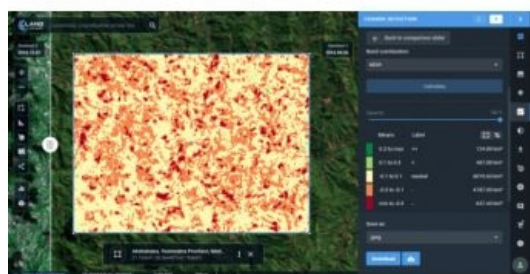


LandViewer Now Features Change Detection that Runs in Browser



The major utilization of remote sensing data has been to compare images of an area taken at different times and identify the changes it underwent. With a wealth of long-term satellite imagery currently in open use, detecting such changes manually would be time-consuming and most likely inaccurate. EOS Data Analytics has now introduced the automated [Change Detection](#) tool to its flagship product LandViewer – a cloud-based tool for satellite imagery search and analysis.

Unlike the methods involving neural networks that identify changes in the previously extracted features, the change detection algorithm implemented by [EOS](#) is using a pixel-based strategy, meaning that changes between two raster multi-band images are mathematically calculated by subtracting the pixel values for one date from the pixel

values of the same coordinates for another date. This signature feature is designed to automate your change detection task and deliver accurate results in fewer steps and in a fraction of the time needed for change detection with ArcGIS, QGIS or another image-processing GIS software.

One of the main goals set by the EOS team was to make the complex process of change detection in remote sensing data equally accessible and easy for non-expert users coming from non-GIS industries.

With LandViewer's change detection tool, farmers can quickly identify the areas on their fields that were damaged by hail, storm or flooding. In forest management, satellite image detection of changes will come in handy for estimation of the burned areas following the wildfire and spotting the illegal logging or encroachment on forest lands. Observing the rate and extent of climate changes occurring to the planet (such as polar ice melt, air and water pollution, natural habitat loss due to urban expansion) is an ongoing task for environmental scientists, who can now analyse data online in minutes. By studying the differences between the past and present using the change detection tool and years of satellite data in LandViewer, all these industries can also forecast future changes.

A picture is worth a thousand words, and the capabilities of satellite image change detection in [LandViewer](#) can be best demonstrated on real-life examples.

Forests still cover around a third of the world's area, but are disappearing at an alarming rate, mostly due to human activities such as farming, mining, grazing of livestock, logging, and also the natural factors like wildfires. Instead of massive ground surveying of thousands of forest acres, a forestry technician can regularly monitor the forest safety with a pair of satellite images and the automated change detection based on NDVI (Normalized Difference Vegetation Index).

How does it work? NDVI is a known means of determining vegetation health. By comparing the satellite image of the intact forest with the recent one acquired after the trees were cut down, LandViewer will detect the changes and generate a difference image highlighting the deforestation spots, which can further be downloaded by users in .jpg, .png or .tiff format. The surviving forest cover will have positive values, while the cleared areas will have negative ones and be shown in red hues indicating there's no vegetation present.

Another widespread use case for change detection would be agricultural flood damage assessment, which is of most interest to crop growers and insurance companies. Whenever flooding has taken a heavy toll on your harvest, the damage can be quickly mapped and measured with the help of NDWI-based change detection algorithms.

For more details, please read the [guide to LandViewer's](#) change detection tool or start exploring the latest capabilities of [LandViewer](#) on your own.