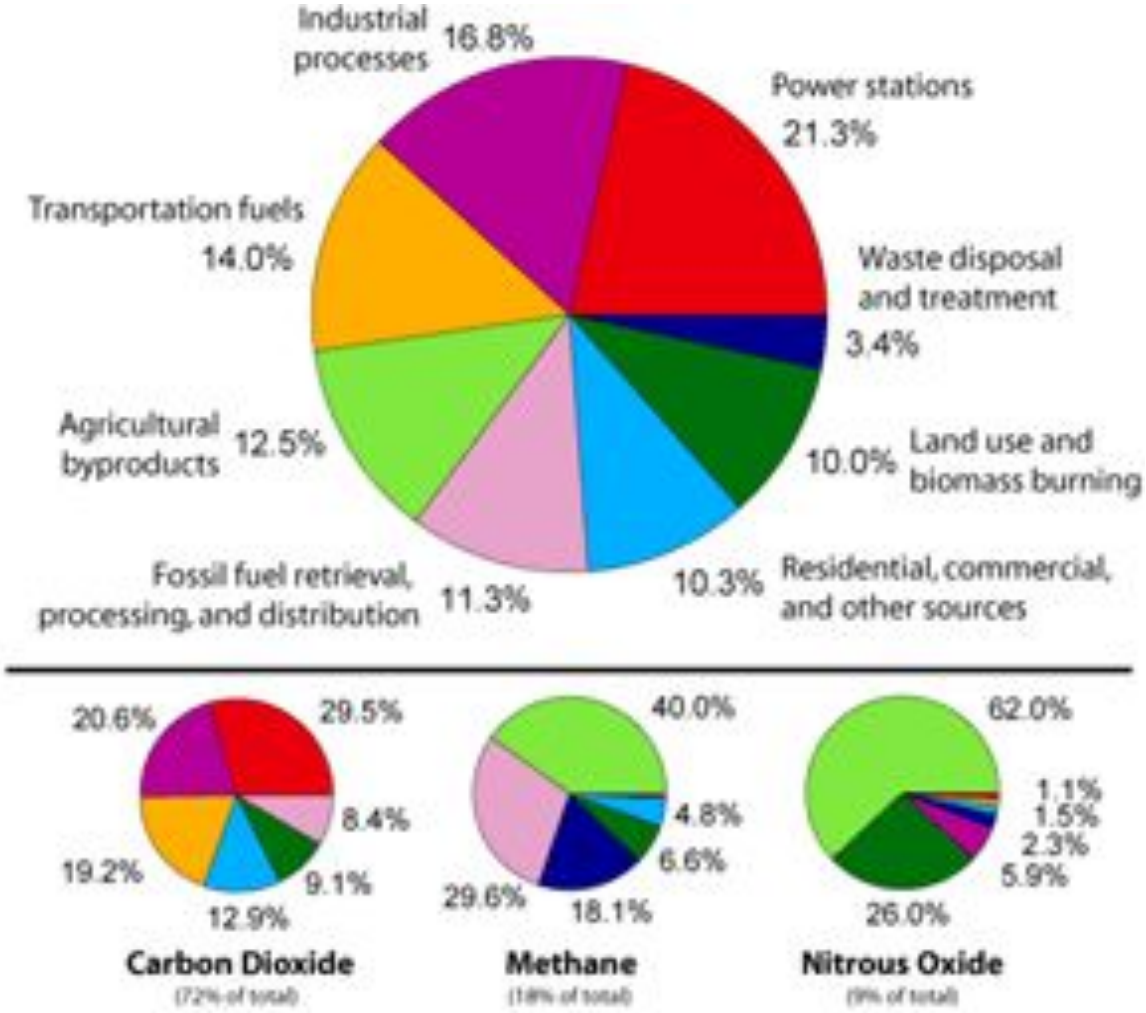
WHAT IS THE GREENHOUSE EFFECT?

- Solar energy passes through the atmosphere and reaches the earth.
- About 50% of it is reflected back.
- The absorbed energy is converted to IR radiation and emitted upwards.
- This IR radiation is trapped by the greenhouse gases and thrown back onto the earth's surface.
- This warms up the earth's surface.



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography; United States Environmental Protection Agency (EPA), Washington; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

ANNUAL GREENHOUSE GAS EMISSIONS



DIRECT EFFECTS OF GLOBAL WARMING

- Heat waves and periods of unusually warm weather.
- Ocean warming, sea-level rise and coastal flooding.
- Glaciers melting
- Arctic and Antarctic warming
- Unpredictable climatic changes

INDIRECT EFFECTS

- Spreading disease
- Earlier spring arrival
- Plant and animal range shifts and population changes
- Downpours, heavy snowfalls, and flooding
- Droughts and fires

HURRICANES EXPECTED…

DRAUGHTS AND HEAT WAVES

GLACIERS MELTING

SO, WHAT CAN WE DO?

- Stop carbon emission
- Reduce greenhouse gas emissions
- Recycle, reduce and reuse
- Eco-driving and car pooling
- Save electricity
- Grow plants
- Solar heating
- Conserve natural resources