

**BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE**
MISCELLANEOUS APPLICATION No. 03/2023 (WZ)
IN
ORIGINAL APPLICATION NO. 478/2018 (WZ)

IN THE MATTER OF:

THE GOA FOUNDATION ...APPLICANT

VERSUS

STATE OF GOA AND ORS. ...RESPONDENTS

INDEX

S.No.	Particular	Page No.
1.	WRITTEN SUBMISSION ON BEHALF OF THE RESPONDENT NOS. 1 TO 3	1 - 10
2.	ANNEXURE A-1 Copy of the Gazette Notification No, 7/4/2023-FOR/213 dated 10.08.2023	11 - 14
3.	ANNEXURE A-2 The Letter F.No. 22-435/2020-FGD-2659 dated 05.07.2022 written to the Principal Chief Conservator of Forest (PCFF), Goa Van Bhavan, Forest Department, Altinho, Panaji, Goa by the Forest Survey of India	15
4.	PROOF OF SERVICE	16

New Delhi
Date: 11.08.2023


Sri Harsha Peechara
Advocate for the Respondents
E-28, LGF, Jangpura Extension
New Delhi - 110014
M: 979717466788
shpeechara@gmail.com

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE
MISCELLANEOUS APPLICATION NO. 03/2023 (WZ)
IN ORIGINAL APPLICATION NO. 478/2018 (WZ)**

IN THE MATTER OF:

THE GOA FOUNDATION

...APPLICANT

VERSUS

STATE OF GOA AND ORS.

...RESPONDENTS

WRITTEN SUBMISSIONS ON BEHALF OF THE RESPONDENTS 1-3

1. The present Application has been filed by the Applicant challenging the 5 interim reports submitted to the Hon'ble NGT which purport to review the work of identification and demarcation of private forests done by the 'Thomas' and 'Araujo' forest expert committees in Goa.

Brief Background of the Sawant and Karapurkar Committees and Review Committee-I

2. That pursuant to the order dated 12.12.1996 in the case titled as T.N. Godavarman Thirumulpad vs Union of India & Ors. bearing Writ Petition (Civil) No. 202 of 1995, the Government of Goa set up the Sawant Committee to demarcate private forests in the State vide a gazette notification dated 06.07.1997. [Annexure 1 (Colly) @ Pg. 27]. The Sawant Committee identified approximately 47 sq. kms of Private Forest.
3. Thereafter, the Government of Goa set up another committee namely the Karapurkar Committee vide notification dated 04.09.2000 to review the work of the Sawant Committee.

4. The Sawant and Karapurkar Committees in their final report dated 16.12.2002 identified 67.02 sq. kms of Private Forest. However, the demarcation of private forest areas with pegs on the ground was not done by either of these committees.
5. In 2003, pursuant to the direction of the Hon'ble High Court in a PIL filed by the Applicant herein, the Forest Department started the demarcation of private forest areas identified by the Sawant and Karapurkar Committees. On 30.06.2008, the Forest Department completed the demarcation of the private forest areas, which was reduced to 41.21 sq. kms from 67.02 sq. kms. The exclusion of 20 sq. km forest area by the Forest Department (from 67.02 sq.km to 41.21 sq.km) was challenged by the Applicant herein in 2013 vide a Writ Petition, which was subsequently transferred to the Hon'ble NGT and numbered as O.A. No. 18/2013.
6. Thereafter, the State of Goa, Respondent No.1 herein, vide notification dated 03.05.2018, appointed a Review Committee i.e. the Deepshikha Sharma Review Committee (hereinafter "RC-I") to cross check the reports of the Sawant and Karapurkar Committees as well as the demarcation report of the Forest Department.
[@Pg.30, Annexure 1(colly) of the Application]
7. In 2020, the RC-I finalized the private forest area as 46.11 sq.km. The Hon'ble NGT vide order dated 18.08.2020, accepted the Deepshikha Committee (RC-I) Report, finalized the private forest area as per the Sawant and Karapurkar Committees at 46.11 sq.km and disposed of the OA. The State Government of Goa filed an appeal against the said order dated 18.08.2020, which SLP was rejected vide order dated 01.02.2021.

[@Pg.39-41, Annexure 3 of the Application]

Brief Background of the Thomas and Araujo Committees

8. The State Government of Goa vide notification dated 21.11.2012 set up 2 District Level Committees, one each for North and South Goa, headed by ex-forest officers Shri V T

Thomas and Shri Francisco Araujo respectively (hereinafter 'T&A Committees') to continue with the work done by the Sawant and Karapurkar Committee.

9. After identifying the Provisional Private Forest Areas, the T&A Committees had prepared plans for some survey numbers and excluded some of them **entirely on ocular basis** without any strong scientific basis and methodology, whereas clear quantifiable Three Parameters are defined by the State Government for identification of area as Private Forest, which are as follows:
 - i. 75% of the tree Composition should be of forestry species
 - ii. The area should be contiguous to the Government Forest and if in isolation, the minimum area should be 5 ha.
 - iii. Canopy density should not be less than 0.4
10. Further, due to grievances received from private citizens and NGOs on inclusion or non-inclusion of certain areas as private forests and to ensure a uniform approach, the Government disbanded the T&A Committees with immediate effect on 23.04.2018 before submission of their final report and mandated RC-I to review the Survey Nos. identified by T&A Committee also, besides reviewing the survey nos. identified by Sawant and Karapurkar Committees.
11. Since RC-I undertook review of the Sawant and Karapurkar Committees on priority and was unable to review the work of the T&A Committees, Review Committee-II (hereinafter "RC-II") was formed on 21.01.2020.
12. That the T&A Committees submitted their reports on 10.12.2018 and 28.12.2018 respectively, i.e. eight months after their disbandment. These reports were not accepted by the State Government. Therefore, for the reasons mentioned above, **the entire exercise done by the T&A Committees is provisional, which was to be reviewed by**

the RC-II as per the Terms of Reference of the notification dated 21.01.2020. It is submitted that in view of these facts, the RC-II did not exceed its Terms of Reference.

13. Further, at the beginning of the review exercise by RC-II, an advertisement inviting objections, publishing the list of provisionally identified survey nos., which included survey nos. demarcated on ocular basis by T&A Committees was published on 15.02.2020 and on 14.03.2020. The advertisement was also published on the website of the Forest Department. Since the Applicant has been closely following the matter, it must be aware about this information in public domain. Hence, the Applicant raising the matter after more than two to three years and that too at the end of the review exercise is not justified.
14. While the 5 Interim Reports were submitted to the Government, the Government was apprised that the Survey Nos. finalized by T&A Committees have also been reviewed as it was done on ocular basis. This has been approved by the Government. It thus, makes clear that the Committee is working as per its prescribed mandate. Further, 3 Interim Reports were uploaded on the Forest Department website on 13.09.2021. In these reports, specified detailed methodology adopted was mentioned along with the mention of review of the area demarcated on ocular basis by the T&A Committees. Furthermore, a detailed methodology was placed before the Hon'ble NGT on 26.11.2021 in Execution Application No. 21/2021, a copy of which was provided to the Applicant. The Applicant did not raise any objection then, however, when the exercise is nearing completion, the Applicant is challenging the methodology now, putting at risk all the work that had been done and concluded by the Answering Respondent and when finally nearing to the completion of the exercise.
15. Period of limitation given in Section 14(3) of NGT Act, 2010 is 6 months from the first time the cause of action arises. Cause of Action first arose when the interim reports

were uploaded on the Forest Department website on 13.09.2021. Present Application is filed on 06.04.2022 which is after 202 days, and thus, is liable to be dismissed on the ground of limitation.

16. After analysing the records/reports submitted by the T&A Committees, it was noticed that the survey and demarcation of private forest were done on ocular basis without any scientific technology. In this regard it is submitted that both T&A Committees in their reports itself have mentioned about doing the exercise ocularly. Thus, RC-II in its 9th meeting discussed in detail the areas whose demarcation and plan are finalized by T&A Committees and unanimously agreed that all such survey numbers will be reviewed by the Committee through field verification and final decision shall be taken as per field reports. Further, in its 10th Meeting, it was decided that all the survey numbers which were identified and later excluded in its final report by the T&A Committees will be reviewed by RC-II.
17. It is pertinent to mention that some Survey numbers finalised by Thomas Committee are in variance with the Survey no. finalised by DCF (Working Plan) Committee in O.A. No. 478/2018 which has been accepted by the Hon'ble NGT. Example for the such situation is that Survey nos 106/1 and 107/1 of Talaulim, demarcated area is 99 Ha as per Thomas Committee whereas it is 33.72 Ha as per RC-I report. Further the petitioner have accepted without challenging the findings of the RC-I report in this respect. Therefore, if plan prepared by Thomas Committee on ocular basis without any scientific basis in this particular case is accepted by the RC-II, then it will be in violation of the Hon'ble NGT order in OA No. 479 of 2018.
18. In both the reports submitted by T&A Committees, it is mentioned that crop composition and canopy density was judged ocularly. Numerous survey numbers were also excluded by these Committees arbitrarily in its final report without ground

verification, which has also been contested by the Applicant also. Further DCF(North) and DCF(South) have also reported that the plans prepared by the T&A Committees were on ocular basis. The Review Committee had the mandate to review all provisionally identified Sy. Nos. Further, it is important to mention that both Thomas and Araujo committee had also included already finalized Sy Nos in O.A No. 479/2018 which has been disposed of by Hon'ble NGT based on the works of RC-I. Furthermore, excluded Survey Numbers were also being taken for review by RC-II as exclusion was also done by the Thomas and Araujo committee on ocular basis and without ground verification or justification. For instance, survey number 204 at Socorro Village under Bardez Taluk was provisionally identified as Private forest and later 204/1 and 204/4 were excluded arbitrarily by Thomas committee, however when RC-II reviewed the survey numbers with FSI map and field verification by sub-committee, it was found that part of the survey number was fulfilling the criteria of private forests and reported in Vth Interim report and submitted to Hon'ble NGT. Further, as there is substantial curtailment of rights involved due to identification of any land as Private Forest wherein Forest Conservation Act,1980 is applicable, it is not fair to declare any area as Private Forest merely on ocular basis. Therefore, the RC-II decided to review ocularly finalised areas i.e. all those areas for which plans prepared as well as excluded on an ocular basis by T&A Committees, following the same methodology through which other areas are reviewed as there cannot be any discrimination between finalised survey nos., whether excluded or for which plans were prepared ocularly.

19. RC-II adopted similar methodology as adopted by RC-I, the report of which has been accepted by the Hon'ble NGT. To strengthen the procedure, RC-II used LISS IV Forest Cover Maps (which has a resolution of 5.8m against standard FCM of 23.5m resolution) obtained from Forest Survey of India, Dehradun to identify the areas with canopy

density of 40% and above, which is more scientific and unbiased. The methodology has been duly approved by the Government of Goa.

20. That the RC-II requested Forest Survey of India to prepare High Resolution Forest Cover Map (FCM) fulfilling the following criteria:

- a) Having more than 0.4% canopy density with area contiguous to private/ govt forest
- b) Having area more than 5ha

Thereafter, RC-II digitised all the 3349 survey numbers identified by Thomas and Araujo Committees and superimposed it on the Forest Cover Map

21. That 91.83 sq. km area was found to be qualifying the criteria of Area and Canopy Density. Out of 91.83 sq. km area, certain survey numbers had already been reviewed by RC-I. Total 87.50 sq. km was subjected to field enumeration through 5% sampling by the Field Enumeration Committees. Out of 87.50 sq. km area, only 25.634 sq. km area was found to fulfil the 3rd criteria i.e. 75% Forest Species Composition. The RC-II is reviewing the 25.634 sq. km area. RC-II has received more than 8000 objections from the land owners. In view thereof, the RC-II is giving a public hearing to each individual and undertaking their demand for 100% enumeration or re-verification.

22. That the Survey Plan indicating qualifying areas completed till date is 10.97 sq. km. It is submitted that Public Hearing in respect of 10 sq. km area is completed so far, whereas public hearings for the remaining 0.97 sq. km is under process.

Out of the 10 sq. km area-

- i. 4.55 sq. km area has been finalised as Private Forest in 60 survey numbers by RC-II after conducting public hearing in 1678 survey numbers.

- ii. 5.45 sq. km area has been referred back to field enumeration committees for complete/ 100% enumeration of the area or re-verification of the area as demanded by the objectors/ land owners during public hearing
23. That the State Government has approved the proposal for notifying 4.55 sq. km area as private forest. **The Government of Goa has vide Gazette Notification No, 7/4/2023-FOR/213 dated 10.08.2023 has notified the said area of 4.55 sq. km as Private Forest.** A copy of the Gazette Notification No, 7/4/2023-FOR/213 dated 10.08.2023 is annexed herewith as **ANNEXURE A-1.**
24. It is submitted that the work of RC-II is final in respect of survey numbers reviewed. With approval of State Government, the Interim Reports submitted by RC-II are henceforth termed as Part Final Report and the 6 Part Final Reports are uploaded on the Forest Department's Website till date.
25. The T&A Committees had taken up field verification during the period 2012 to 2017, therefore the satellite data of 2014-2015 of Forest Cover Maps/ classified images of FSI were used to superimpose the digitized maps of survey numbers of provisionally identified private forest areas. The Forest Survey of India has certified after field verification that data provided by them is correct and accurate. Further, it is submitted that the FSI Map is relied for canopy density as it is unbiased and highly scientific using modern technology supported by ground truthing, with FSU having more than 30 years of experience in preparing forest cover maps.
26. It is submitted that for the study, image interpretation of the satellite data was done using ERDAS imagine Digital image Processing software and Arc GIS software was used for preparing different digital layers and thematic maps. The validation of maps was done with the help of very high-resolution Google Earth Satellite imageries. **During 2020, the ground validation of the mapping work could not be carried out**

due to Covid-19 travel restriction all over the country. However, ground truthing was carried out in the month of June-2022. A total of 58 number of locations were visited on ground and found correct. Out of these 58 locations, 50 locations fall in area ≥ 5 ha, with the canopy density more than 40% and 1 locations fall in < 5 ha area, with canopy density more than 40%. The Forest Survey of India vide its Letter F.No. 22-435/2020-FGD-2659 dated 05.07.2022 written to the Principal Chief Conservator of Forest (PCFF), Goa Van Bhavan, Forest Department, Altinho, Panaji, Goa apprised the PCFF about the ground truthing carried out by it. The Letter F.No. 22-435/2020-FGD-2659 dated 05.07.2022 written to the Principal Chief Conservator of Forest (PCFF), Goa Van Bhavan, Forest Department, Altinho, Panaji, Goa by the Forest Survey of India is annexed herewith as ANNEXURE A-2.

27. Further, a specific issue raised by the Applicant is regarding the issuance of NOCs for conversion by the Government. It is submitted that the Applicant has annexed a Circular dated 10.11.2021 [**@Pg. 255-256, Annexure 9 of the Application**] which specifically states that the advice of the Learned Advocate General, extracted as follows, has to be followed while granting NOC's for conversion-

"In view of the order of the Hon'ble Supreme Court of India it will be therefore not possible to permit development of any plot /land which has an area of more than 1 hectare and 0.1 canopy density, which have been excluded by the review committee from the purview of Private Forest.

However, the plots/ land /survey numbers which have been excluded by the review committee from the purview of the private forest and which have an area of less than 1 hectare can be cleared for the purpose of development, as the restrained order of the Hon'ble Supreme Court of India is not applicable to the plots which have area less than 1 hectare.

Similarly, other permissions under various statutes including Goa Preservation of Trees Act, 1984 can also be granted strictly in accordance with the provision of the said law."

28. Despite having annexed this Circular, the Applicant states that it has no faith in the said Circular dated 10.11.2021. The Applicant has not stated any survey numbers or any particular individual in respect of which the NOC for conversion has been issued qua the 8.64 sq. km area allegedly finalised by the T&A Committees. It is only on conjectures and surmises that the Applicant has been claiming that such NOCs are being issued. Further, despite the Government of Goa having issued a specific Circular dated 10.11.2021 to follow the directions issued by the Hon'ble Supreme Court vide its order dated 10.02.2015 in Civil Appeal Diary No. 37492/2014, the Applicant is not willing to accept it for reasons best known to them.

THROUGH


SRIHARSHA PEECHARA
Advocate for the Respondent
E-28, Jangpura Extension
New Delhi-110014
Mob: 9717466788
Email-shpeechara@gmail.com

PLACE: NEW DELHI

DATE: 11.08.2023

OFFICIAL GAZETTE



GOVERNMENT OF GOA

PUBLISHED BY AUTHORITY

SUPPLEMENT

GOVERNMENT OF GOA

Department of Forests

Notification

No. 7/4/2023-FOR/213

Whereas, the Government of Goa in compliance to the Hon'ble Supreme Court order dated 12-12-1996 in Writ Petition (Civil) No. 202/1995, T.N. Godavarman Thirumalpad V/s Union of India and others, constituted various committees for the identification of Private Forests in the State of Goa from time to time and the process of identification of Private Forest is being monitored by Hon'ble National Green Tribunal (NGT);

And whereas, in compliance with the Hon'ble High Court Order in Writ Petition No. 334 of 2006 dated 16-12-2009, the Government of Goa vide Notification No. 7-1-2009/FOR/439 dated 27-11-2012 published in the Official Gazette, Series II No. 36 dated 06-12-2012 constituted two Committees, namely North Goa Forest Division Committee and South Goa Forest Division Committee (hereinafter referred to as "said Committees"), for identification of balance areas of private forests in the State. Accordingly, the said Committees provisionally identified balance areas of private forest in the State of Goa from the year 2012 to 2018;

And whereas, to review the private forest areas provisionally identified by the said Committees, the Government of Goa vide Notification No. DCF(WP)/Pvt.For/16(THC)/2013(WZ) 19-20/26 dated 21-01-2020, published in the Official Gazette, Series II No. 44 dated 30-01-2020, constituted a review committee

headed by Conservator of Forests (Conservation) which was subsequently headed by the Chief Conservator of Forests vide Notification No. DCF(WP)/Pvt.For/16(THC)/2013(WZ)19-20/119 dated 18-06-2020 published in the Official Gazette, Series II No. 13 dated 25-06-2020 (hereinafter referred to as the "Review Committee");

And whereas, the Government of Goa vide Notification No. MS-REV.PF/DCF/WP/2018-19/393/177 dated 18-09-2020 published in the Official Gazette, Series No. II No. 26 dated 24-09-2020, read with Addendum No. MS-REV.PF/DCF/WP/2018-19/393/205 dated 26-10-2020 published in the Official Gazette, Series II No. 32 dated 05-11-2020 and Addendum No. MS-REV.PF/DCF/WP/2020-21/97 dated 03-06-2022 published in the Official Gazette, Series II No. 11 dated 16-06-2022, notified 16 site inspection teams in 156 villages to carry out site inspection of properties meeting private forest criteria of canopy density and area as per Forest Survey of India Map, in respect of the provisionally identified private forest by the said committee;

And whereas, the claims and objections were sought and received from the owners/representatives of provisionally identified private forest through public notices. The Review Committee conducted personal hearing of objectors, whose area fulfils the criteria of Private Forest;

And whereas, Hon'ble National Green Tribunal vide Order dated 07-01-2021 in E.A. No. 26/2020 in O.A. No. 478/2018 [Earlier O.A. No. 16/2013 (WZ)] has directed that the entire exercise of identification and demarcation of balance private forests in terms of order of the Tribunal dated

12-10-2018, be completed positively within three months and that if any grievance survives, it will be open to the applicant to take further remedies in accordance with law and to upload the final report on the website for information of the concerned parties;

And whereas, in pursuance of the said direction of Hon'ble National Green Tribunal, the Review Committee has so far reviewed 1678 survey numbers out of 3349 survey numbers, which were identified by the said Committees. Accordingly, review committee has finalized an area of 455.1081 Hectare as private forest area in 60 qualifying survey numbers;

Now, therefore, in pursuance of Hon'ble National Green Tribunal order, the Government of Goa hereby notifies the part final report on Private Forest encompassing an area of 455.1081 Hectare which has been reviewed and finalized in all respects by the Review Committees till its 6 (Six) Part Final Reports, as Private Forest in the State of Goa.

TABLE

Survey Numbers finalized as Private Forest by review committee having an area of 455.1081 HA.

Sr. No.	Taluka	Village	Survey Numbers provisionally identified as private forest by Thomas & Araujo Committee	Survey Numbers finalized by Review Committee and reported in its part final report*	Extent of Area finalized as private forest (in Ha.)
1	2	3	4	5	6
1.	Pernem	Pernem	224	224/1(p)	11.82
2.	Ponda	Ponda	83	83(p)	2.44
3.	Ponda	Ponda	84	84(p)	1.56
4.	Ponda	Curti	99	99(p)	1.90
5.	Ponda	Curti	100	100(p)	1.85
6.	Quepem	Quitol	75(p)	75(p)	5.52
7.	Quepem	Quitol	79(p)	79(p)	2.58
8.	Quepem	Quitol	80(p)	80(p)	1.23
9.	Quepem	Quisconda	14(p)	14(p)	45.89
10.	Quepem	Corla	10(p)	10(p)	6.968
11.	Sanguem	Colomba	50(p)	50(p)	14.51
12.	Sanguem	Colomba	53(p)	53(p)	3.62
13.	Sanguem	Uguem	70(p)	70(p)	5.24
14.	Sanguem	Uguem	59(p)	59(p)	15.97
15.	Sanguem	Uguem	63(p)	63(p)	22.08
16.	Sanguem	Uguem	81(p)	81(p)	16.57
17.	Quepem	Sulcoma	18(p)	18(p)	14.3412
18.	Quepem	Sulcoma	21(p)	21(p)	3.61
19.	Quepem	Sulcoma	29(p)	29(p)	7.29
20.	Quepem	Sulcoma	36(p)	36(p)	4.0634
21.	Quepem	Sulcoma	37(p)	37(p)	2.2037
22.	Quepem	Sulcoma	40(p)	40(p)	3.84
23.	Sanguem	Curpem	62(p)	62(p)	26.89
24.	Sanguem	Curpem	26(p)	26(p)	10.51
25.	Sanguem	Curpem	48(p)	48(p)	5.27
26.	Sanguem	Curpem	31(p)	31(p)	0.0125
27.	Sanguem	Curpem	37(p)	37(p)	6.14
28.	Canacona	Nagarcem-Palolem	159(p)	159(p)	5.902

1	2	3	4	5	6
29.	Canacona	Nagarcem-Palolem	162(p)	162(p)	1.185
30.	Salcete	Raia	399	399	1.376
31.	Salcete	Raia	402	402	1.816
32.	Salcete	Raia	405(p)	405(p)	0.297
33.	Dharbandora	Piliem	7	7(p)	5.02
34.	Dharbandora	Piliem	15	15(p)	17.21
35.	Dharbandora	Piliem	16	16(p)	19.36
36.	Sattari	Xelpo-Curdo	23	23(p)	13.85
37.	Bardez	Socorro	204	204(p)	6.2385
38.	Bardez	Assagao	59	59(p)	2.4
39.	Bardez	Assagao	67	67(p)	9.95
40.	Bardez	Assagao	68	68(p)	0.3023
41.	Bardez	Siolim	309	309(p)	0.1325
42.	Sanguem	Santona	34(p)	34(p)	5.15
43.	Sanguem	Santona	35(p)	35(p)	12.17
44.	Sanguem	Santona	60(p)	60(p)	4.84
45.	Sanguem	Patiem	47(p)	47(p)	0.27
46.	Sanguem	Coranguinim	19(p)	19(p)	2.64
47.	Sanguem	Coranguinim	23(p)	23(p)	0.9
48.	Sanguem	Coranguinim	5(p)	5(p)	5.75
49.	Sanguem	Neturlim	74(p)	74(p)	4.94
50.	Sanguem	Tudou	2(p)	2(p)	36.35
51.	Sanguem	Salauli	38(p)	38(p)	1.14
52.	Sanguem	Bhati	36(p)	36(p)	10.05
53.	Quepem	Quedem	9(p)	9(p)	24.309
54.	Quepem	Naquerim	89(p)	89(p)	0.776
55.	Quepem	Naquerim	90(p)	90(p)	0.864
56.	Dharbandora	Sigao	21(p)	21(p)	7.2
57.	Dharbandora	Sangod	10(p)	10(p)	2.84
58.	Dharbandora	Dharbandora	94	94(p)	3.089
59.	Dharbandora	Dharbandora	106	106(p)	2.89
60.	Bardez	Pomburpa	16	16(p)	0.07

*Note: Any new survey number formed due to partition of any of the above survey numbers after 27-11-2012 shall be deemed to have been notified as Private Forest, if the indentified area comes within said survey numbers.

This Notification shall come into force on the date of its publication in the Official Gazette.

By order and in the name of the Governor of Goa.

Nathine S. Araujo, Under Secretary (Forest).

Porvorim, 9th August, 2023.

www.goaprintingpress.gov.in

Published and Printed by the Director, Printing & Stationery,
Government Printing Press,
Mahatma Gandhi Road, Panaji-Goa 403 001.

PRICE—Rs. 3.00

PRINTED AT THE GOVERNMENT PRINTING PRESS, PANAJI-GO—172/80—08/2023.



(भारत सरकार, पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय)
(Govt. of India, Ministry Of Environment, Forest & Climate Change)

कौलागढ़ मार्ग पो० ओ० आई०पी०ई०
Kaulagarh Road, P.O. - I.P.E.,
देहरादून - 248 195
Dehradun - 248 195

dated: 5 July, 2022

F.No. 22-435/2020-FGD - 2659

To

Principal Chief Conservator of Forest (PCCF)
Goa Van Bhavan
Forest Department
Altinho, Panaji, Goa-403001

Sub: Ground truthing of Forest Cover Mapping of Goa using High Resolution Satellite Data (IRS-Resourcesat-2 LISS-IV)

Ref: Letter no. DCF (WP)/ISFR/2022-23/86 dated 27.04.2022 from Dy Conservator of Forest, Working Plan Division, Goa

Sir,

A project was given to FSI for **Forest Cover Mapping of Goa using High Resolution Satellite Data (IRS-Resourcesat-2 LISS-IV 5.8 m spatial resolution)** vide letter no-CF(C)/03/ Pvt. Forest/2019-20/FD/5438 dated 30.01.2020, from PCCF, Goa. The study was completed and report submitted to the Goa State forest department in January, 2021, as per the criteria given in the said letter, mentioned below:

- 75% of the tree composition of such lands should be of forestry species
- The area should be either contiguous to the government forest lands or if in isolation, the minimum area identified should be 5ha.
- Canopy density should not be less than 0.4.

For the study image interpretation of the satellite data was done using ERDAS Imagine Digital Image Processing software and Arc GIS software was used for preparing different digital layers and thematic maps.

The validation of maps was done with the help of very high resolution Google Earth Satellite imageries. During 2020, the ground validation of the mapping work could not be carried out due to Covid-19 travel restriction all over the country. However, ground truthing has been carried out in the month of June-2022. A total of 58 number of locations were visited on ground and found correct. Out of these 58 locations, 50 locations fall in area ≥ 5 ha, with the canopy density more than 40% and 8 locations fall in < 5 ha area, with canopy density more than 40%. The details of the ground validation locations are enclosed as Annexure-I and Annexure-II.

Yours sincerely,

Encl: Annexure-I & Annexure-II


(Meera Iyer)
Joint Director (FGD)