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CURRENT AND FUTURE COMMERCIAL SPACE COLLABORATION FOR EFFECTIVE
DISASTER MANAGEMENT

Abstract

In the recent decade, we have seen the emergence of a new commercial space industry. Increased frequent and reliable access to space has brought about a growth in commercial space ventures. These ventures are backed by private sector investment from traditional financial institutions demonstrating the validity of business plans and models for new entrants. This industry is collectively made up of private sector transportation services to sub-orbit, low-Earth orbit (LEO), and beyond LEO destinations as well as on-orbit platforms providing a range of commercial services from remote sensing to communications.

There are many commercial companies that offer access to their services to non-profits and NGOs for humanitarian and disaster response purposes today. The International Charter for Space and Major Disasters utilizes various government agencies to access space resources for disaster management. For example, last September when New South Wales, Australia experienced its worst flooding in over two decades, the Charter in partnership with commercial imaging companies, was able to rapidly produce a flood map to aid response.

With commercial space capabilities only projected to increase in the future, there are many more areas of opportunity to address on-going and future disaster management efforts. Furthermore, these capabilities could even aid in recognizing potential disasters before they happen. Issues such as predicting drought, floods, containing the spread of disease, or monitoring crop yield, could utilize current and future commercial space services. This paper will explore our current commercial space capabilities in international disaster management and provide recommendations on future potential private sector partnerships. This paper will also examine current local and international policies governing disaster management with an aim to identify areas that may improve timely and effective responses.