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A SOCIO-ECONOMIC BENEFIT MODEL FRAMEWORK USING SWIR BAND EARTH OBSERVATION DATA

Abstract

Earth Observation (EO) data and commercial application could be used to monitor progress towards sustainable development goal and address socio-economic benefit. This paper presents the uniqueness of Short Wave Infrared (SWIR) band being used in specific purpose applications in wildfires detection, urban heat island mapping, oil spill detection, vegetation health monitoring, plastic waste and greenhouse gases (GHG) emission detection. Case studies are being qualitative reviewed with a model framework to generate a cost benefit analysis which can be used by stakeholders in government agencies, ESG investment firms and insurances companies for further qualitative review. The outcome of this paper is to help potential users of EO data to understand damage impact of these negative externalities are weighed against the cost prevention or early detection.