

One Pager:

How Earth Observation services contribute to climate change adaptation and mitigation?

Environmental observation involves collecting and monitoring information and data regarding changes and trends in industrial, economic, and global environments. These pieces of data help researchers understand changing environments to inform potential changes in things like climate change policies and disaster relief plans.¹

Earth Observation (EO) is defined as the process of acquiring observations of the Earth's surface and atmosphere via remote sensing instruments. The acquired data is usually in the form of digital imagery.²

The value of Earth Observation for climate action

EO satellites have been essential to identifying and monitoring climate change and it supports [mitigation and adaption measures](#) by providing vast amount of EO data.

Satellites watch over the Earth continuously, helping to monitor, understand, model, predict and act on climate change and its related challenges. EO data can be easily combined with in situ environmental measurements, along with artificial intelligence, to deliver actionable information to support decision-making for a neutral future.

Space data has an untapped potential to help achieve a better understanding through modelling, allowing predictive forecasts, and supporting policy formulation, implementation, monitoring and evaluation.

PROTECT consortium aims at steering the uptake of innovative, fit-for-purpose and cost-effective EO based climate services by sharing relevant state of the art of the climate services market and allowing potential public procurers to better assess climate services' benefits and potential.

¹ Faculty of Science, University of Alberta, Environmental Observation and Modelling | Faculty of Science (ualberta.ca)

² European Space Agency, Newcomers Earth Observation Guide | ESA Business Applications



What is Climate Change Adaptation and Mitigation?

More information on this topic is available at:

[Knowledge Centre on Earth Observation](#)

[European Union Agency for the Space programme](#)

[Group On Earth Observations \(GEO\)](#)

[Copernicus Climate change service: European state of the Climate 2021](#)

[Eurisys: Space for climate challenges](#)

[Citizen observation and in situ components](#)

[Examples of innovative Earth Observation services \(ESA\)](#)

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