

Automated Monitoring of Vehicle Activity at National Border

OneAtlas Use Case | Earth Monitor



Challenge

A government agency lacks resources on the ground to detect illegal vehicle incursions along remote national border.

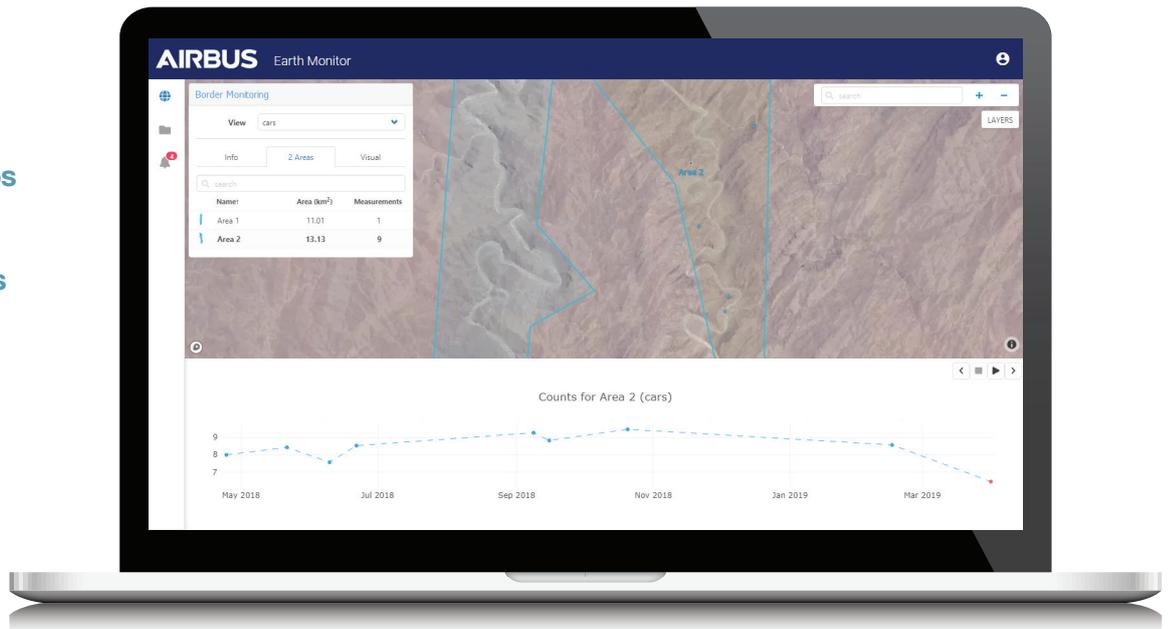
Solution and Results

Earth Monitor monitors the number and types of vehicles (cars vs trucks) along potential border access points.

Benefits

Locations of potential illegal activities have been identified for effective deployment of limited enforcement resources.

“ Earth Monitor helps a sovereign nation to protect uncontrolled, remote sections of its border against illegal incursions. ”



Challenge

Illegal activities are taking place at the border between two nations. Hundreds of kilometres of the uncontrolled boundary snake through a remote desert region that has proved nearly impossible for one nation to defend against incursions and other illegal activities.

Vehicle crossings and possible rendezvous for illicit purposes are known to occur along two 100 kilometres stretches of the perimeter.

A government agency needs detailed intelligence on activities in the region. Specifically, the agency wants to know if several potential border access tracks are used by vehicles, and where these events are taking place.

With extremely limited personnel and equipment to patrol the remote region, the agency seeks another method of monitoring this illicit activity along its border.

Solution and Results

The OneAtlas Earth Monitor service enables detection of ongoing vehicle activity in the specified border area and monitoring of its evolution over time.

On a periodic basis, the Pléiades satellites can capture optical images of the AOI at 0.5m resolution. An automated workflow is activated upon each new acquisition, and the imagery is automatically analysed using artificial intelligence techniques to extract the desired information for the client, with precision and accuracy.

The automated analysis identifies vehicles – differentiating cars from trucks – and maintains an ongoing count at specific border locations at the user-specified frequency.

Earth Monitor determined that incursions were occurring and pinpointed their locations, so the client could deploy resources appropriately.

Solution Description

On a periodical basis, Earth Monitor provides the client with a statistical report detailing the total number and types of vehicles in the border-crossing area, and its temporal evolution. The analysis also shows geographically where those intrusions occurred, with statistics on a timeline revealing patterns of activity.

Benefits

The client enhanced its national security through automated monitoring of a contentious border area, which allowed the nation to safely deploy its limited resources in a targeted and cost-effective manner, and establish control over its legally established boundaries.