

The use of Satellite Data as Evidence

(February 2026)

Satellite imagery is an increasingly effective source of actionable information and potential evidence. While satellite-collected/monitored data is already used extensively for administrative purposes, *e.g.* to update land records (via the ‘Digital India Land Records Modernisation Programme’ or to track forest fires (via the publicly accessible ‘Van-Agni Geo-Portal’), its admissibility as evidence continues to vary based on several factors.

Under the Indian law of evidence, satellite-collected/monitored data qualifies as ‘electronic evidence’ when downloaded from ground stations in electronic format—a position affirmed by the Karnataka High Court when allowing an investigation into alleged forest encroachments based on government-generated satellite imagery (see *M/s V.S. Lad & Sons v. State of Karnataka*, Karnataka High Court 2009). Under Section 63 of the Bhartiya Sakshya Adhinyam 2023 (“BSA”) (previously, Section 65B Indian Evidence Act 1872), an electronic record is admissible as evidence if generated from a computer system ‘used regularly’ and ‘operating properly’ and if the electronic record ‘reproduces’ data that is ‘fed into the computer system’ in the ‘ordinary course’. Further, statutorily, such electronic records/data require certification by an accredited third party, confirming compliance with the prescribed statutory conditions (see *Arjun Panditrao Khotkar v. Kailash Gorantyal*, Supreme Court 2020) although such certification has not been insisted on by Indian courts in the context of satellite-collected/monitored data so far.

Satellite-collected/monitored data has traditionally met with skepticism in Indian courts. In an early example, satellite imagery was disregarded as a means of determining the presence of forests, citing poor resolution and an inability to distinguish forests (requiring forest-species trees with 40% canopy density) from agricultural and crop plantations (see *Tata Housing Development Co. Ltd. v. Goa Foundation*, Supreme Court 2003). In another instance, dismissing a challenge to the alleged felling of a forest, the Supreme Court doubted whether satellite images could ascertain ‘different species of trees, their age, and the girth of their trunks’ and found that land records were a more accurate method to determine the legal existence of a ‘forest’ (see *In re Construction of Park at Noida Near Okhla Bird Sanctuary*, Supreme Court 2009). In a further example, arguments on the alleged non-existence of mangroves based on ‘Google Earth’ images were disregarded as satellite imagery was found to be not providing ‘a clear picture of the area’ given ‘the existence of clouds’ (see *Ansari Kannothe v. State of Kerala*, Kerala High Court 2011).

In a different example, the Kerala High Court employed satellite imagery and ‘Google images’ to ascertain encroachments on a lake and filtration ponds, and found that the Supreme Court had not ‘completely tabooed the use of satellite imagery’ in instances where it could be used effectively (see *Ratheesh v. State of Kerala*, Kerala High Court 2013). In other instances, the use of satellite imagery has been endorsed when it originates from government remote-sensing agencies and the courts have employed such data to detect encroachments, demarcate mangrove areas, and delineate land boundaries where physical reference points were absent (see, *MC Mehta v. UoI*, Supreme Court 2022; *Bombay Environmental Action Group v. State of Maharashtra*, Bombay High Court 2019; *Baraham Sarup v. Gagandeep*, P&H High Court 2018).

Under the statutory scheme for evidence, satellite data originating from government remote-sensing agencies would amount to a ‘relevant fact’ (see Section 30 BSA) to be proved by an expert opinion (including by the Examiner of Electronic Evidence (Section 39(2) BSA)) or accepted based on the (potentially applicable) presumption of authenticity which attaches to government maps and surveys (see Section 82 BSA; *Ram Kishore Sen v. UoI*, Supreme Court 1966). In practice, however, judicial approaches are not uniform. In certain cases, courts have sought to rely exclusively on satellite data produced from government remote-sensing agencies (see *Green Vistas v. UoI*, Kerala High Court 2020). In other cases, Google Earth imagery has sufficed when corroborated by government databases and cadastral surveys (see *National Builders v. Circle Inspector*, Kerala High Court 2016; *MC Mehta v. UoI*, Supreme Court 2022).

Internationally, tribunals have frequently employed satellite imagery as contextual and/or corroborative evidence to verify witness testimony, geolocate sites, and assist forensic investigations (see *Prosecutor v. Al Mahdi* (Judgement) ICC 2015; *Prosecutor v. R. Krstić* (Judgement) ICTY 2001). Notably, the *Leiden Guidelines on the Use of Digitally Derived Evidence in International Criminal Courts and Tribunals* 2019 endorse the satellite imagery (when corroborated) and do not presume inadmissibility based on potential manipulation or the absence of detailed metadata. In US courts, satellite imagery has been relied upon to establish limited geographic facts, but contested facts have required independent authentication (see *United States v. Lizarraga-Tirado*, 9th Circuit, 2015). Even so, a recent state-level statute (the New York Civil Practice Law and Rules, as amended in 2019) now mandates that courts must consider satellite-collected/monitored data, subject to providing the opposing side a fair opportunity to object. Despite a fragmented approach, the use of satellite data as evidence now appears increasingly valid across jurisdictions and judicial tribunals.