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## EXPLORING THE POTENTIAL OF EARTH OBSERVATION DATA IN AFRICA: HOW WEATHER DATA IS IMPACTING THE CONTINENT.

## Abstract

Earth observation data, including data gathered from satellites, drones, and ground-based sensors, has the potential to impact various sectors in Africa greatly. Some African countries have leveraged timely and accurate information on weather conditions to improve agricultural productivity, crop health, and soil moisture. This has helped many local farmers to make informed decisions on when to plant, irrigate, and apply fertilisers, leading to increased crop yields and reduced losses due to adverse weather conditions.

However, the use of earth observation data in Africa is still in its early stages, and more efforts are needed to realise its potential fully. Earth observation data can mitigate the impacts of natural disasters such as floods, droughts, and tropical cyclones. For example, weather data can provide early warning systems for extreme weather events, allowing people to evacuate or take other protective measures. In addition, Earth observation data can also be used to assess the extent of damage caused by natural disasters and to prioritise the allocation of resources for recovery and reconstruction efforts.

This paper aims to explore the current state of earth observation data use in Africa and its potential to address the continent's key challenges, focusing on how weather data is utilised. By examining case studies and discussing the limitations and opportunities for future growth. Furthermore, this work aims to understand better the potential of earth observation data in Africa and how it can be leveraged to drive positive change.