



**SATELLITE REMOTE SENSING BASED INPUTS PREPARED
IN COMPLIANCE WITH THE DIRECTIONS OF
THE HON'BLE NATIONAL GREEN TRIBUNAL
IN OA NOS 35/2022 (I.A 295/2022) DATED 22 NOV 2022**

12 JAN 2023

**NATIONAL REMOTE SENSING CENTRE
INDIAN SPACE RESEARCH ORGANISATION
HYDERABAD, INDIA**

This report is prepared in compliance with the directions of the Hon'ble National Green Tribunal in OA Nos 35/2022 (I.A 295/2022) dated 22 Nov 2022.

The order directed NRSC to submit a status report over the Prescribed Time-Line for Year 2014, Year 2016, Year 2017 and Year 2021 with High Resolution Satellite Imagery of the construction site of the "Moga Resort" to ascertain the factual situation with respect to the Forest Canopy/Vegetative Cover at (1) the Co-ordinates 30°03'58.2"N and 78°16'50.4"E and (2) 30°03'59"N and 78°16'51"E. The order also directed that the expenses incurred for the submission of the reports by the NRSC shall be borne by UKEPPCB.

NRSC sent a pro forma invoice for the costs of the satellite data to the Chairman, Uttarakhand Pollution Control Board, Gaura Devi Bhawan, 46 B IT Park Sahastradhara, Dehradun, Uttarakhand at his email id msukpcb@yahoo.com (as published on the official website of the Uttarakhand Pollution Control Board <https://ueppcb.uk.gov.in/>) on December 7, 2022. No acknowledgement or funds have been received from the UKEPPCB.

The following high-resolution satellite data was used in this report. The data used was the highest resolution, green season cloud free satellite coverage available over the points of interest.

Year	Available date, best resolution during the given Year	No.of scenes
2014	C1_528-259, 10 Oct 2014, RS2/FMX_97-50/A, 09 Oct 2014 2.5m colour product	1
2016	C1_528-259, 03Feb2016, RS2/FMX_97-50/A, 01 Feb 2016 2.5m colour product	1
2017	C1_528-259, 15Feb2017 RS2/FMX_96-50/B, 14 Feb 2017 2.5m colour product	1
2021	C2S_29896.1.033411.4 & 5, 13 Nov 2022 0.65 cm colour product	2

The imagery is presented in Appendix I

For years 2014, 2016, 2017 and 2022 false color imagery is presented. In this combination vegetation is visualized in red tones in the imagery. For 2022 the natural color composite image is also presented.

Some structure is visible at location 1 in the imagery from 2014 and can be seen clearly in the 2022 imagery. Vegetation is also present at both locations. From the imagery no observation can be made on the presence of forest canopy at the two locations. This is explained below

The Forest Survey of India defines forest cover as lands more than one hectare in area with tree canopy density of more than 10 percent. The cover based definition

does not “make any distinction between the origin of tree crops or tree species and encompasses all types of lands irrespective of their ownership, land use and legal status” (India State of Forest Report, 2021)

Therefore, in order to ascertain whether the construction site of the “Moga Resort” falls in forest cover, accurately surveyed boundaries of the “Moga Resort” as well as base map and forest boundary compatible with cadastral scale are required. The required base maps and boundary information is not available with NRSC.

Appendix – I Satellite imagery showing Moga Resort and surrounds

YEAR 2014 (Merged FCC of 10 Oct 2014 and 09 Oct 2014)



(Locations of interest are shown in a hollow yellow circle)

label 1 depicts 30°03'58.2"N and 78°16'50.4"E and label 2 30°03'59"N and 78°16'51"E

YEAR 2016 (Merged FCC of 03 Feb2016 and 01 Feb2016)



YEAR 2017 (Merged FCC of 15 Feb 2017 and 14 Feb 2017)



YEAR 2022 (FCC of 13 Nov 2022)



YEAR 2022 (NCC of 13 Nov 2022)

