

# THE ROLE OF GEOSPATIAL ENGINEERING IN Climate Change

Geospatial engineering techniques, such as Earth observation data and high-resolution satellite imagery are vital for monitoring, analysing and effectively planning to mitigate the effects of climate change

## HOW CAN GEOSPATIAL ENGINEERING HELP?

Satellite images and remote sensing are the most powerful tool that we are using to fight this issue. GIS, DEMs and land cover maps are helpful in mapping the impact of climate change.

Geospatial technologies also provide visual proof of the extreme weather conditions, such as melting polar ice caps, dying corals and vanishing islands.

Spatial analysis highlights the realities of our planet in an irrefutable way to streamline decision-making and aid policymakers to understand which areas need immediate attention and action.



## HOW SATELLITES ARE CHANGING THE WORLD

Climate change is a global issue that needs to be tackled holistically, not just with local policies.

Satellite data transcends borders, helping to evaluate climate change from a global perspective.

Out of the 50 essential climate variables being monitored today, 26 can be measured only from space. These include sea level monitoring, polar ice extent and greenhouse gas emissions in all layers of the atmosphere.



## WHAT CAN GIS BE USED FOR?

Continuing advances in GIS technology have established mapping as a crucial means of identifying connections between the climate and other areas of concern.

GIS can be used to locate areas where temperatures are particularly high, model the ecological impact of climate change, discover how natural atmospheric processes affect global warming, visualise the impact of rising sea levels on human migration, evaluate which areas are suitable for new wind or solar farms and much more!



For more information visit:  
[ncl.ac.uk/engineering/undergraduate/geospatial](http://ncl.ac.uk/engineering/undergraduate/geospatial)