

IAF EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Applications, Societal Challenges and Economic Benefits (5)

Author: Ms. Harshitha V  
Christ University, India, harshitha.v@mamcs.christuniversity.in

Ms. Manisha Nainani  
Christ University, India, manisha.nainani@mamcs.christuniversity.in

Mr. Ramesh Kumar  
India, rkconf@gmail.com

Dr. Padmakumar M M  
Christ University, India, padmakumar@christuniversity.in

## A REVIEW ON GEOSPATIAL INTELLIGENCE FOR INVESTIGATIVE JOURNALISM

**Abstract**

Throughout the ongoing Russian invasion of Ukraine, satellite images like the vast convoy of Russian military vehicles approaching the beleaguered Ukrainian city of Kyiv, Russian aircrafts deployed at Zhabrovka, Belarus and many more such visuals have been into circulation that are being used as a tool to facilitate investigative journalistic studies. In light of the same, it can be said that satellite-based images are one of the latest means of accessing vital data that can help in expanding the scope and impact of investigative journalism. Some of the path-breaking journalistic stories that have come up in the past decade - Imaging of Uttarakhand landslide in 2019 using satellite images, coverage of Fukushima nuclear plant since 2011, and tracking of Asia's border disputes emerging due to climate change in 2021 and the satellite journalism revolving the blockage of Suez canal, 2021 - showcase the potential that geospatial intelligence has in the domain of journalism. All the four identified stories point out how we can practise mega satellite-based investigative studies, especially, for scrutinising and comparing historical records regarding cross border issues as well as the disappearance of pastures and forests in vast open lands. However, the arena of using geospatial intelligence, enabled by satellite images, remains underutilised and limited to specific journalistic organisations, based in a few countries. This exploratory review of the four mentioned journalistic accounts identifies the contexts where such efforts are feasible, methods that are required, sources that could be tapped, associated skill sets needed for its usage, the dynamics of such investigative approaches, its scope and limitations. This review and the conclusions drawn from the above mentioned cases will also provide a direction for journalists from small organisations and developing countries to explore the potential of satellite-based images in furthering their investigative reporting with a technological edge that still persists to be sovereign of geo-political powerplay. Geospatial intelligence uses varied graphical content to convey information about the activities that occur on the surface of the earth. It includes colour and panchromatic (black and white) aerial photographs, multispectral or hyperspectral digital imagery, and products such as shaded relief maps or three-dimensional images produced from digital elevation models. The improving technology in geo spatial spectra has broadened the scope of its usage to investigative journalism which lies at the core of this review paper.

Keywords: Geo-Spatial Intelligence, Investigative Journalism, Satellite Imaging, Cross Border Issues, Environmental Investigation

Contributors: Harshitha V, Independent Researcher Manisha Nainani, Independent Researcher