REPORT
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ESTIMATING AND MAPPING CFR POTENTIAL

For Madhya Pradesh, Chhattisgarh, Jharkhand, and Maharashtra

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EXECUTIVE SUMMARY

The Community Forest Resource (CFR) rights provisions of the Forest Rights Act 2006 (FRA) have the potential to transform forest governance in India, as they decentralize the authority of forest management to Gram Sabhas. But their implementation has been quite poor. One of the reasons is the lack of information regarding how much forest land might be eligible for CFR claims and in which villages. There is therefore no pressure on the implementing agency to make progress towards a clear target. This study estimates (a lower bound for) the potential area that could come under CFR rights and the locations of the villages with this CFR potential in four important central Indian states: Madhya Pradesh, Chhattisgarh, Jharkhand and Maharashtra, using a combination of Census of India data and maps, and Geographic Information System (GIS) techniques.

Given the differences in the manner in which forests have been demarcated in the region, the villages and the area of CFR potential was estimated in two parts. All the villages that, as per Census 2011, have more than 10 ha of forest area within their revenue boundaries were first identified and form one part of the estimate. The second part consists of identifying those villages that are in or adjacent to Reserve Forests located outside village revenue boundaries. For such villages, it is assumed (based on field observations) that their customary boundary would extend to at least 2 km into the forest; this area is estimated using GIS.

We encountered several challenges while implementing our methodology. It was difficult to obtain good quality, error-free Census village boundary maps. In many cases, the latest Census maps have incorrectly allocated large areas of Reserve Forest to erstwhile tiny Forest Villages. There are also peculiarities/errors in Census data, such as the presence of villages that have both zero area and zero population, or cases of under-reporting of forest area, etc. While some of these errors could be rectified, our estimates are nevertheless subject to some uncertainties, especially in the case of Madhya Pradesh.

Based on our analysis, we estimated that in Chhattisgarh the minimum CFR potential is 53,843 km^2 in 11,445 villages, and in Madhya Pradesh it is 57,948 km^2 in 19,158 villages. In Jharkhand, a total of 21,175 km^2 could be potentially claimed as CFR by 12,516 villages, and in Maharashtra 50,264 km^2 could be claimed by 17,256 villages.

Thus, across these 4 states, ~60,000 villages could potentially claim CFR rights under the FRA over an area of at least ~1,83,000 km^2. This will potentially benefit the livelihoods of a total of ~6.26 crore people, including ~2.36 crore people belonging to Scheduled Tribes and ~0.66 crore people belonging to Scheduled Castes (as per Census 2011). However, when we compare the potential with the area of actual CFR rights recognition (which in most states is itself an overestimate due to being clubbed with other rights and double counting), we find that only Maharashtra (where we have accurate data) has made significant progress (rights recognized are 23% of our estimated potential), while in the other states the extent of recognition is much lower, with Jharkhand being the lowest at just 2%.

By highlighting this gap between potential and actual recognition and by providing the spatial information necessary to identify the CFR potential areas, this report hopes to provide some impetus to the fuller implementation of CFR provisions of FRA.

1. Background

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, commonly known as the Forest Rights Act or FRA, is a landmark legislation in the history of independent India. It recognizes the multiple historical injustices imposed on forest-dwellers in India, particularly in central India, since the colonial period. To redress these injustices, the FRA provides for recognizing multiple forms of rights: individual rights to pre-existing cultivation and settlement, i.e. Individual Forest Rights (IFRs), community rights to use forests, also known as Community Rights (CRs), the right to manage and protect the forests i.e. Community Forest Resource (CFR) rights, as well as habitat rights of particularly vulnerable tribal groups (PVTGs). It also asks that Forest Villages be converted to revenue villages. The CFR rights provisions in particular can potentially transform forest governance in India, because they decentralize the authority of forest management to Gram Sabhas.

Unfortunately, the implementation of the FRA has been far from satisfactory. While recognition of IFRs has been promoted, albeit with lapses, the biggest lacuna has been the poor implementation of the CFR provisions. The reasons for non-implementation of CFR rights are multiple. Among these is a lack of clarity, both in government and among proponents of the FRA, as to where and **how much forest land might be eligible for CFR rights claims and in which villages.** Consequently, there is no 'target' that state governments must reach and against which their performance must be measured in terms of recognizing CFR rights.

Estimating the **CFR potential and mapping its locations** in a state helps in three ways:

1. It enables the nodal agency for FRA implementation at the state level to focus their efforts in the appropriate locations and anticipate some of the issues and challenges that they might face.
2. It enables civil society groups working on CFR rights recognition to also direct their energies and understand the spatial context of claim-making.
3. It enables state governments to measure progress against a target, prevents faulty declaration of 'completion of FRA process' and enables advocacy groups to hold state governments accountable in the implementation of CFR rights.

This study attempts to identify the villages that are likely to have CFR rights on forests and estimates (a lower bound for) the potential area that could come under CFR rights in four important central Indian states: Madhya Pradesh, Chhattisgarh, Jharkhand and Maharashtra. It also maps the location of these potential CFR claim areas and will make these maps and village lists publicly available.

Two caveats are in order. First, this estimate is approximate and meant primarily as an overall guide, with limited micro-level validity and based on a conservative estimate of how much might be claimed. Claims by individual Gram Sabhas may very well exceed, and deviate spatially from, these estimates. Moreover, the claims may come from hamlet-level Gram Sabhas, whereas our lists are perforce at the village-level. Second, estimating the CFR potential is only a first step; it must be followed by the actual process of awareness building and rigorous claim-making and verification on the ground. This will require intense groundwork to understand forest legal status and records in different locations, and the consequent challenges faced by (and solutions for) communities actually making CFR claims.

2. Estimating CFR Potential

Generating an estimate of, how much land could come under CFR rights and where, is not an easy task, especially given the complexity of land and forest settlement in our country and the poor quality of land records and maps available. A first crude estimate was attempted by the CFR-LA network using only tabular census data. It was based on the simple assumption that if a village had forest area within its revenue boundary (i.e., listed in the forest column of census village amenities tables), then that area would (at the very least) certainly constitute that village's CFR. [1] Even this lower-bound estimate showed that (after excluding 5 north-eastern states and J&K) at least 35 million hectares (i.e., 350,000 km^2) should come under CFR rights. Against this, the area of CFR rights granted came to only ~3% (which itself is an overestimate given the tendency to mis-report other rights (such as Section 3(2) rights) under "community rights" column in the reports submitted by the states to the Ministry of Tribal Affairs.

But the reality of forest 'settlement' (i.e., notification and demarcation), especially in central Indian states, is that large tracts of forest are demarcated as Reserve Forest (RF) and kept 'outside' the revenue settlement, thereby not being part of any revenue village and therefore not showing up in the census tables. These large patches have many settlements inside them (often designated as 'Forest Villages'), and of course have many more abutting or surrounding them. Field experience shows that villagers from at least these villages (those inside and those adjacent) would be using these forests and exercising customary rights over them.[2]

Our identification of CFR potential villages and the estimation of CFR potential therefore has two parts to it:

1. All the villages that have **more than 10 ha of forest area[3] within their revenue boundaries** (as per Census 2011 village amenities tables) are first identified, and their forest area aggregated.

2. For villages that are in or adjacent to 'forest lands outside village revenue boundaries', we used a thumb rule that their customary boundary would extend to at least **2 km** into the forest. We then identified and estimated the area in such a **2 km buffer to forest adjacent villages**. This 2 km figure is a very approximate thumb-rule, based on field observations about the areas that are likely to be under customary use and management.

The total of the CFR potential is then the sum of areas in parts 1 and 2 above. The list of CFR potential villages is the 'union' of the lists in parts 1 and 2, because there may be some villages that have more than 10 ha of forest area within their revenue boundary and are also adjacent to forests that are outside any revenue boundary.

[1] CFR-LA. 2016. Promise and Performance: Ten Years of the Forest Rights Act in India. Community Forest Rights-Learning and Advocacy, India, available at (https://www.fra.org.in/document/Promise%20and%20Performance%20Report.pdf).

[2] It is also possible that other villages that do not abut the forest exercise at least usufruct rights in these forests, which may constitute community rights (CR) under the FRA. Only a ground-level public verification process can clarify such rights. To the extent that they may overlap with CFR rights of abutting villages, they will not add to the potential CFR area.

[3] The 10 ha threshold is to eliminate villages with tiny amounts of forest area, which are unlikely to suffice or even be of interest as CFRs.

3. Using GIS to map and estimate CFR potential

The survey and demarcation of forest boundaries in central Indian states happened under different administrations during the British colonial period: various directly administered Provinces as well as various princely states. Moreover, the types of communities and their use of the forests was also varied, including Adivasis engaged in shifting cultivation (kumri or podu in local languages), farmers engaged in settled cultivation and using forests for grazing and firewood collection, and nomadic pastoralists. The extent of resistance from communities to British takeover of the forests was one more complicating factor. So the way forest boundaries were drawn and rights were recognized by the British varied a lot. Broadly speaking, we see two situations:

a) The forest land is inside the revenue boundary of the village, and

b) The forest land is outside the revenue boundary of any village.

The first situation is illustrated in Figure 1 below with the example of a village from Chhattisgarh state. The green line is the village revenue boundary, and the hatched area is the area on which CFR was recognized.

The second situation is illustrated in Figure 2 below with an example from Maharashtra state. The revenue boundary of the village includes only the agricultural lands and settlement areas, and the forest customarily used by the villagers lies outside the revenue boundary, in the RF land. The Gram Sabha of this village identified this customary use area (locally called *nistaar*) on forest compartment maps and showed evidence such as grazing passes issued for different compartments to claim these areas as their CFR.

How does one estimate the CFR area that is likely to be claimed in these two situations?

Part (a) For the cases where the forest area is within the revenue boundary of the village, one can reasonably assume that villagers would have rights over **at least that area**, and this area can be estimated from 'forest' column in the village-wise Census 2011 data (village amenities directory). To be conservative, we include only villages with 'forest' area more than 10 ha.

Part (b) For the cases where the forest area is outside the village boundary, we propose a thumb-rule, based on field experience, that villages inside or adjacent to the RF may claim **at least up to 2 km into the RF** (from the edge of their village).

Adopting this approach, we implemented it in a Geographic Information System (GIS) framework[4] to develop maps and estimate the CFR potential as follows:

1. Obtain village boundary maps of a state in vector (shapefile) format.
2. Check their geo-positioning or if necessary geo-rectify the maps.
3. Ensure that the attributes include Census 2011 codes (or if the codes are from earlier censuses, translate them to 2011 codes).
4. Compare the polygons in the map with the Census 2011 village and town lists so as to identify and fix problems such as missing villages, duplicate village ids, etc., and assign the 'non-village' polygons to 'town', 'waterbody', and 'forest'.
5. Link Census 2011 landuse data (which are provided in the village amenities directory) to this

[4] In particular QGIS from www.qgis.org, an open source software.

Figure 1. *Example of Sonoli village (Rajnandgaon district, Chhattisgarh) where forest area claimed as CFR is entirely within the revenue boundary. Figure on top shows the location of actual forest and the figure below shows the boundary of CFR granted. As can be seen, there are villages on all sides of Sonoli village.*

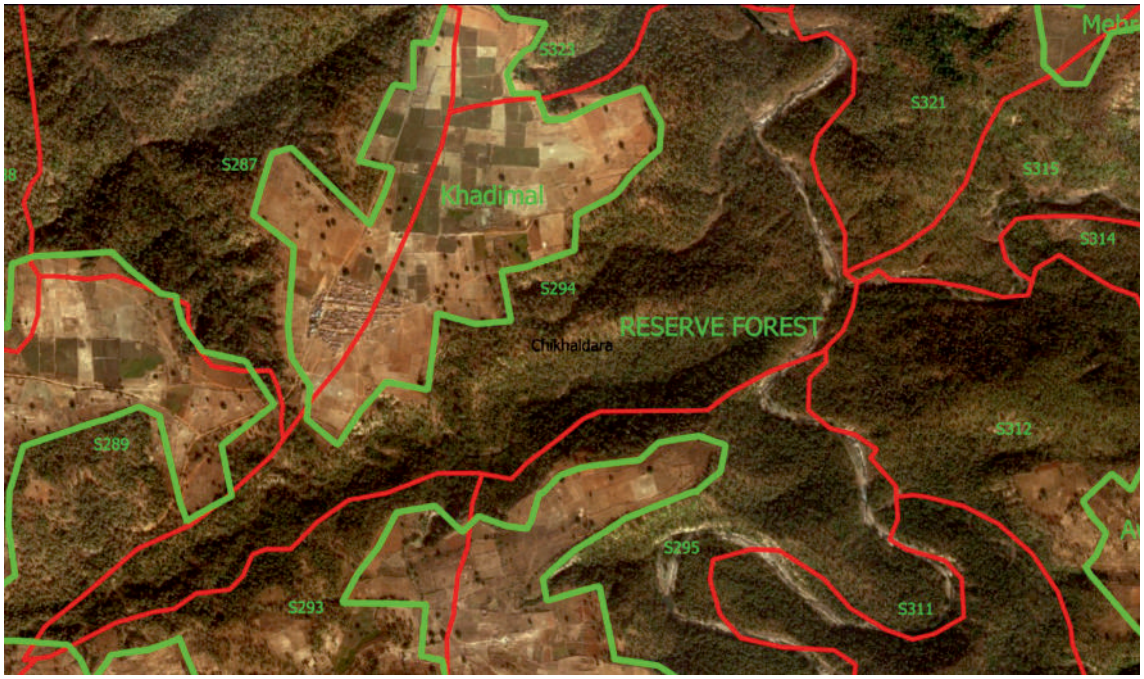

Figure 2. *Example of Khadimal village, Amravati district, Maharashtra, with forest and CFR rights outside its revenue boundary: Green lines are village revenue boundaries, and red lines are forest compartment boundaries. Khadimal village was granted CFR rights over the forest in compartment S294 and S295.*

vector layer. Identify villages with more than 10 ha in the 'forest' landuse field. This completes part (a) above.

6. Identify all the 'forest' (RF) polygons in the shapefile, and all the 'forest adjacent' villages; draw an 'inward buffer' of 2 km into the forest polygons and estimate its area.

7. Merge the list of villages with forest area with the list of villages adjacent to forest polygons (avoiding double counting) to create a full list of villages with CFR potential.

An illustration of how step 6 is applied is given in Figure 3 and Figure 4 below.

Note that our methodology is flexible. For instance, if it is believed that the typical distance to which CFR claims may extend is say 4 km, one can incorporate the same into the buffer estimation (step 6) and re-estimate the potential. Similarly, the estimate can also be modified by changing the threshold of 10 ha of forest within a village. Note also that there is some possibility of over-estimation due to the fact that an RF-adjacent village that also has substantial area of forest within its own boundary may not always claim any or all of the 2 km buffer that we have predicted.

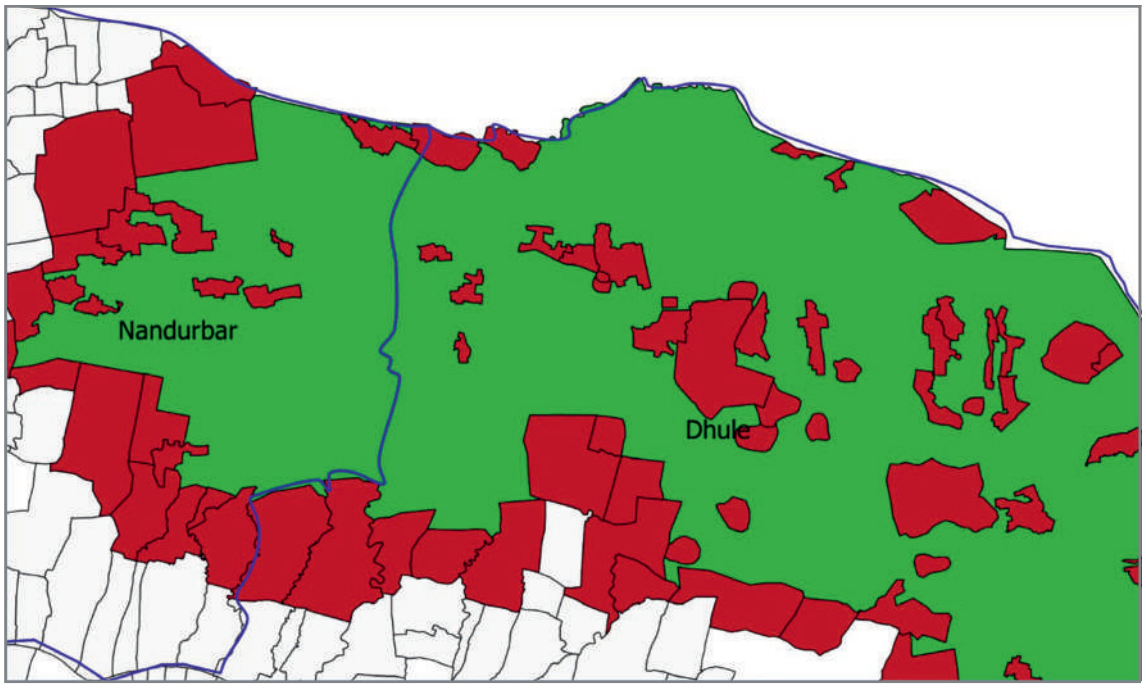

Figure 3. *Identify RF polygons (green) and forest adjacent villages (dark red)*

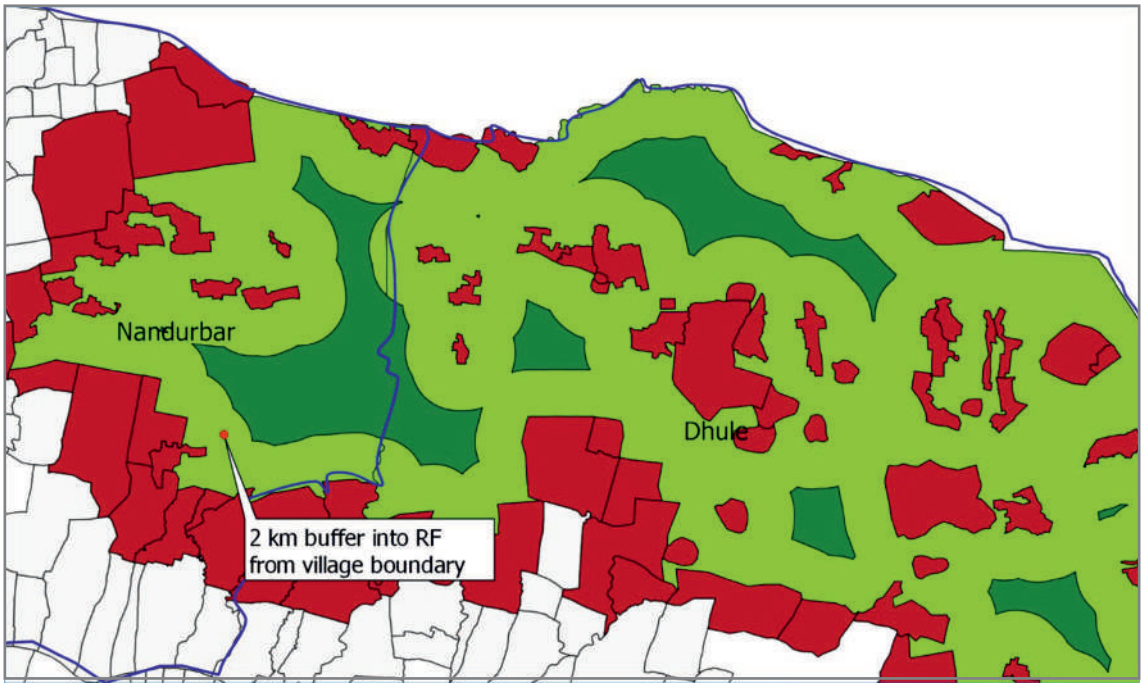

Figure 4. *Estimate likely CFR claim area by drawing a 2 km buffer from edge of village boundary into RF (light green). Some area of RF may remain unclaimed (dark green).*

4. Applying the method to four major CFR potential states: Challenges involved

Central India represents the main region of the country where a large forested tract coincides with a large forest-dwelling population (including especially Adivasi or Scheduled Tribe populations) and highly unsettled or historically unrecognized forest rights. This is therefore the region where the CFR potential is the highest. We chose to implement this methodology in viz., **Madhya Pradesh (MP), Chhattisgarh (CG), Jharkhand (JH)** and **Maharashtra (MH)**. [5]

We encountered several challenges in implementing our methodology:

1. **Obtaining Census village boundary maps:** Census of India is the most comprehensive source of village data in the country.[6] This includes village 'directories' that contain village population and land-use data, as well as District Census Handbooks (DCHBs) that include tehsil or block-wise maps showing village boundaries. However, to be usable, these maps have to be in digitized (shapefile) format. The most challenging step was obtaining reliable versions of these village boundary shapefiles, checking them for topological and data errors, and ensuring that they could be matched reasonably with ground realities and census data. This was especially true for Madhya Pradesh and Chhattisgarh, where a large number of 'Forest Villages' or villages inside forests are present but whose locations have not been provided with any accuracy in the Census Handbook maps. We tested village boundary shapefiles from various sources including SEDAC (Columbia University)[7] and National Remote Sensing Centre's Bhuvan database, censusgis.org, IIT Bombay[8] and so on, and finally used the one with least errors. While in the case of Jharkhand and Maharashtra, we were able to match the village layer with the census tables, in the case of Chhattisgarh, we were eventually unable to locate about 100 Forest Villages.[9]
2. **Errors in Census village boundaries (RF area wrongly distributed among Forest Villages):** The second problem was that in some heavily forested districts/tehsils, Forest Villages—which are typically tiny settlements within large forest areas that have not been surveyed and assigned revenue boundaries at all, and which were therefore depicted as dots in previous Census rounds—have been depicted in the Census 2011 Handbooks as large polygons, even when the official census landuse statistics continue to show tiny village areas. So the large RF polygons have disappeared and there is no forest outside village boundaries as per the Census map (Figure 5 and Figure 6 below). But the values in the total geographical area (TGA) and forest area columns in the census village amenities directory are small (forest area usually being shown as zero), indicating that the villages are still tiny enclaves with forest area outside their boundary. Thus, neither of our two methods (forest area from census tables or forest area in a 2 km buffer around the village) works.

[5] We had initially chosen Odisha also, but the Odisha government has supposedly released a similar 'FRA Atlas' report (https://www.downtoearth.org.in/news/forests/in-a-first-odisha-studies-potential-forest-land-under-fra-69481) so we did not cover Odisha in this exercise.

[6] Note that the term 'village' as used by Census includes revenue villages, standalone 'Forest Villages' and other unsurveyed settlements. Individual hamlets within revenue villages are sometimes listed separately.

[7] Including http://sedac.ciesin.columbia.edu/data/set/india-india-village-level-geospatial-socio-econ-1991-2001.

[8] https://www.cse.iitb.ac.in/~pocra/MahaCensus_shapefile_data1.2/MaharashtraCensus.html .

[9] The Chhattisgarh government is in the process of developing maps for Forest Villages with the help of IIT Roorkee. It is hoped that this will eventually enable the identification of such villages.

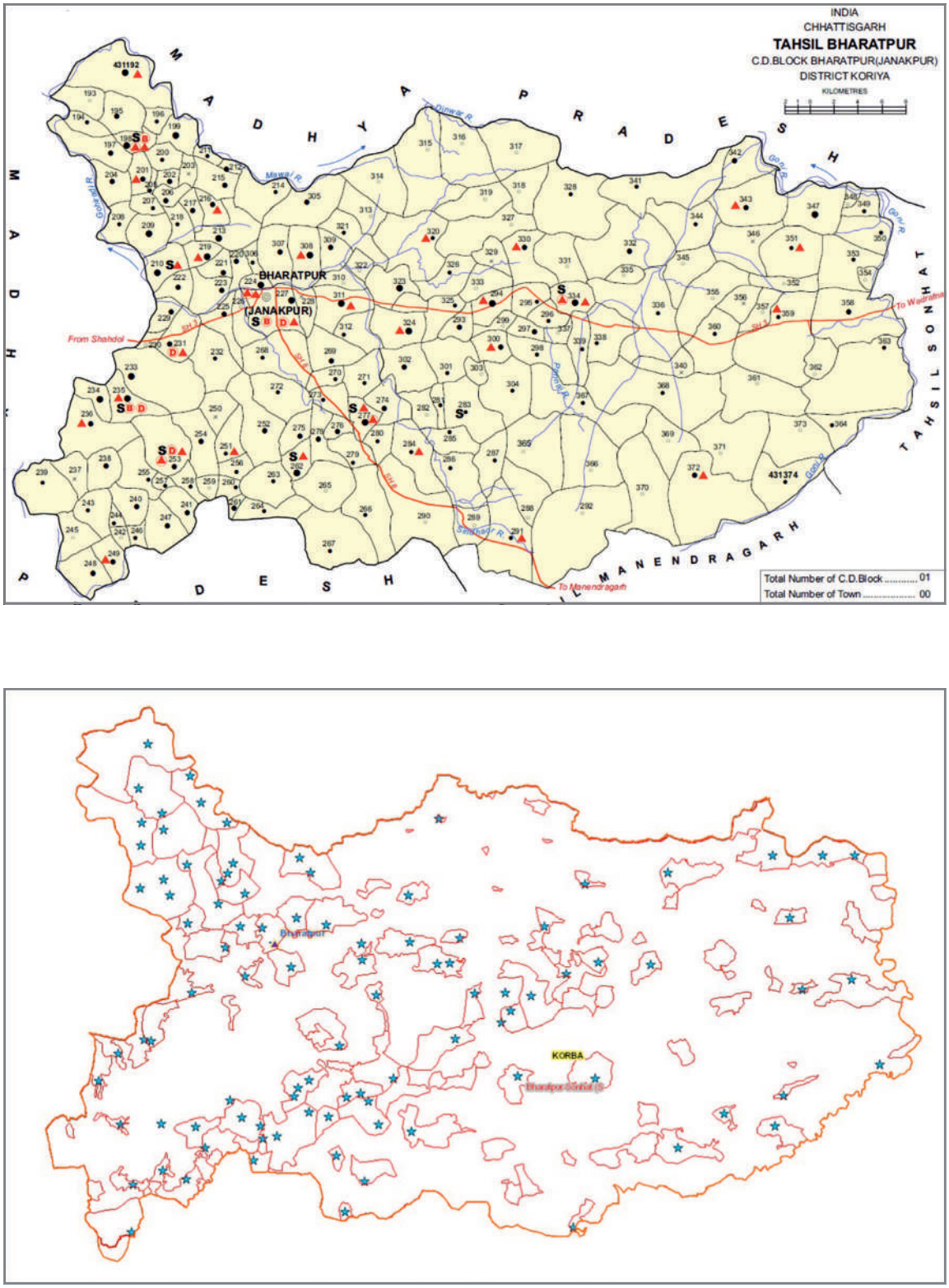

Figure 5. *Bharatpur tehsil, Koriya district, CG: The map from the DCHB 2011 (top), suggests that all land is within village boundaries. But TGA of the villages in census data adds to less than 1/3rd of the geographical area of the tehsil. The map from the CG state GIS portal (bottom) shows the correct picture: viz., large tracts of forest (blank space) lie outside village boundaries.*

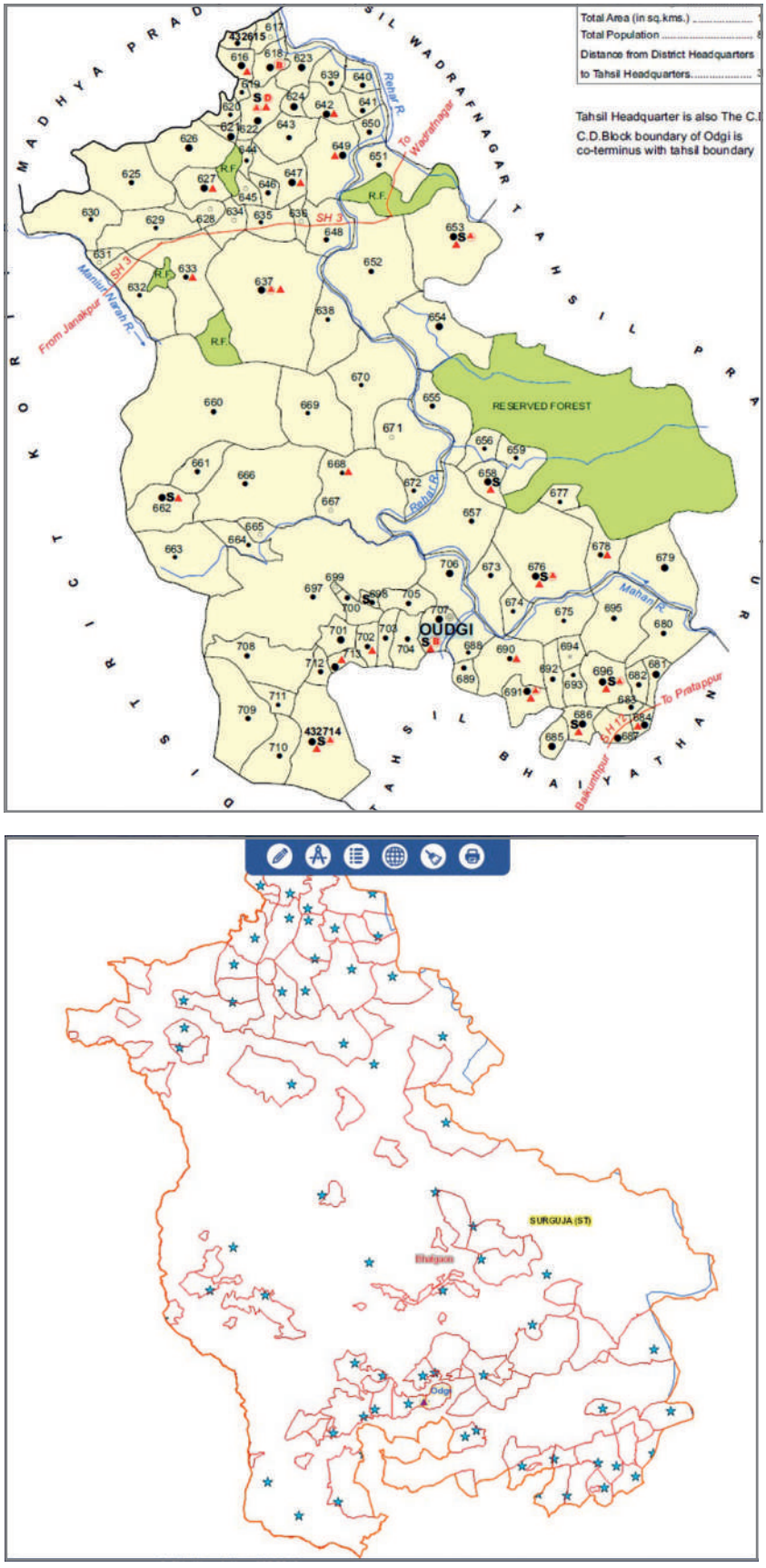

Figure 6. *Oudgi tehsil, Surguja district (now Surajpur), CG: The map from the DCHB 2011 (top), suggests that almost all land is within village boundaries (except the green RF patch). But TGA of the villages in census data adds to less than ¼th of the geographical area of the tehsil. The map from the CG state GIS portal (bottom) shows the correct picture: viz., large tracts of forest (blank space) lie outside village boundaries.*

That these newly drawn polygons in census maps are incorrect is apparent when one looks at the village boundary maps on the state GIS portals (see the bottom maps in Figure 5 and Figure 6), but these latter maps are not accessible for use in our analysis.

These errors were most prevalent in the Census 2011 maps for Chhattisgarh and Madhya Pradesh. In the case of Chhattisgarh, we were able to obtain and use an older shapefile that showed the forest boundary more correctly. In the case of Madhya Pradesh, however, we were unable to do so, and so the estimates remain highly approximate and locally inaccurate.

3. **Errors in Census data (Village boundary actually includes forest, but Census tabular data under-report the forest area):** We encountered many cases in Madhya Pradesh where the Census Handbook maps show that a village includes significant forest area, but the Census 2011 data show the forest area as 0 or very small, and a TGA that is much lower than what is shown in the map. Further digging indicated that the 1991 census data for the same villages show a large TGA and forest area, matching the areas indicated in the Census Handbook map. An example from Shivpuri district is given in Figure 7 below.

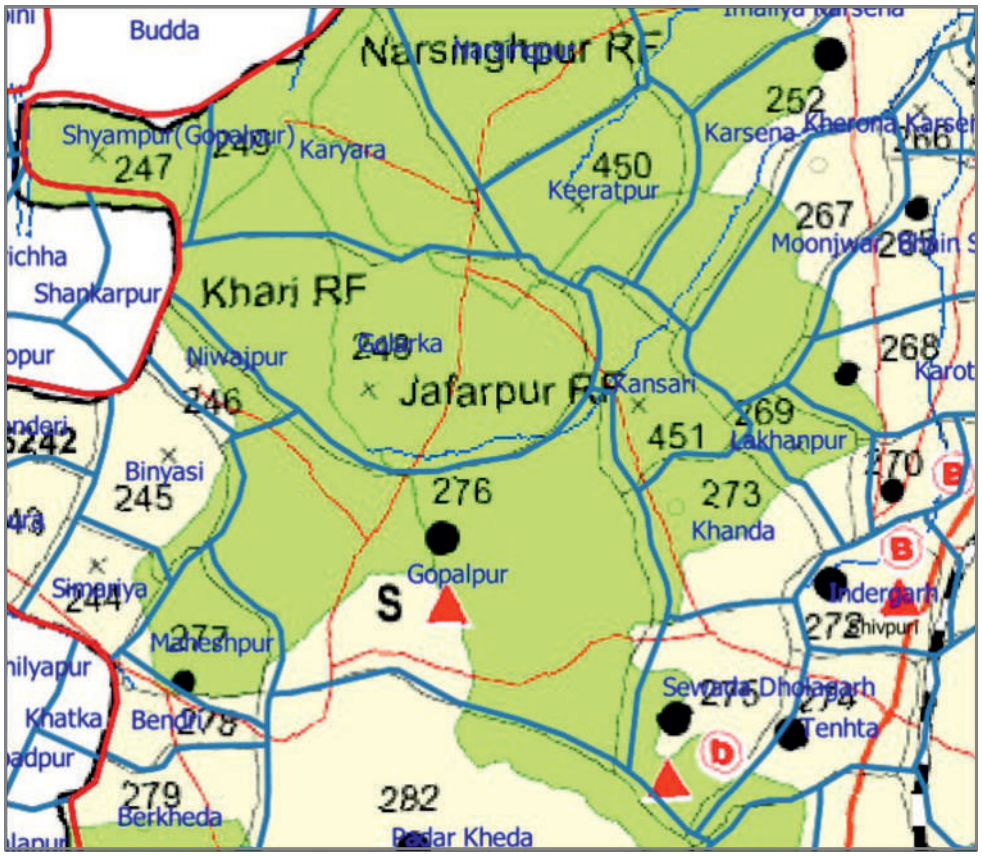

Figure 7. *Example of village boundary including large forest but Census 2011 data reporting lower figures: Gopalpur village (ID 276) in Shivpuri district, Shivpuri tehsil clearly includes a large forest area (green) within its boundary (blue line) as per Handbook, but Census 2011 data show 0 ha of forest. Census 1991 data show 3018 ha. The same is true for many neighbouring villages: Moonjwar, Karsena, and Karyara.*

This mismatch might be the result of a supposed recent policy in Madhya Pradesh to exclude forest areas from village revenue details even when the original revenue settlement included the forest. We identified at least 290 villages where a large forest area reported in 1991 was mis-reported as 0 in 2011, and ~2,200 cases where the forest area has dropped by more than **100 ha** from 1991 to 2011.[10] As the Shivpuri example shows, this is simply a change in reporting, not an actual decline in forest area. Although we have no way of systematically correcting these errors, we have tried to estimate the minimum additional CFR potential in Madhya Pradesh that might result from correcting this error (using the 'additional' forest area from these ~2,200 villages).

4. **Zero-area-zero-population villages:** In the Census 2011 tables, most states have tens or hundreds of villages that have zero TGA and zero population. It is not clear why these are listed in the census tables and even demarcated in the village layers with tiny polygons. Where such villages were inside or adjacent to the RF, we deleted the village polygon (i.e., merged it with the RF) before estimating the CFR potential and drawing up the list of potential CFR villages. The number of villages so deleted/merged were: 106 in Chhattisgarh, 38 in Madhya Pradesh, 0 in Jharkhand and 36 in Maharashtra.[11]

[10] In more than 1200 villages, the difference is more than **500 ha**. The blocks (in districts) particularly affected by this problem are Shivpuri (in Shivpuri), Obedullaganj (in Raisen), Ichhawar (in Sehore), Pawai and Shahnagar (in Panna), almost all of Sidhi district, Chitrangi (in Singrauli), several blocks in Jhabua and Alirajpur districts, and Kurai (in Seoni).

[11] The actual number of 'zero-TGA-zero-population' villages in each state was higher.

5. Results: CFR potential of the 4 states

The estimated (minimum) CFR potential based on the above methodology is as follows.

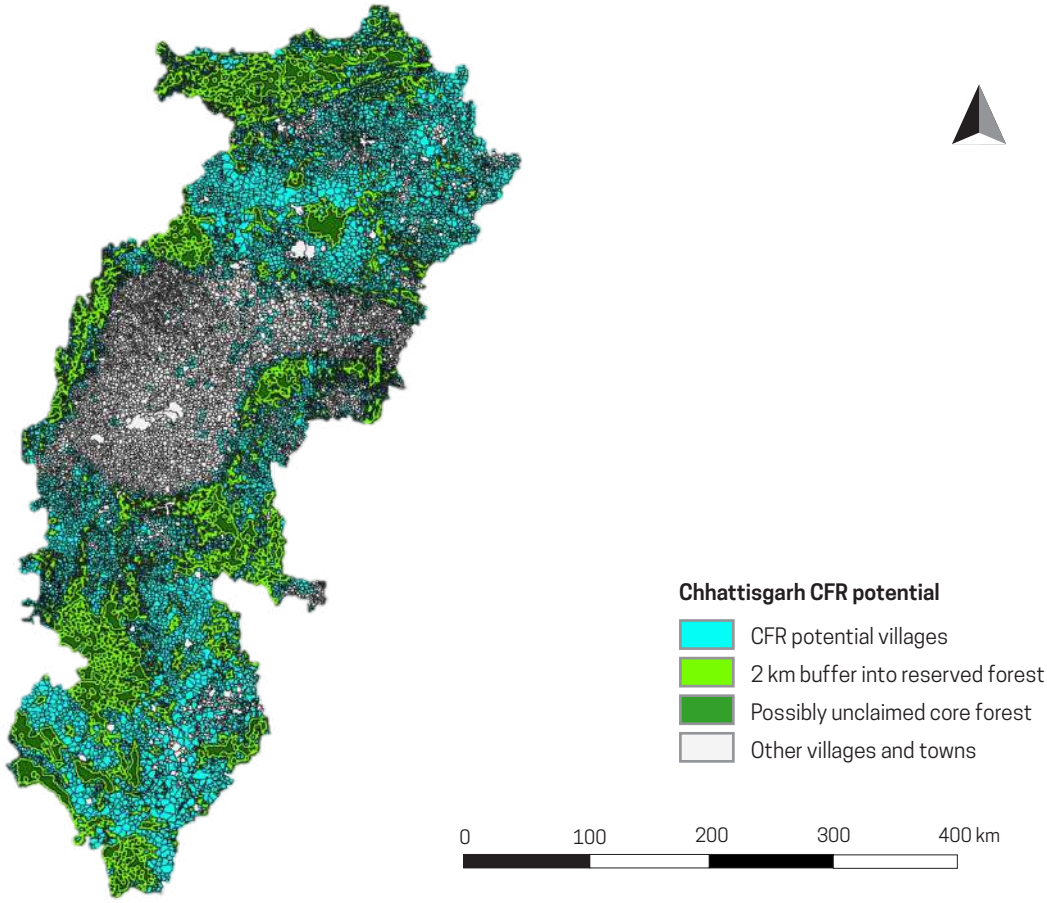

Figure 8. *CFR potential villages in Chhattisgarh (denoted by blue colour)*

5.1 CHHATTISGARH

a	Total number of villages in the state (Census 2011)		20,126
b	Number of forest-adjacent zero-TGA-zero-population villages		106
c	Villages containing forest area more than 10 ha		8,510
d	Forest area contained in these villages		19,904 km^2
e	Reserve Forest outside village boundaries [12]		38,570 km^2
f	Villages adjacent to these Reserve Forests		8,348
g	Extent of such RF falling under 2 km buffer		33,939 km^2
h	**Minimum CFR potential in CG**	d + g	**53,843 km^2**
i	**Minimum villages with CFR potential in CG (obtained by merging lists in c and f)**		**11,445**

[12] After dissolving the 'zero-TGA-zero-population' village polygons into the respective forest polygons.

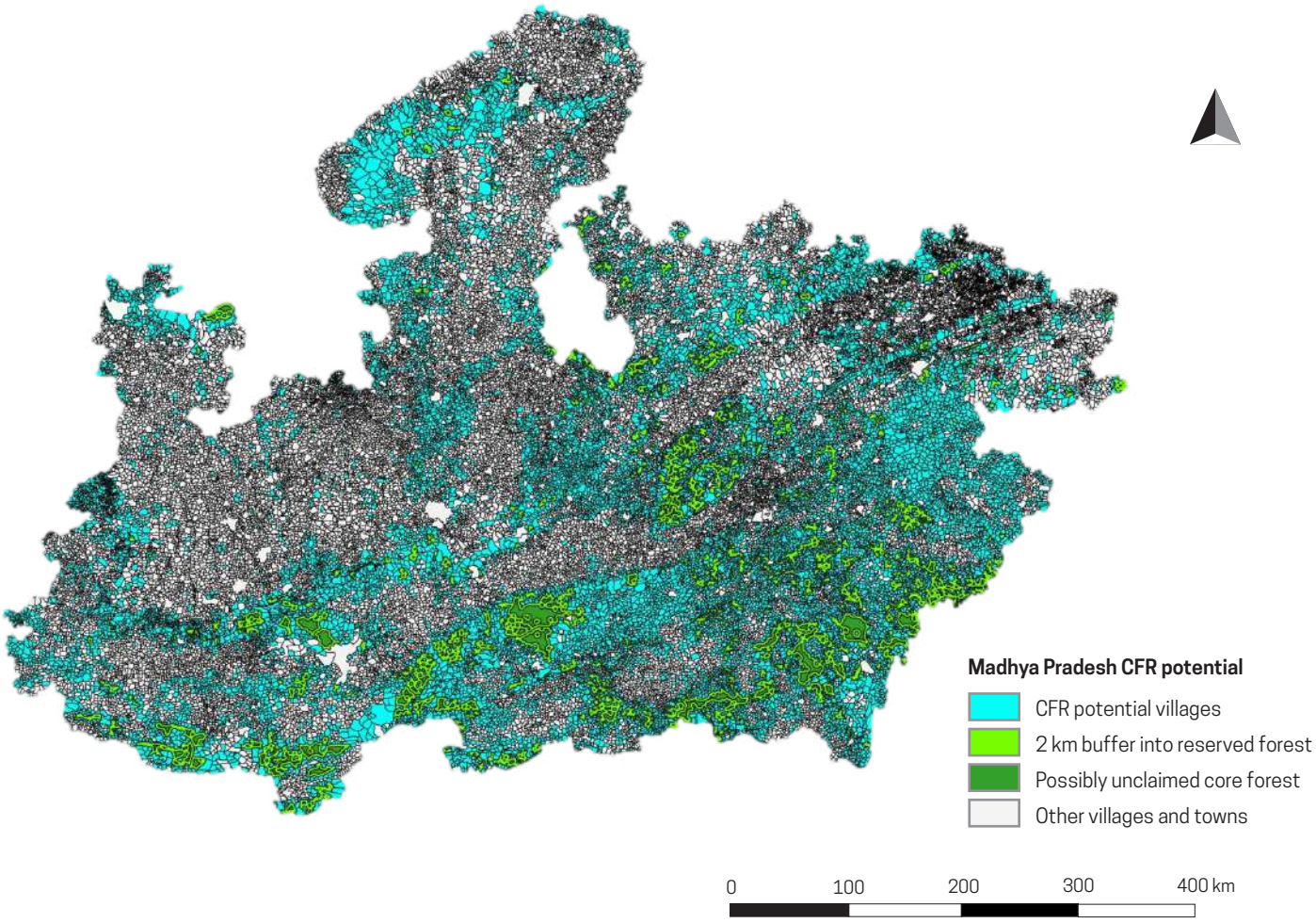

Figure 9. *CFR potential villages in Madhya Pradesh (denoted by blue colour)*

5.2 MADHYA PRADESH

a	Total number of villages in the state (Census 2011)		54,903
b	Number of forest-adjacent zero-TGA-zero-population villages		38
c	Villages containing forest area more than 10 ha		16,754
d	Forest area contained in these villages		37,411 km^2
e	Reserve Forest outside village boundaries		22,718 km^2
f	Villages adjacent to these Reserve Forests		6,285
g	Extent of such RF falling under 2 km buffer		20,537 km^2
h	**Total minimum CFR potential in MP**	d + g	**57,948 km^2**
i	Additional potential if 1991 forest areas are considered		9,222 km^2
j	**Total minimum villages with CFR potential in MP (obtained by merging lists in c and f)**		**19,158**

Given the major errors and uncertainties in the spatial data for Madhya Pradesh, we must acknowledge that the above estimate is to be treated with caution, and the village lists for Madhya Pradesh need to be refined in a tehsil-wise manner by those more familiar with ground conditions and with access to more accurate maps and other data. However, given the under-reporting of forest area in ~2,200 villages, even if we allow for other errors, we believe that our estimate of CFR potential is a conservative one.

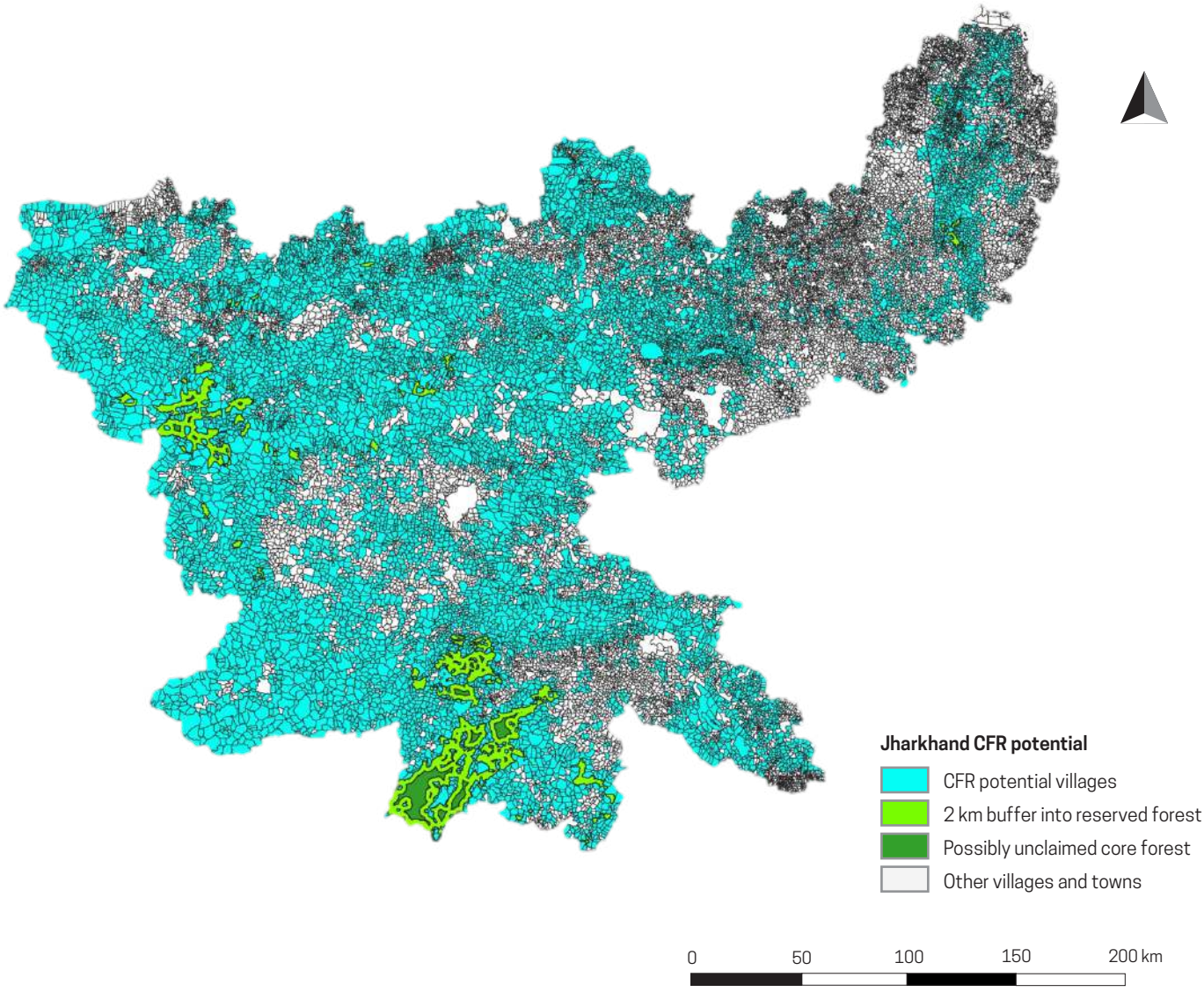

Figure 10. *CFR potential villages in Jharkhand (denoted by blue colour)*

5.3 JHARKHAND

a	Total number of villages in the state (Census 2011)		32,395
b	Number of forest-adjacent zero-TGA-zero-population villages		0
c	Villages containing forest area more than 10 ha		12,294
d	Forest area contained in these villages		18,877 km^2
e	Reserve Forest outside village boundaries [13]		2,609 km^2
f	Villages adjacent to these Reserve Forests		939
g	Extent of such RF falling under 2 km buffer		2,298 km^2
h	**Total minimum CFR potential in JH**	d + g	**21,175 km^2**
i	**Total minimum villages with CFR potential in JH (obtained by merging lists in c and f)**		**12,516**

[13] In passing, it may be noted that the area of Reserve Forest outside village boundaries is by far the lowest for Jharkhand (~2,600 km^2) as compared to other three states (where it ranges from 17,000 km^2 to 38,000 km^2). This reflects the significantly different pattern of village revenue and forest land demarcation in Jharkhand during the colonial period.

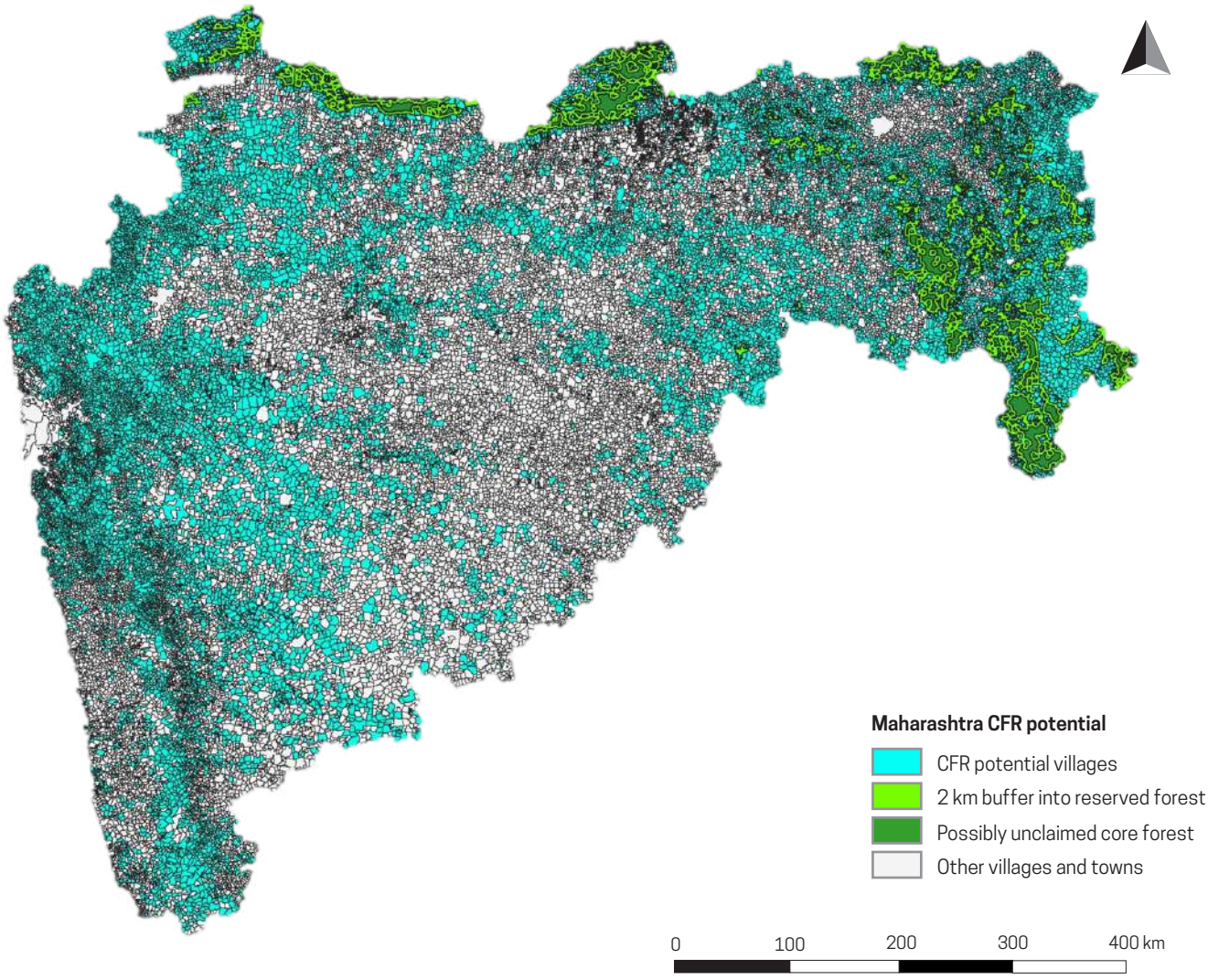

Figure 11. *CFR potential villages in Maharashtra (denoted by blue colour)*

5.4 MAHARASHTRA

a	Total number of villages in the state (Census 2011)		43,665
b	Number of forest-adjacent zero-TGA-zero-population villages		36
c	Villages containing forest area more than 10 ha		16,320
d	Forest area contained in these villages		36,043 km^2
e	Reserve Forest outside village boundaries		17,021 km^2
f	Villages adjacent to these Reserve Forests		3,679
g	Extent of such RF falling under 2 km buffer		14,221 km^2
h	**Total minimum CFR potential in MH**	d + g	**50,264 km^2**
i	**Total minimum villages with CFR potential in MH (obtained by merging lists in c and f)**		**17,256**

The actual lists of villages with CFR potential are being published on the ATREE website as spreadsheet files and the maps are being made publicly available on a WebGIS server.

Note that the total number of CFR potential villages includes villages with zero population but non-zero area. We have retained them as they are, because such uninhabited villages often have agricultural lands cultivated by neighbouring villagers, who may then also be using the forests in and around the village and may be eligible for claiming CFR rights.[14]

In all, we estimate that **~60,000 villages** have the potential to claim CFR area under the FRA in these 4 states over an area of ~1,83,000 km^2. This will potentially benefit the livelihoods of ~6.26 crore people, including **~2.36 crore people belonging to Scheduled Tribes and ~0.66 crore people belonging to Scheduled Castes** across these 4 states (as per Census 2011).

[14] For the record: the numbers of such villages (zero population, non-zero area) are: Maharashtra - 937, Chhattisgarh - 217, Madhya Pradesh - 1014, and Jharkhand - 624.

6. CFR Implementation

A comparison with the CFR implementation status reports submitted by the states to the Ministry of Tribal Affairs is given below:

Table 1. *Comparison of CFR potential and CFR recognition in the 4 states*

State	Minimum CFR potential from this study	Community rights area granted as per status reports	Caveats
Chhattisgarh	53,843 km^2	8,252 km^2 (15%)	Includes 3(2) area and community rights to other non-forest uses
Madhya Pradesh	57,948 km^2	5,931 km^2 (10%)	Includes huge area under Section 3(2) and community rights to other non-forest uses
Jharkhand	21,175 km^2	420 km^2 (2%)	Includes 3(2) area and community rights to other non-forest uses
Maharashtra	50,264 km^2 in 17,256 villages	11,769 km^2 (23%) to 5,071 villages	After removing 3(2) rights and multiple titles per village

Note: Source for area granted is Monthly Progress Report of January 2020 on the Ministry of Tribal Affairs website, except Maharashtra, where more detailed data came from the Tribal Research and Training Institute, Pune.

Note that the reported area of community rights granted include areas granted under Section 3(2) (development rights), except in the case of Maharashtra, where we were able to get village-wise data on the types of rights granted and eliminate all except CR and CFR titles. The over-reporting is extreme in the case of Madhya Pradesh and Chhattisgarh. In Madhya Pradesh the vast majority of the so-called community rights granted are Section 3(2).[15] In Chhattisgarh, different CR rights such as grazing, fuelwood collection, and NTFP collection recognized in the same village are being treated as separate titles and granted on the same area, in addition to reporting the Section 3 (2) claims under community claims. Moreover, there are numerous repeated entries of the same claim, thus exaggerating not only the number of titles granted but also the area granted under CFR.[16] In the case of Maharashtra, we were able to obtain the entire list of titles, and after removing Section 3(2) rights and other rights for non-forest use, and combining multiple titles issued to the same village, we estimate that 5,071 unique villages/hamlets have been granted CFR/CR titles over 11,769 km^2.

From **Table 1**, it is clear that Maharashtra has made much more progress (23% of potential area granted) than all the other states in terms of CFR implementation. The difference is even starker when one allows for the over-reporting in the case of Madhya Pradesh and Chhattisgarh. Jharkhand has an abysmal record, with only 2% of its CFR potential recognized.

[15] See SAMARTHAN. 2011. Recognition of Community Forest Rights under Forest Rights Act in Madhya Pradesh and Chhattisgarh. UNDP, New Delhi.

[16] For instance, a separate study by us of CFR/CR titles granted in Dhamtari district showed that 1378 titles have been granted, but the actual number of unique villages to which these titles have been given is only around 250.

7. Concluding Remarks

The CFR rights provisions in the FRA recognize the right of forest-dwellers to access and collectively manage the forests they have traditionally used. The vast central Indian forest belt, with a large population of Scheduled Tribes, is the region where CFR rights recognition needs to happen on a large scale. Our analysis provides the first spatially explicit estimates of the (minimum) CFR potential in four of the states in this region. Comparing with the rights recognized till 2019 indicates the vast gap that remains to be bridged — even the best performing state (Maharashtra) has recognized only about one-fourth of the area that should potentially come under community control. The progress of other states is quite abysmal, especially when we consider the fact that the heavily forested states of Chhattisgarh and Jharkhand were carved out of larger states in order to give more voice to the aspirations of forest-dwellers.

By highlighting this gap and providing the spatial information necessary to identify the CFR potential areas, we hope our analysis will provide some impetus to the fuller implementation of this key provision of the Forest Rights Act 2006.

The GIS-based methodology we have adopted can be easily extended to at least the other states that overlap with this vast central Indian forest belt, viz., Telangana, Odisha, West Bengal, Gujarat and Rajasthan. The inaccuracies and discrepancies we encountered in the data point to the numerous and gaping lacunae in tabular and spatial data on public lands in India, notwithstanding the setting up of state GIS portals,[17] and the inadequate public access and scrutiny of these data. Integrating cadastral maps and forest compartment boundary maps into this geodatabase and making such data publicly accessible in the CFR claim-making process would be the logical next step for strengthening democratic forest governance in the country.

[17] https://stategisportal.nic.in/stategisportal/

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BRLF Bharat Rural Livelihoods Foundation
An independent society set up by the Government of India to upscale civil society action in partnership with Government

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