Key Terms

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Adaption:	initiatives and measures to reduce the vulnerability of human and natural systems to climate change
Albedo:	the amount of incoming solar energy reflected back into the atmosphere by the Earth's surface
Anthropogenic:	human-related processes and/or impacts
The Greenhouse Effect:	the process by which certain gases allow short-wave (incoming) radiation to pass through the atmosphere and heat up the Earth, but trap a greater proportion of long-wave (outgoing) radiation from Earth, leading to a warming of the atmosphere
*The Enhanced Greenhouse Effect:	an increasing amount of greenhouse gases in the atmosphere, as a result of human activities, impacting atmospheric systems
Global Warming:	the impact of atmospheric systems, the increase in global average temperature noticed since the 1960s, resulting in changes to climate
Mitigation:	attempts to reduce the causes of climate change
Resilience:	the ability for a population or human or natural system to absorb change without having to make a fundamental change
Vulnerability:	the degree to which a human or natural system is susceptible to, and unable to cope with, the impacts of climate change

Case Studies

Case Studies

Vulnerability of Societies:

Bangladesh - 7th most vulnerable country, as global temperatures are rising, Bangladesh is getting increasing amounts of rainfall annually. Two thirds of the country is less than 15 feet above sea-level, very susceptible to flooding. An estimate of one out of seven people in Bangladesh will be displaced by climate change by 2050. Salinisation is another effect and has increased by 26% in the last 35 years, heavily impacting agriculture and access to clean water. In coastal regions, many are forced to drink saline water leading to health issues such as hypertension and cardiovascular diseases. Menstruating and pregnant women are susceptible to seizures due to high blood pressure and eclampisa

USA - American forests are significant as they absorb and sink about 13% of the greenhouse gases that the US emits. However, climate change is causing wildfires, insect infestations and drought. All these are liable to get worse as the climate warms, and by 2036 forests could become a carbon source, instead of a sink. Mitigating the effects is expensive and will only get more costly

Resilience of Societies:

Bangladesh - although Bangladesh is vulnerable, its becoming more resilient. Cyclone shelters and improved early warning systems have reduced deaths by 100 fold in the last 50 years and shelters are able to house 2.4 million. However, still lacks policies to address loss and damage after cyclones. Another adaption has been converting agricultural lands infested with saline water to prawn farms, with the support of the government and NGOs. Now, Bangladesh is the second largest exporter of prawns. But these benefits have only impacted large farmers and not small--scale farms, who still suffer. Therefore Bangladesh needs to transform adaption strategies to benefit communities of all levels

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Case Studies (cont)

Responses to Climate Change:

USA Corporate Changes - large companies across America are aiming to reduce their 1990 carbon dioxide emissions up to 80% by 2050. The USA has large-scale wind, solar, biomass and waste-from-energy sector and industries are showing interest and desire to replace fossil fuels. However, companies not associated with the renewable industry are also attempting to reduce emissions. Companies have lobbied the government to set legally binding emission targets suggesting to capture and store carbon. Although, many US citizens do not want the government to pursue policies that they think could lead to declines in US competitiveness and job losses

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