

SPACE**KNOW**

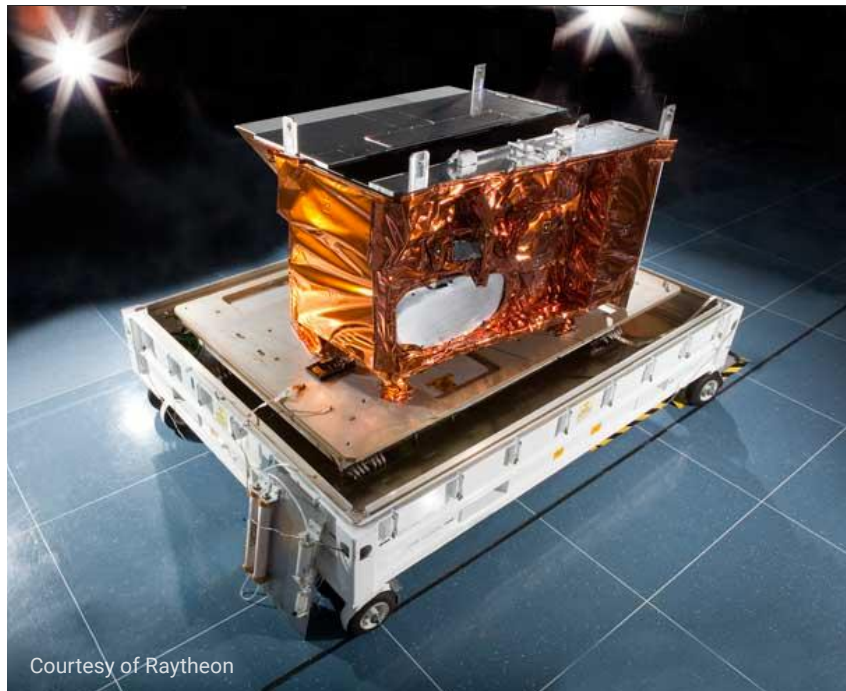
# Africa Lights Index

## Tracking African GDP

A frustrating constraint for investors and policy makers in Africa is the paucity of reliable and timely economic data. Satellite imagery offers one potential solution by revealing proxies for headline economic growth. SpaceKnow's African Lights index, launched in 2017, uses nighttime light intensity to produce economic growth estimates for 27 countries across the continent.



Source: NASA Earth Observatory  
image by Robert Simmon



## VIIRS

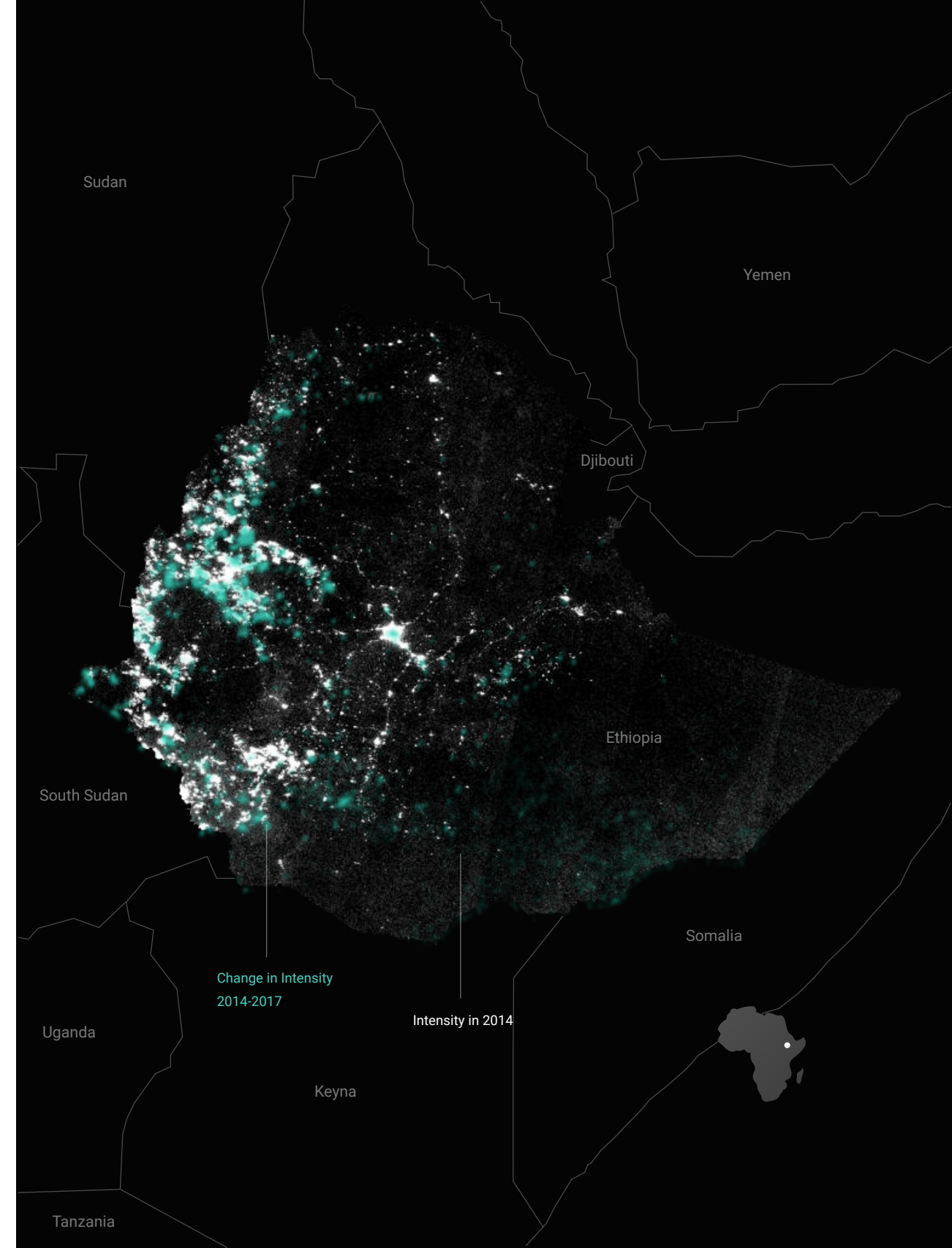
The SpaceKnow African Lights index is based on Visible Infrared Imaging Radiometer Suite (VIIRS) data collected by the Suomi NPP satellite. The VIIRS data registers light intensity daily for each 742 x 742 meter pixel on the Earth's surface outside the Arctic Circle.

The methodology assumes that regions with higher, or wealthier, populations will generate higher nighttime light intensity than regions with lower, or less wealthy, populations. SpaceKnow uses this relationship between nighttime light intensity and economic activity to calculate year-over-year growth.

## Growing Economy in Ethiopia

As one of Africa's recent economic successes, Ethiopia's GDP has growth at least 10% every year for the past decade according to official records. Satellite imagery of night time light corroborates this data, and adds insight into the sub-national distribution of economic growth.

Using satellite imagery, we can track the economic growth of Ethiopia, one of Africa's fastest growing economies. The western border regions registered the most growth from 2014-2017.





## Sierra Leone Ebola Outbreak

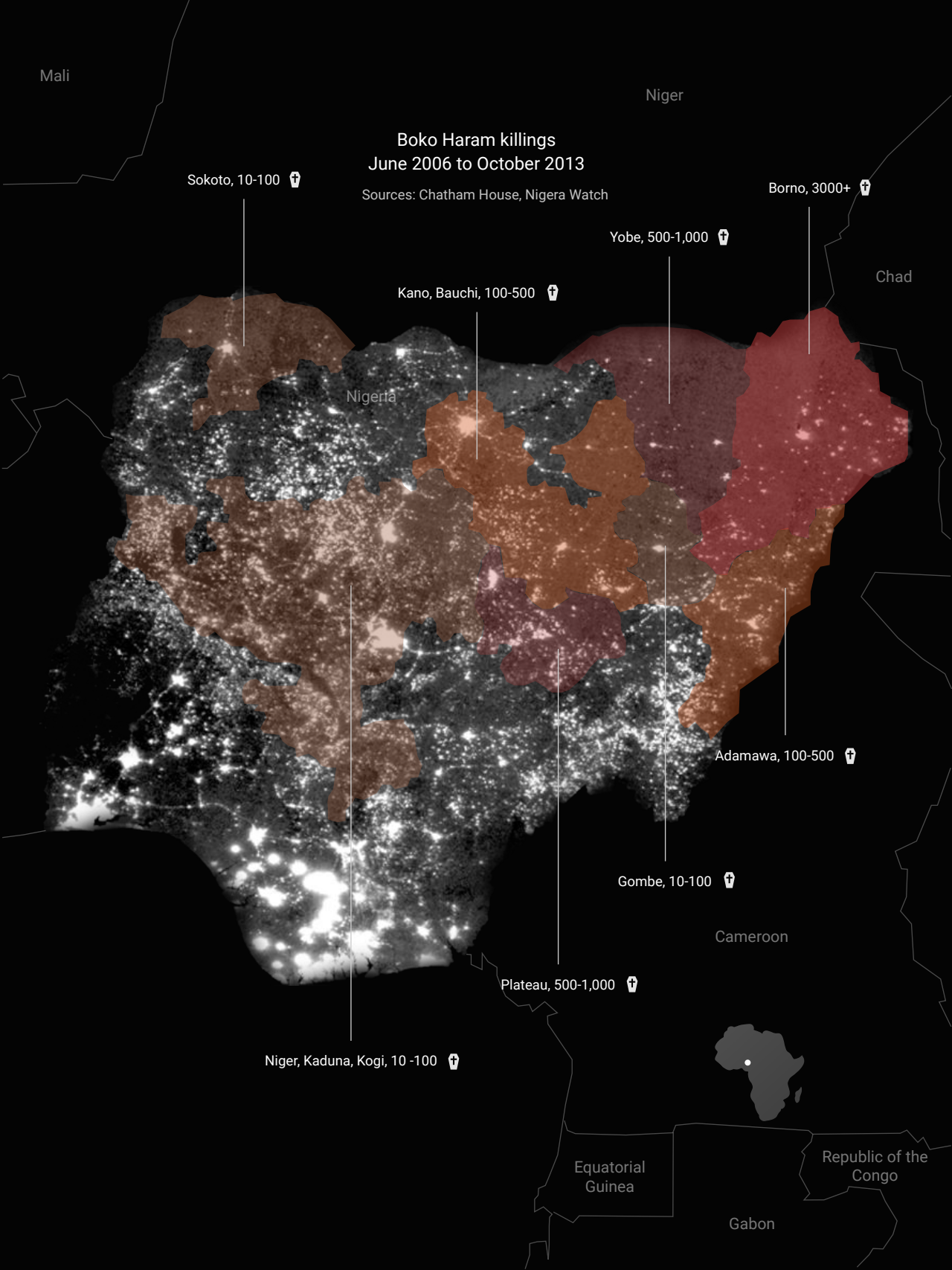
Sierra Leone, a fast-growing economy since 2000, was devastated by the Ebola outbreak in 2014 which coincided with the end of the commodities super-cycle. This combination caused the national economy to contract by 20% in 2015. Nighttime light intensity also fell precipitously.



# Nigerian Boko Haram Conflict

In Nigeria, continued conflict with Boko Haram in the northeast regions has displaced nearly 2.3 million people and stunted economic growth in those areas.

Satellite images demonstrate the comparative economic outcomes of the conflict-ridden northeast with the wealthier, and more stable, southwest.

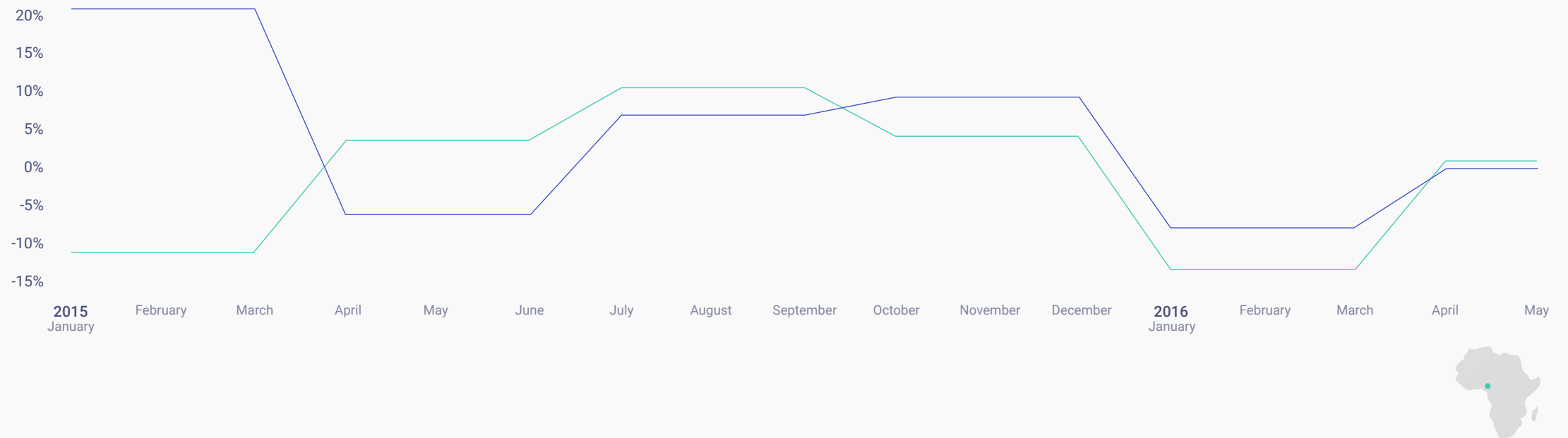


# Africa Light Index and GDP data for Nigeria

The following graphs contain two curves:

Green line represents quarterly GDP data from <http://www.tradingeconomics.com/>

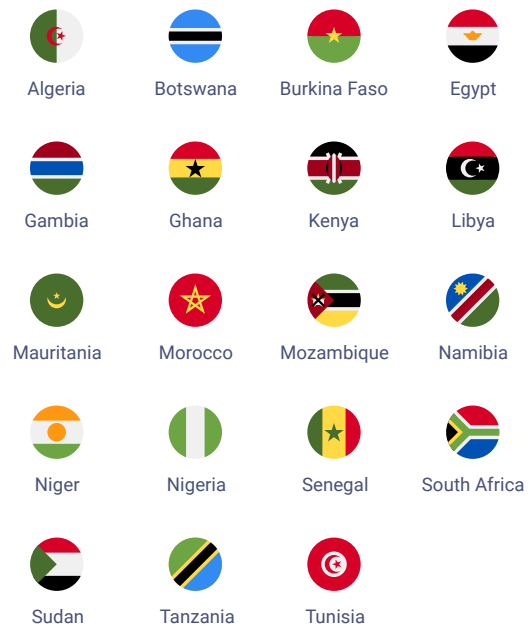
Blue line represents quarterly data from SpaceKnow Africa Light Index



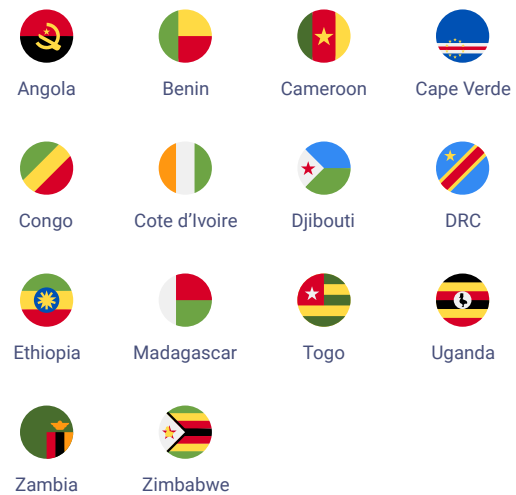
# Countries Already Processed by SpaceKnow

Data availability is based on cloud coverage levels.

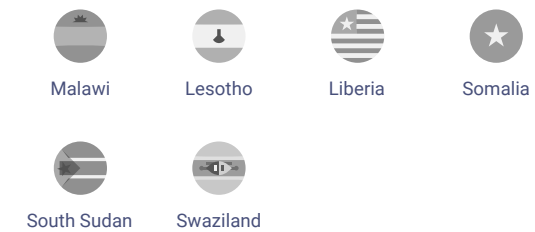
## Monthly and quarterly data available



## Quarterly data available



## No data available







## Delivering Transparency of Global Changes and Trends

We're SpaceKnow and we're on a mission to redefine your perspective on the world. To give you unprecedented access and transparency to how our world is being shaped, through our AI-powered satellite image analysis tools.

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