

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH AT NEW DELHI**

Original Application No. 545/2024

**IN THE MATTER OF:**

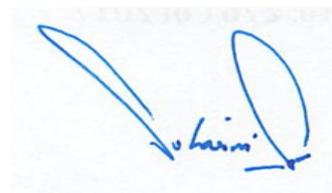
NEWS ITEM TITLED “*SOME MIND BOGGLING DATA*” SAYS MANIPUR CHIEF MINISTER ON FOREST COVER LOSS” APPEARING IN NDTV.COM DATED 04.05.2024

**NDOH: 02.02.2026**

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**THROUGH**



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(COUNSEL FOR RESPONDENT NO. 2, FSI)**

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New Delhi  
Date: 03.12.2025

SL. NO. 29/2025

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,  
PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO.545 OF 2024

IN THE MATTER OF

NEWS ITEM TITLED "SOME MIND-BOGGLING DATA" SAYS MANIPUR CHIEF MINISTER ON FOREST COVER LOSS" APPEARING IN NDTV.COM DATED 04.05.2024.

BEFORE THE NOTARY PUBLIC  
AT BIDHANNAGAR  
DIST.-NORTH 24 PARGANAS

AFFIDAVIT ON BEHALF OF RESPONDENT NO.2 FOREST SURVEY OF INDIA, EASTERN ZONE, KOLKATA

I, S.ELAMURUGANNAN S/o Sh.SHANMUGAM, aged about 49 years, presently working as Regional Director (i/c) in the Forest Survey of India, Eastern Zone, Kolkata, Ministry of Environment, Forest and Climate Change, do hereby solemnly affirm on oath and state as follows;

1. That, I am holding the post of Regional Director (i/c), in the Forest Survey of India Eastern Zone, Kolkata and I have made myself acquainted with the facts and circumstances of this case and I have been duly authorized and empowered by the Respondent No. 2 to make and swear this Affidavit for and on behalf of Forest Survey of India Eastern Zone, Kolkata and I am competent to do so.
2. That, this Hon'ble Tribunal vide its Order dated 31.07.2025 directed this Answering Respondent (Forest Survey of India, Eastern Zone, Kolkata) to file its reply affidavit in response to the captioned news item. The present Affidavit is being filed in compliance of the order passed by this Tribunal.
3. That, Forest Survey of India (FSI), Dehradun is an organization under the Ministry of Environment, Forest and Climate Change, Government of India, which carries out the assessment of Forest Cover of the country biennially since 1987 and the findings are published in the India State of Forest Report (ISFR).

01 DEC 2025

क्षेत्रीय निदेशक / Regional Director,  
भारतीय वन सर्वेक्षण, पू.क्षे.  
Forest Survey of India, E.R  
कोलकाता / Kolkata-700 106



4. It is further submitted that the Forest Cover under the report (ISFR) includes all lands more than 01 ha in area with a tree canopy density of more than 10% irrespective of ownership and legal status. Such lands may not necessarily be a recorded forest area.
5. The Forest Cover assessment is a wall-to-wall mapping exercise based on remote sensing data and technique supported by intensive ground verification and field data from the National Forest Inventory. Forest Survey of India has always kept pace with the technological and methodological advancements and makes improvements over the years. For example, the first State of Forest Report (SFR) was published in the year 1987 which was based on the visual interpretation of Satellite Data having spatial resolution of 80 meter on 1:1 million scale. The assessment of Forest Cover in the State of Forest Report from 1989 to 1999 were based on 1:2,50,000 scale having 30 meter/36.25 meter/23.5 meter resolution. The interpretation is visual initially (SFR 1989, 1991 and 1993), visual and digital in between (SFR 1995, 1997 and 1999) and was later changed to digital interpretation completely. From 2001 onwards, the assessment was made completely digital with scale of interpretation 1:50,000 and spatial resolution of 23.5 meter. The table showing snap shot of technological advancement in Forest Cover Mapping in FSI over the years as per the India State of Forest Report is given in the **Annexure-I**.

Therefore, it is humbly submitted that Forest Cover data as per the SFR, 1987 is as such not comparable with the Forest Cover data as per the ISFR, 2021 due to the fact that there is constant technological and methodological advancements being used by the Forest Survey of India assessment in an effort to enhance the accuracy of the estimates of Forest Cover, as mentioned above. However, Forest Cover estimates from the SFR 2001 to ISFR 2021 are comparable due to the fact that the spatial resolution of the satellite sensors, scale and mode of interpretation are same and is given as Annexure-II.

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 Forest Survey of India, E.R  
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6. It is respectfully submitted that, Net Change in Forest Cover between SFR 2001 and ISFR 2021 of Manipur State as per the India State of Forest Report of Forest Survey of India which is comparable is given in the below table:

(Area in square kilometer)

State	ISFR	2001	2021	Net Change
Manipur	Forest Cover Area Figure	17,889*	16,598	-1,291

\* (Area as revised & published in ISFR 2005)

As per the above comparison a net decrease of 1,291 sq. km in Forest Cover has been recorded in Manipur State during the period between SFR 2001 and ISFR 2021.

7. Further, for kind information of the Hon'ble Tribunal, it is also submitted that during the period between 2021 and 2022, the analysts from FSI visited Manipur State for ground validation of Forest Cover change polygons. During the visit, the observations at several locations confirmed negative changes in Forest Cover due to various factors such as widespread practice of shifting cultivation, clear felling of trees by local people for fuelwood and diversion of forest land for developmental activities. In addition, Opium Poppy (*Papaver somniferum*) cultivation was also observed in certain areas. Field photographs for ground validation of forest cover change between 2022 and 2023 are placed as **Annexure-III**.
8. In view of the foregoing submissions, it is respectfully prayed that, this Hon'ble tribunal may graciously be pleased to accept the affidavit filed by answering respondent.
9. That, the answering respondent craves leave of this Hon'ble Tribunal to file additional information, if any till pendent lite.

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 क्षेत्रीय निदेशक / Regional Director,  
 भारतीय वन सर्वेक्षण, पू.क्षे.  
 Forest Survey of India, E.R  
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01 DEC 2025



10. It is respectfully requested that in view of the forgoing submissions this Hon'ble Tribunal may be pleased to pass further Orders as it may deem fit in the interest of justice and proper in the given circumstances of this case.

*[Handwritten Signature]*  
24.11.25

DEPONENT

क्षेत्रीय निदेशक / Regional Director,  
भारतीय वन सर्वेक्षण, पू.क्षे.  
Forest Survey of India, E.R  
कोलकाता / Kolkata-700 106

VERIFICATION

I, the above named deponent do hereby verify that the contents of the above affidavit are true and correct to my knowledge and area based on official records and nothing material is concealed therein.

Verified at Kolkata on this <sup>th</sup> 24 ..... Day of November, 2025.

*[Handwritten Signature]*  
24.11.25

DEPONENT

क्षेत्रीय निदेशक / Regional Director,  
भारतीय वन सर्वेक्षण, पू.क्षे.  
Forest Survey of India, E.R  
कोलकाता / Kolkata-700 106

*[Handwritten Signature]*  
S. CHAUDHURI  
★ NOTARY ★  
GOVT. OF INDIA  
Regd. No.-6584/06  
Bidhannagar Court  
Dist.-North 24 Pgs

01 DEC 2025

Identified by me

*[Handwritten Signature]*  
Advocate

VIA NOJ BASU:  
Advocate  
Enrolment No.-F-247/2006  
Bidhan Nagar Court  
Kolkata-700091

## Annexure-I

## 1.2 Technology Trends in Forest Resource Assessment

Since the publication of first report in 1987, FSI has kept pace with the technological and methodological improvements associated with forest cover mapping owing to availability of better satellite data, higher scale of mapping and improvement in methods of interpretation. Table 1.1 provides an overview of the technological and methodological improvements in Forest cover mapping over the years. The first report of 1987 used LANDSAT-MSS satellite data with a spatial resolution of 80 meters, the scale of mapping was 1:1 million and interpretation was in visual mode with a Minimum Mappable Unit (MMU) of 400 hectares. Subsequently there were continuous improvements in the spatial resolution of satellite data and also scale of mapping and MMU. With the availability of indigenous satellite data from 1995 onwards, FSI started using the IRS-1B satellite data and in 2001 completely switched over to LISS III data with a spatial resolution of 23.5 m at 1:50,000 scale with MMU of 1 ha. The mode of interpretation also changed to digital mode.

Table 1.1 Forest Cover Mapping over the Years

Cycle of Assessment	Year	Data Period	Sensor	Spatial Resolution	Scale	Minimum Mappable Unit (ha)	Mode of Interpretation
I	1987	1981-83	LANDSAT-MSS	80 m	1:1 million	400	Visual
II	1989	1985-87	LANDSAT-TM	30 m	1:250,000	25	Visual
III	1991	1987-89	LANDSAT-TM	30 m	1:250,000	25	Visual
IV	1993	1989-91	LANDSAT-TM	30 m	1:250,000	25	Visual
V	1995	1991-93	IRS-1B LISSII	36.25 m	1:250,000	25	Visual & Digital
VI	1997	1993-95	IRS-1B LISSII	36.25 m	1:250,000	25	Visual & Digital
VII	1999	1996-98	IRS-1C/1D LISS III	23.5 m	1:250,000	25	Visual & Digital
VIII	2001	2000	IRS-1C/1D LISS III	23.5 m	1:50,000	1	Digital
IX	2003	2002	IRS-1D LISS III	23.5 m	1:50,000	1	Digital
X	2005	2004	IRS-1D LISS III	23.5 m	1:50,000	1	Digital
XI	2009	2006	IRS-P6-LISS III	23.5 m	1:50,000	1	Digital
XII	2011	2008-09	IRS-P6-LISS III & IRS-P6 AWIFS	23.5 m 56 m	1:50,000	1	Digital
XIII	2013	2010-11	IRS P6-LISS-III IRS-Resourcesat 2- LISS III	23.5 m	1:50,000	1	Digital
XIV	2015	2013-14	IRS P6-LISS-III IRS-Resourcesat 2- LISS III	23.5 m	1:50,000	1	Digital
XV	2017	2015-16	IRS P6-LISS-III IRS-Resourcesat 2- LISS III	23.5 m	1:50,000	1	Digital
XVI	2019	2017-18	IRS P6-LISS-III IRS-Resourcesat 2- LISS III	23.5 m	1:50,000	1	Digital
XVII	2021	2019-20	IRS-Resourcesat 2- LISS III	23.5 m	1:50,000	1	Digital

(Area in square kilometre)

S. No	State	Indian State of Forest Report (ISFR)	Published Forest Cover Area Figure	Revised Forest Cover Area Figure
1.	Manipur	2001	16,926	17,889
2.		2003	17,219	17,259
3.		2005	17,086	16,952
4.		2009	17,280	17,280
5.		2011	17,090	17,090*
6.		2013	16,990	16,990*
6.		2015	16,994	17,083
7.		2017	17,346	17,346*
8.		2019	16,847	16,847*
9.		2021	16,598	16,640.29

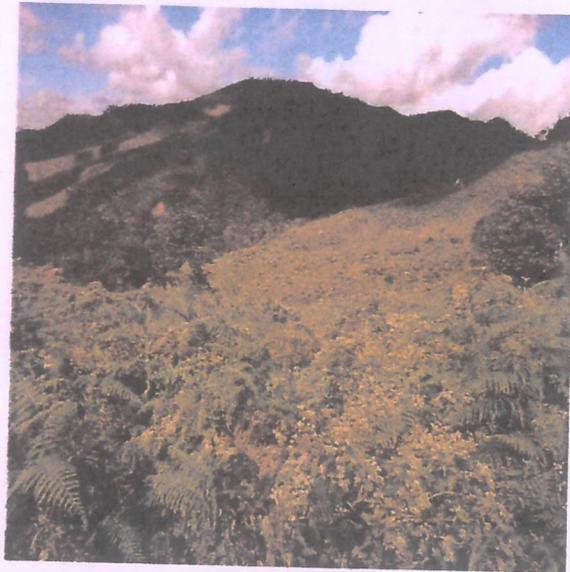
\* Area Figure is not revised

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क्षेत्रीय निदेशक / Regional Director.  
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Field photographs for Ground Validation of Forest Cover Change between 2021 & 2022

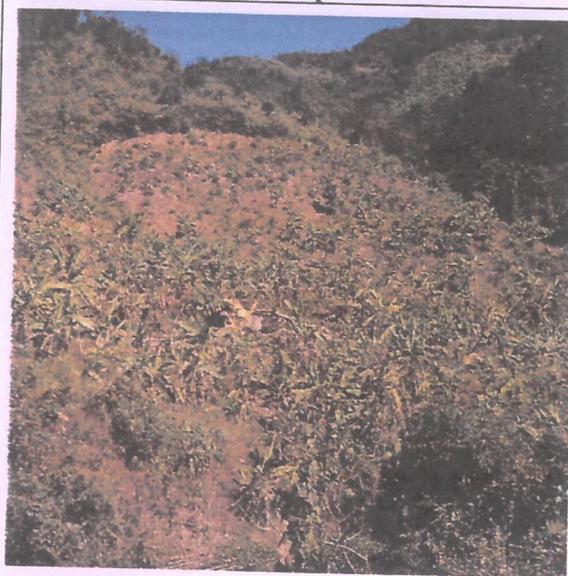
**Loss of Forest Cover due to Shifting Cultivation at Ningchou, Manipur**



Date: 08-12-2022

Lat/Lon: 24°44'30.5"N 94°29'40.4"E

**Loss of Forest Cover due to Shifting Cultivation (Banana Crop) at Tuivelzang, Manipur**



Date: 12-12-2022

Lat/Long: 24°09'29.6"N 93°34'24.8"E

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**Burning of Forest at Tuilaphai, Manipur**



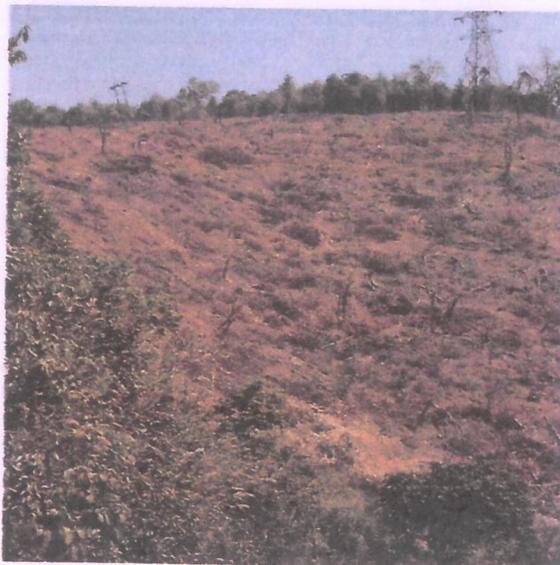
**Date: 06-03-2021**

**Lat/Lon: 24°20'54.64"N 93°36'45.17"E**

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**Clearing of Forest at Tuilaphai, Manipur**



**Date: 06-03-2021**

**Lat/Long: 24°20'23.07"N 93°35'58.28"E**

**Loss of Forest Cover for Developmental activities at L. Hengjol, Manipur**



**Date: 16-12-2022**

Lat/Lon: 24°48'37.6"N 93°45'22.5"E

**Loss of Forest Cover for Developmental activities at Maukot, Manipur**



**Date: 12-12-2022**

Lat/Long: 24°08'34.8"N 93°32'56.4"E

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Forest Survey of India, E.R  
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**Clearing of Forest for Opium Cultivation at  
Hengjang, Manipur**



**Date: 06-03-2021**

**Lat/Long: 24°24'24.88"N 93°39'57.55"E**

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भारतीय वन सर्वेक्षण, पू.क्षे.  
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