

29th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Space Assets and Disaster Management (4)

Author: Ms. Brittany Zajjic
Planet Labs Inc., United States, brittanyzajjic@gmail.com

HOW SMALL SATELLITES ARE TRANSFORMING DISASTER AND HUMANITARIAN RESPONSE
FROM SPACE

Abstract

Over the past several decades, advancements in satellite imagery and surrounding technologies have transformed how we respond to natural disasters and humanitarian crises. Spaceborne assets provide timely situational awareness with both temporal and spatial resolutions - something we previously did not have access to. Today, the New Space industry is bringing the next era of revolutionary innovation to disaster and crisis response. Agile aerospace coupled with advanced technologies, like artificial intelligence and machine learning, deliver new, unprecedented information feeds with transformational potential for humanitarian affairs. This paper will explore how private companies, like Planet and their partners, are leveraging these tools in humanitarian contexts. Most notably, for the first time in history, Planet now has access to daily, medium-resolution satellite data and the ability to see change as it happens across the entire planet. This will reshape how often we can monitor refugee sites, estimate populations, and track the effects of natural disasters. This paper will also explore how Planet and their partners are utilizing breakthroughs in artificial intelligence and machine learning to generate insights into the world around us and provide unparalleled assistance to communities that will benefit from it most.