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UTILIZING SPACE-BASED EARTH OBSERVATION DATA AND SATELLITE IMAGERY FOR
WILDLIFE SIGHTING AND SAFARI TOURISM

Abstract

Currently Earth observation satellites being developed within the New Space and Space 2.0 realms have facilitated tailored access to data that serves as an informative key point and often offers a decisive factual input to help tackle problems and challenges on Earth. The environmental challenges induced due to the natural evolution alongside manmade global warming have been recently in the focus point of multiple governments, industries, and institutes working tirelessly to implement changes meant to tackle its issues and effects on our society. The leisure tourism industry in particular faces a challenge being one of the non-essential industries that has a considerable impact on Earth's vulnerable ecosystem. Reducing its carbon footprint and the implementation of a greener and more ecological practices of the tourism industry has become one of the fundamental aspects for it to survive the changes all the surrounding industries are undergoing. The paper focuses especially on national parks and their utilization of space applications to help monitor the status of wildlife in terms of numbers, location, health, and security. In this research we investigate the ecological impact of wildlife safari and animal sighting tourism, presenting data from all around the globe and crosschecking space-based imagery and Earth observation satellite solutions that could tackle the driving pain points for that impact in an attempt to control it and with hope to minimize its effects. This paper gives a special focus with regards to the African Asian wildlife safari concepts in particular aiming to minimize the impact on the fragile animal ecosystem at these two massive and densely populated continents while considering maintaining, if not boosting, the experience, value, and pleasure of tourism and the touristic activities. This elaborate research of a combination of space segment solutions and propositions aim at benefiting the wildlife, local communities, tourists, and all the stakeholders in the safari tourism industry alike while reducing the impact on the environment in a considerate not an extremist manner. Currently Earth observation satellites being developed within the New Space and Space 2.0 realms have facilitated tailored access to data that serves as an informative key point and often offers a decisive factual input to help tackle problems on Earth.