
ENVIRONMENTAL IMPACT

Environmental impact refers to the impact on the ecosystem, in particular to modifications to the built or natural environment that are directly attributable to a particular activity and that may have a negative influence on the ecosystem's inhabitants or on the air, land, and water.

The Millennium Development Goals (MDGs) launched a global initiative in 2000 to address the poverty issue and outlined eight goals, including eradicating poverty and hunger, ensuring universal access to basic education, achieving gender equality, enhancing maternal and child health, preventing and combating dangerous diseases, preserving the environment, and promoting global development. In 2012, the UN Conference on Sustainable Development in Rio de Janeiro replaced the Millennium Development Goals (MDGs) with the Sustainable Development Goals (SDGs). It was necessary to improve environmental performance because of climate change and other major environmental issues. The need to keep a balance between development and environmental protection, or rejuvenation, is still crucial as urban areas and infrastructures spread across the globe. Because of this, environmental assessments are becoming more frequently included into official legislation, regulations, and guidelines in different nations.

The demand for crucial information layers at appropriate spatial and temporal dimensions and extents rises as environmental impacts of human activity make resource management more and more difficult, and as, at the same time, our understanding of complex natural processes develops.

Progress towards many of the SDGs is greatly facilitated by the use of Earth observation (EO) technologies, an essential component for monitoring and achieving the SDGs because it offers different tools to be used in decision-making processes: spatial data at various geographic (local, regional, national or even global) and temporal scales; wide variety of monitored phenomena (orography, land cover, climate variables, etc.); low cost of information retrieval.

UpToEarth, through the use of EO data and algorithms for the construction of predictive models, offers the opportunity to monitor areas of interest remotely, so that environmental data can be analysed directly by the end user to provide a baseline analysis of pre-activity environmental conditions and continuous environmental monitoring and make the impacts of human activities visible and measurable.