

Introduction to climate change

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Introduction.

- What is climate change?
- What are the related concepts?

Definition of terms

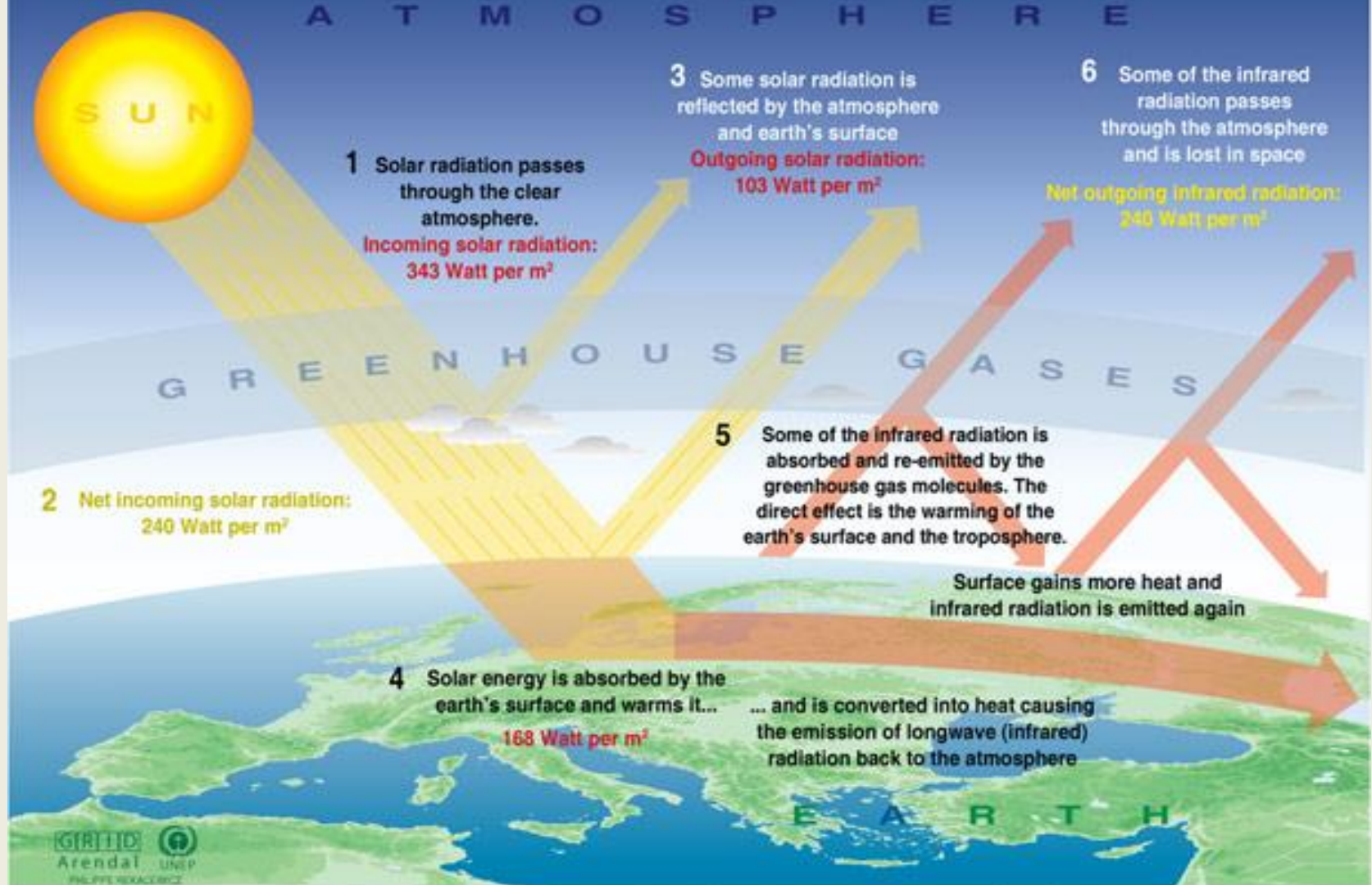
- **What is weather?**
- **Weather** - is a specific event or condition that happens over a period of hours or days. For example, a thunderstorm, a snowstorm, and today's temperature all describe the weather.
- **What is climate?**
- **Climate** - is the average weather over a period of time. The classical period for averaging weather variables is 30 years, as defined by the World Meteorological Organization (WMO). Observe parameters include temperature, rainfall, wind.

What is climate change?...

- **Climate change** is a change in the state of the *climate* that persists for an extended period, typically decades or longer. *Climate change may be due to natural and human processes;*
- The change is attributed directly or indirectly to **human activity** that **alters the composition of the global atmosphere** and which is in addition to natural climate variability observed over comparable period of time;

- A change of climate which is attributed directly or indirectly to human activity that **alters the composition of the global atmosphere** and which is in addition to natural climate variability observed over comparable time periods

The Greenhouse effect



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.

- The growing accumulation of human-made greenhouse gases in the atmosphere **enhance the greenhouse effect**, resulting on average in an additional warming of the Earth's surface

What are the Effects of Climate Change?

- Increasing temperatures globally
- Increased extreme weather events
- Some areas will be warmer at a higher rate than others.
- Global Temperatures is expected to rise by between 1.4 – 5.8 by the year 2100.

- **Exposure** - is the extent to which a region, resource or community experiences changes in climate.
- It is characterised by the magnitude, frequency, duration and/or spatial extent of a climate event;

What are the impacts of climate change?

- **Biophysical impacts** - are the biophysical parts of a system and often directly result from climate change factors, e.g. damaged infrastructure due to flooding or erosion of shorelines due to storm surge.
- **Socio-economic impacts** follow biophysical impacts and affect socio-economic development, e.g. reduced access to services due to damaged infrastructure or losses in tourism revenues due to shoreline erosion.

Effects of Climate Change

- There will be changes in Precipitation – leading to **severe floods /droughts**
- Climate dependent sectors will be affected (Agriculture, fisheries, forestry even Industry)
- Areas with high population densities, fewer resources and low technological advancement will be worse off
- Strong correlation between *poverty* and vulnerability to climate change

What are some of the interventions to address CC?

- The key interventions identified are;
 - ✓ Adaptation
 - ✓ Mitigation
 - ✓ Technology transfer
 - ✓ Climate Finance
 - ✓ Capacity building is inbuilt in all the above
- Nb. We need to focus at the country and local levels for our planning and interventions.

What is mitigation ?

- **Mitigation** is any undertaking to **reduce the level of Greenhouse gases** in the atmosphere, either by reducing their emissions or reducing their concentration (by absorbing them).
- **What are some of the ways in which we can mitigate against climate change**

What is adaptation?

- **Adaptation** is the adjustment of natural or human systems in response to actual or expected changes in the climate, with the aim of allowing them to benefit from potential opportunities while minimizing threats.
- *The objective of adaptation is to reduce vulnerability to climate change*

- **Vulnerability:** the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.
- It is a function of the character, magnitude and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.

Adaptation

- Adaptation is a process by which individuals, communities and countries seek to cope with the consequences of climate change, including variability.
- It is about taking the right measures (including making the right choices) to reduce the negative impacts of climate change

- There are many ways of adapting to climate change ranging from technological options to behavior change at the individual level.
- **What are some of the adaptation and coping strategies?**

Thank you