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THE USE OF SMALL SATELLITES IN LATIN AMERICA AND AFRICA TO IMPROVE THE
WELL-BEING OF THE POPULATION IN THE REGION AND THE PROTECTION AGAINST
ILLEGAL ACTIVITIES

Abstract

Space used to be the playground of a selected few that would send multi-ton systems into orbit. Today, smallsats are being developed all over the world and developing nations are catching on the trend. Smallsat lower technical, engineering, and investment thresholds, enabling more countries to access space. However, small size does not equal small gains. In Earth observation, benefits to society are numerous. Beyond uses such as agricultural management or environmental monitoring, some developing countries are using the technology to tackle security and safety related concerns. That is the case in Africa, where satellite imagery shows the effects of Boko Haram's actions. In Latin America, systems owned by national armed forces could be used to monitor illegal drug and enforce the law. Since the phenomena of terrorism and drug cartels tend to be transboundary, states in both regions could unite and establish a common mechanism to share EO data gathered by smallsats. The first section reviews how Latin America and Africa make innovative use of the EO data from smallsats. Legal and policy instruments supporting and facilitating the space industry and research are also considered. The second section focuses on the fight against drug cartels in Latin America and how EO smallsats can contribute. Countries may already have the capabilities to monitor illegal activities, but they may lack the means to put a dedicated plan into motion or enforce it. There need to be enhanced regional cooperation in Latin America. The recent creation of the Latin American Satellite Information System to share data in the fields of agriculture, forest fires and health, together with the proposals for the development of a Latin American and Caribbean space agency and the development of a regional EO nanosatellite, demonstrates that using small satellites would improve the well-being of the population in the region. The last section presents the rising trend in small satellites in Africa, focusing on combatting terrorism, and on the needs for scientific research and bridging the digital divide, in particular providing communications to remote areas in Africa.