CCI – ASSIGNMENT -02

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**TASK:** Make a brief report about the impact of climate change on surface temperature, precipitation, ocean pH, sea-level, Arctic sea-ice extent in global level based on the IPCC-AR6 report.

Impact of Climate Change on Surface Temperature

Due to recent climate changes the surface temperature is increased gradually the earth has warmed by 1.1˚C, warming is unprecedented in more than 2000 years, it is observed that the surface temperature after ar5 has been increased by 1.1 ˚C, it is also observed that surface temperature is increased due to various human activities i.e, increase of greenhouse gases and due to aerosol cooling.It is also observed that warming is stronger over land than ocean and strongest in the arctic warming occurred at a faster rate after the 1970s compared to the first half of the 21st century the above picture shows that regions affected by climate change.

Many changes in the climate system become larger in direct relation to increasing global warming.

Impact of Climate Change on PRECIPITATION

Due to Heat waves, heavy precipitation and droughts are projected to be larger in frequency and intensity with every additional increment of global warming,

Continued global warming is projected to further intensify the global water cycle, including its variability, global monsoon precipitation and the severity of wet and dry events.

With every increment of global warming, changes get larger in regional mean temperature, precipitation and soil moisture

Impact of Climate Change on SEA-LEVEL

AR6 shows that Current Fastest sea level rates in at least 3000 years.

Human activities affect all the major climate system components, with some responding over decades and others over centuries.

Global mean sea level will continue to rise over thousands of years with a rate and magnitude depending on global greenhouse gas emissions.

Impact of Climate Change on ARTIC SEA-ICE EXTENT

A warmer climate effects ice sheets in several ways . The most evident impact warmer air and ocean waters.warmer air causes the ice mely more quickyly

According to ar6 arctic sea ice at a rate of almost 13% per decade

Researchers say that the changes in the Arctic are worrisome, because they could lead to feedback effects that lead to further warming .for instance, when the white sea melts in summer, areas of dark open water are exposed which can absorb more heat from the sun.