

٠

LEO Satellites in Action:

Addressing Global Food Insecurity

Low Earth orbit (LEO) satellites have the potential to drive major progress in reducing food insecurity around the world. Precision farming and other advances in agriculture can increase crop yields while reducing costs, but their impact is currently constrained by limited access to broadband in many rural areas and large farmland properties. LEO satellites will empower farmers and producers around the world with the modern connectivity they need to thrive.

Global Food Insecurity

- A 2023 <u>report</u> from the World Health Organization (WHO) revealed that one in 11 people across the world face hunger – 733 million people. In Africa, a staggering one in five people go hungry.
- WHO also <u>reports</u> that 2.33 billion people globally face moderate to severe food insecurity a number that
 has remained stubbornly stagnant for several years. Additionally, economic disparities and increased food
 costs have left 2.8 billion people unable to afford a healthy diet. In poorer countries, this can include more
 than 70 percent of the nation's total population.
- In many countries across Africa, less than 40 percent of farming households have internet access. <u>Research</u> shows that these disconnected areas are likely to have croplands with low yields and food-insecure populations.

Advanced Connectivity's Role In Elimating Hunger

- Connectivity helps farmers and producers of every size. <u>Autonomous machinery</u> has the potential to transform the operations of large, commercial farms. On a smaller scale, <u>research</u> from rural Ghana shows that reliable internet greatly improves the food security of small farms and households with off-farm work. The report concludes that "the fight against hunger and poverty could be easily won through comprehensive insights from the global waves of Internet of Things."
- By bringing fast, affordable broadband to rural and remote areas, LEO satellites can make effective crop monitoring systems available to many more farmers, improving yield in harvesting and storage.
- LEO satellite technology can also enable real-time supply chain monitoring, such as tracking cargo vehicles and road congestion and monitoring conditions inside shipping containers. These technologies can improve distribution networks — which are currently a major choke point. For example, <u>nearly 90 percent</u> of the wasted food calories in South and South-East Asia are lost in transportation and storage.

Case Study / LEO Satellites in Action:

Togo faced exacerbated food insecurity due to COVID-19 supply chain disruptions. A <u>collaboration</u> involving NASA Harvest, Planet Labs and the University of Maryland utilized LEO satellite technology to address this crisis. By leveraging high-resolution satellite imagery analytics, Togo authorities could make informed decisions about resource allocation and distribution, effectively mitigating the impact of the pandemic on food security.



www.connecteveryonecoalition.com