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# **Chapter I**

## **Introduction**

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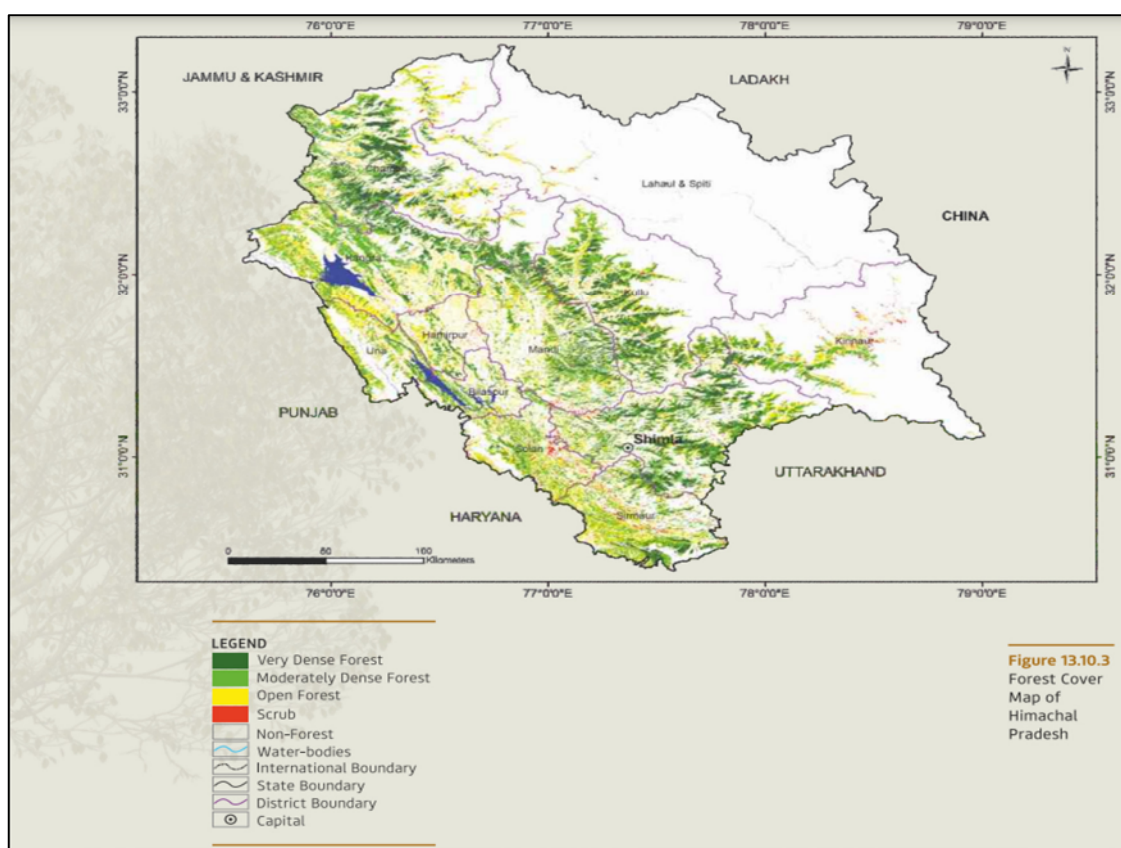


## Chapter I

### Introduction

Forests are a vital component in sustaining the life support system on Earth and are a source of timber, fuel, fodder and medicines. In addition to their aesthetic and cultural values, forests also act as rich repositories of biodiversity and are recognised for their role in regulating air quality and climate, soil formation and nutrient recycling. They also have a significant impact in reducing the risk of natural disasters, such as floods, droughts, landslides and other extreme events. Article 48A of the Constitution of India requires that the State shall endeavour to protect and improve the environment, safeguard forests and wildlife in the country. Under Article 51A, it is the duty of every citizen to protect and improve the natural environment, including forests, lakes, rivers, and wildlife, and to have compassion for living creatures. Sustainable Development Goal 15 aims to "protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss". This Performance Audit aims to support this goal by identifying the actual implementation of Compensatory Afforestation (CA) activities in the State of Himachal Pradesh.

**Map 1.1: Forest cover map of Himachal Pradesh**



Source: India State of Forest Report 2021

The Forest (Conservation) Act, 1980 and rules made thereunder govern the schemes of CA activities in the State.

### **1.1 Status of forests in Himachal Pradesh**

The forests of the State are important catchment areas for five major rivers, including the Beas, Chenab, Ravi, Sutlej and Yamuna. These forests not only support the agroforestry system in the plains of adjoining states, but also fulfil the hydropower needs of the state and nation. The State of Himachal Pradesh has a geographical area of 55,673 sq. km, constituting 1.69 *per cent* of the geographical area of the country. The State has 12 districts, all of which are hill districts. About one-third of the area in the State is permanently under snow, glaciers and cold deserts. Tree growth is minimal in this region due to harsh climatic conditions. The State has a Recorded Forest Area (RFA)<sup>1</sup> of 37,948 sq. km, which is 68.16 *per cent* of its geographical area. However, the actual area under forest is only 15,443 sq. km, which is only 27.73 *per cent* of its geographical area. According to National Forest Policy, 1988, at least two thirds i.e. 66 *per cent* of the geographical area should be under forests in hilly states like Himachal Pradesh. The State Government aims to bring 30 *per cent*<sup>2</sup> of the geographical area under forest cover through plantation over two lakh hectares of land by the year 2030. The rest of the RFA is barren land. The details of categories of classification of forests are given in **Table 1.1**.

**Table 1.1: Recorded Forest Area**

Sr. No.	Classification	Area in Km <sup>2</sup>	Percentage of Geographical Area
1	Geographical Area	55,673	100.00
2	Forest Area Legally Classified (RFA)	37,948	68.16
3	<b>Area under Forest Cover</b>	<b>15,443</b>	<b>27.73</b>
<b>Break up of Area under Forest Cover</b>			
i)	Very Dense Forest (VDF) <sup>3</sup>		3,163
ii)	Moderate Dense Forest (MDF) <sup>4</sup>		7,100
iii)	Open Forest (OF) <sup>5</sup>		5,180

Source: ISFR Report 2021 and HPFD Statistics Report 2019

<sup>1</sup> Recorded Forest Area (RFA) includes all the areas recorded as forest in government records. These largely consists of Reserved Forests (RF) and Protected Forests (PF), which have been constituted under the provisions of Indian Forest Act 1927 or its counterpart State Acts. Areas which have been recorded as forests in revenue records or have been constituted under any other State Act or local law are also included in the RFA.

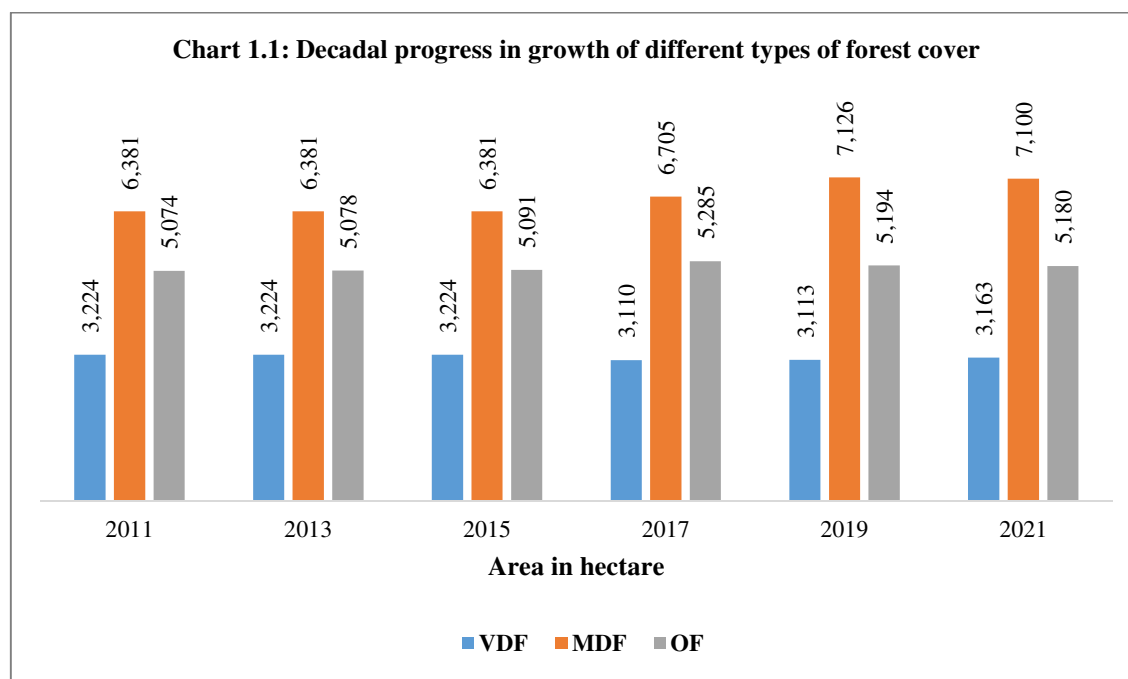
<sup>2</sup> As per the document Drishti Himachal Pradesh – 2030, the official SDG document of the Government of Himachal Pradesh.

<sup>3</sup> All lands with tree cover (including mangrove cover) of canopy density of 70 *per cent* and above.

<sup>4</sup> All lands with tree cover (including mangrove cover) of canopy density between 40 and 70 *per cent*.

<sup>5</sup> All lands with tree cover (including mangrove cover) of canopy density between 10 and 40 *per cent*.

During the period 2011 to 2021, the trend of different areas under forest cover is given in **Chart 1.1**.



*Source: India State of Forest Report (ISFR) of the years concerned. Figures indicate biennial distribution of different types of forest over a decade.*

As can be seen from the **Chart 1.1**, there has been a slight increase in the area under MDF and OF, whereas area under VDF has marginally decreased.

## 1.2 Circumstances necessitating diversion of forest land

Forests are generally used for the lifestyle and well-being of forest dwellers, villagers, and other people or species that are wholly or partly dependent on forests. They are also used for nature reserves, national parks, wildlife sanctuaries, biosphere reserves, as habitats for any endangered or threatened species of flora and fauna, and for agricultural purposes and rehabilitation of persons displaced from their residences due to river valley or hydroelectric projects, among others. Forest land is generally diverted for facilitating developmental activities for non-forestry purposes, such as the construction of power projects, irrigation projects, roads, railways, schools, hospitals, rural electrification, telecommunications, drinking water facilities and mining. The procedure for granting forest clearances for diversion of forest land for non-forest purposes is elucidated in subsequent paragraphs.

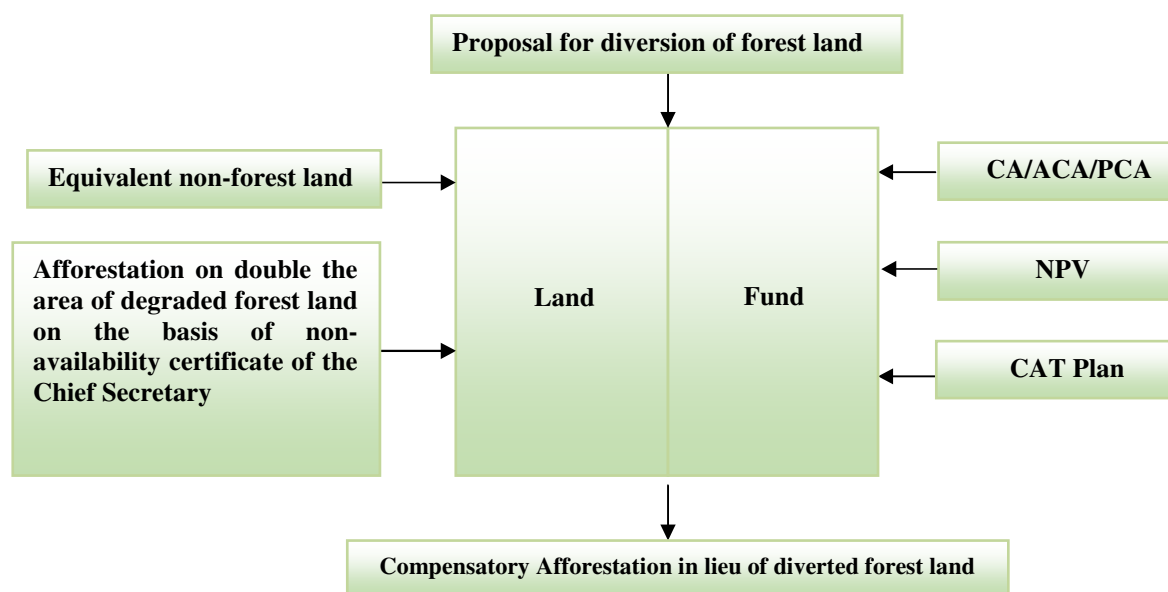
## 1.3 Need for compensatory afforestation

The diversion of forest land for non-forest use is based on the concept of ‘Tree for tree’ and ‘Land for land’. The Forest (Conservation) Act 1980 states that, as far as possible, non-forest land for Compensatory Afforestation (CA) should be identified in proximity or contiguous to Reserved Forest or Protected Forest. If non-forest land for CA is not available in the same district, it should be identified elsewhere in the State or Union Territory. If non-forest land is not available in the entire State or Union Territory, funds

for raising CA in double the area of the forest land diverted must be provided by the user agency. The non-availability of suitable non-forest land for CA in the State or Union Territory will be accepted by the Central Government only on a certificate from the Chief Secretary of the State or Union Territory Government. In case of Central Government or Central Undertaking, projects such as the extraction of minor minerals from riverbeds, construction of link roads, small water works, minor irrigation works, and laying of transmission lines, CA should be raised on degraded forest land, twice the area of the forest land being diverted.

The components of conditions for diversion of forest land for non-forest purpose are depicted in the **Chart 1.2**.

**Chart 1.2: Components for diversion of forest land for non-forest purposes**



Source: FC Act 1980 and FC rules 2003

As per the Forest Conservation Act 1980 (FCA 1980), the User Agency (UA) of the approved developmental project would provide money for the regeneration of forests which are sought to be diverted for the project. This regeneration is to be done by the State Authorities at some other designated and approved place. As per the scheme, in case, private non-forest land is provided by the UA, an area equal to the forest land diverted is to be afforested on this. However, in case private forest land is not available, afforestation needs to be carried out in Open Degraded Forest (OF) on an area twice the area of forest land diverted.

The UA is required to provide money at the prescribed rates, which is based on area to be diverted in hectares, nature of forest that is sought to be diverted, nature of project proposed to be undertaken, nature of area like tribal or non-tribal, proximity of forest site etc. The per hectare rate is notified for each year for different types of areas in which CA is to be undertaken and calculation is done at the Divisional Forest Officer (DFO) level to arrive at the money required for CA scheme. The money required is computed based on original cost for plantation and maintenance cost for 10 years based

on notified rates. Apart from CA, a UA may be required to undertake penal CA in addition, in cases involving violation of the provisions of the FCA, 1980.

As per Section 6 of the Compensatory Afforestation Fund Act, 2016, the money received for Compensatory Afforestation (CA)<sup>6</sup>, Additional Compensatory Afforestation (ACA)<sup>7</sup>, penal compensatory afforestation (PCA)<sup>8</sup>, net present value (NPV)<sup>9</sup> of the diverted forest land or catchment area treatment (CAT)<sup>10</sup> plan etc. is required to be used as per site specific schemes submitted by the State along with the approved proposals for diversion of forest land. After receipt of the money, the State Forest Department is to accomplish afforestation, for which money is deposited in the Compensatory Afforestation Fund, within a period of one to two years from the date of final approval of projects. These funds are to be used for the development, maintenance and protection of forest and wildlife management.

To compensate for the loss of tangible as well as intangible benefits from the forest lands that have been diverted for non-forest use, the net present value (NPV) of the land is to be recovered from the user agencies to adequately compensate for the loss of natural forests. Such funds are to be used for natural assisted regeneration, forest management and protection, infrastructure development, wildlife protection and management, supply of wood and other forest produce, energy-saving devices, and other allied activities.

#### 1.4 Procedure for granting forest clearances

Every User Agency (UA) that seeks to use any forest land for non-forest purposes (under Section 2 of the FC Act) is required to make a proposal to the Nodal Officer<sup>11</sup>, Forest Conservation Act, 1980 (FCA) of the concerned State/UT Government and endorse a copy of the proposal, along with a copy of the receipt obtained from the office of the Nodal Officer, to the concerned DFO or the Conservator of Forests,

<sup>6</sup> CA is one of the most important requirement/ conditions for prior approval of the Central Government for diversion of forest land for non-forest purposes and its purpose is to compensate the loss of 'land by land' and loss of 'trees by trees'.

<sup>7</sup> MoEF&CC in certain cases also imposes condition of Additional Compensatory Afforestation (ACA) in addition to CA.

<sup>8</sup> Penal compensatory afforestation (PCA) means afforestation work to be undertaken over and above the compensatory afforestation specified in the guidelines issued under the Forest (Conservation) Act, 1980, in lieu of the extent of area over which non-forestry activities have been carried out without obtaining prior approval of the competent authority under the Forest (Conservation) Act, 1980.

<sup>9</sup> NPV means the quantification of the environmental services provided for the forest area diverted for non-forestry uses, as may be determined by an expert committee appointed by the Central Government from time to time in this regard.

<sup>10</sup> CAT Plan is an important and essential plan for enhancing and maintaining the ecological health of the catchment area of the proposed irrigation/hydroelectric project through site-specific biological and engineering measures for conservation of soil & moisture and management of water regime. A proposal for diversion of forest land for Irrigation/Hydro-electric projects shall invariably be accompanied by detailed CAT plan except in respect of small hydel projects (maximum up to 10 MW capacity).

<sup>11</sup> "Nodal Officer" means any officer not below the rank of Conservator of Forests, authorised by the State Government to deal with the forest conservation matters under the FCA 1980.

Regional Office, as well as to the Ministry of Environment, Forest and Climate Change (MoEF&CC) under the provisions of the FCA.

MoEF&CC accords prior approval on proposals of the State/UT Government in two stages; first, an in-principle or Stage-I approval, and second, a final or Stage-II approval, based on compliance with the conditions given in the in-principle approval. Thereafter, when the State Government decides to permit the use of the forest land for non-forest purposes, it has to pass orders to that effect along with the conditions and safeguards imposed by the Central Government while granting Stage-I and Stage-II clearance.

Conditions relating to transfer, mutation, and declaration<sup>12</sup> as Reserved Forest (RF)/ Protected Forest (PF)<sup>13</sup> under the Indian Forest Act, 1927 of equivalent non-forest land for compensatory afforestation and funds for raising compensatory afforestation thereof, are stipulated at Stage-I. For mining purposes, additional conditions such as maintaining a safety zone area, fencing, and regeneration, etc., and for major and medium irrigation projects, catchment area treatment plans, are to be stipulated. After receipt of a report from the State Government regarding compliance with the stipulated conditions, final approval under the FC Act is issued.

The procedure for granting of permission under the FCA is depicted in **Chart 1.3**.

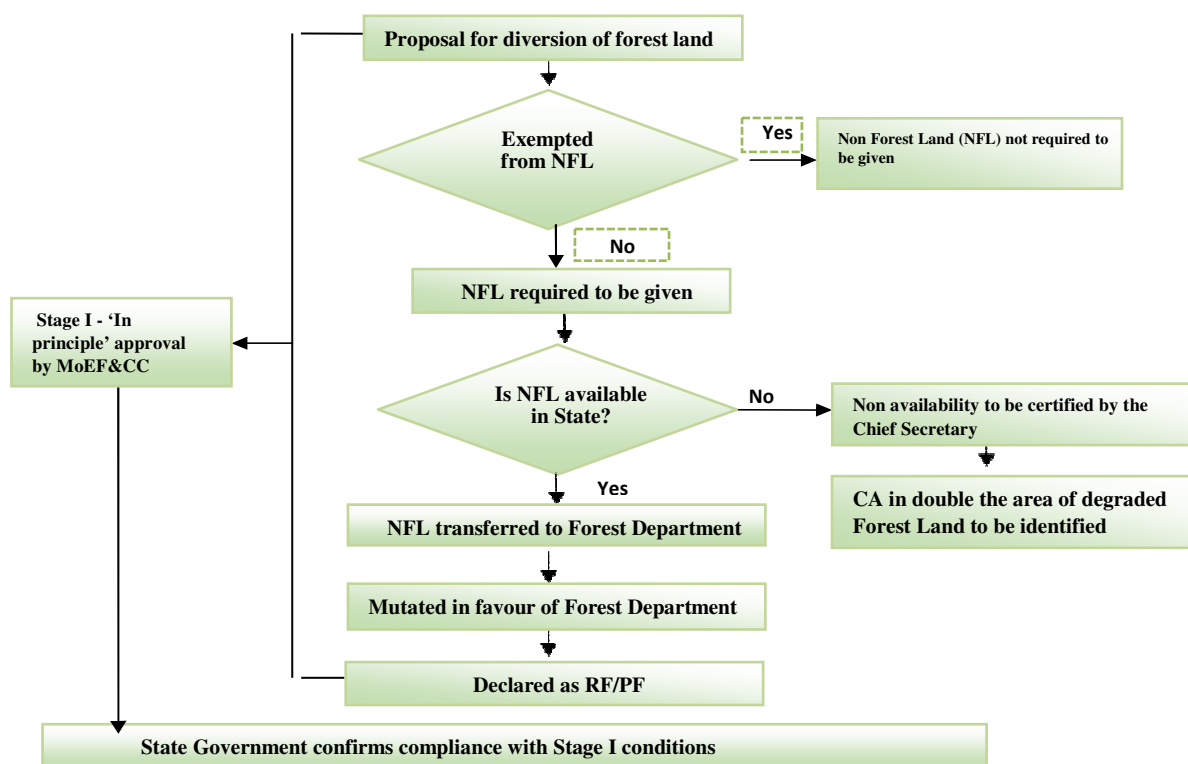
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<sup>12</sup> As per Forest Conservation Act, 1980, equivalent non-forest land identified for the purpose of Compensatory Afforestation is transferred in the name of the State Forest Department (after Stage-I approval and prior to Stage-II approval) and declared as reserved (RF)/protected forests (PF) under Section 4 or Section 29 of the Indian Forest Act, 1927 (within six month of Final approval), so that the plantation raised could be maintained permanently.

<sup>13</sup> Reserved Forest (RF) is an area notified under the provisions of India Forest Act 1927 or the State Forest Acts and having full degree of protection. In RFs all activities are prohibited unless permitted. Demarcated Protected Forest (DPF) is an area notified under the provisions of India Forest Act 1927 or the State Forest Acts having limited degree of protection. In Protected Forests (PFs), any existing rights of individuals or communities are not affected.



Chart 1.3: Procedure for diverting forest land for non-forest purpose



Source: FC Act, 1980 and FC Rules, 2003

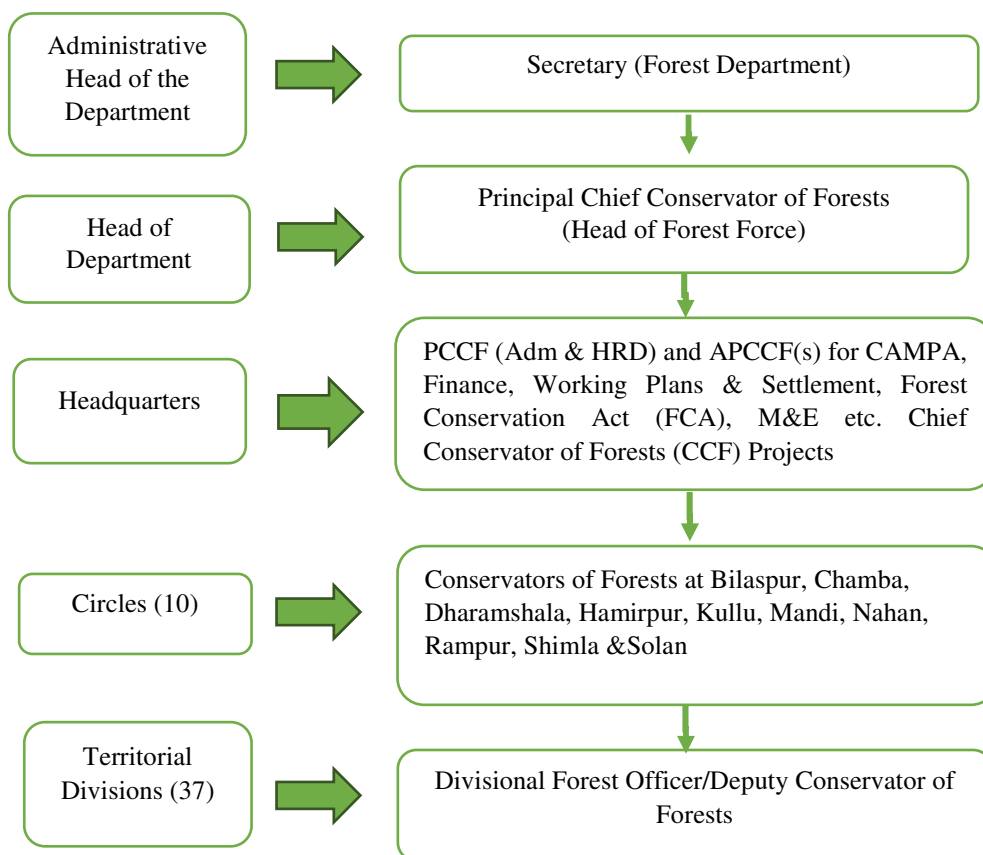
In the State of Himachal Pradesh, the RFA claimed is much larger than the actual forest area. As per 'the Handbook of Forest (Conservation) Act, 1980 and Forest Conservation Rules, 2003 (Guidelines & Clarifications), 2019', a special provision exists for the State, as per which, waste lands of Himachal Pradesh that come under the category of Protected Forests but have neither been demarcated on that ground nor transferred and mutated in the name of the Forest Department in the revenue records, shall be considered for the purpose of CA, provided that double the area of such category is covered under CA and is declared as Reserved Forests/Protected Forests under the Indian Forests Act (IFA), 1927 after mutation in the name of the State Forest Department prior to Stage-II approval. This dispensation is applicable for Central, State and private sector projects.

### 1.5 Organisational structure of the Forest Department

In Himachal Pradesh, the State Forest Department is the administrative authority for diversion of forest. It is responsible for submission of such proposals to the Central Government.

The organogram of the Forest Department is shown in **Chart 1.4**.

**Chart 1.4: Organogram of HP Forest Department**



*Source: Forest Department Website*

The State Forest Department is headed by Secretary who is the administrative head of the Department. Under him, the Principal Chief Conservator of Forests (PCCF) and Head of Forest Force (HoFF), as Head of the Department, controls all forest affairs and issues such instructions, as he may consider necessary, on the administration and working of the forests. The PCCF (HoFF) is assisted by a number of Additional PCCsF (APCCsF) looking after separate functions like FCA proposals, CAMPA, Monitoring and Evaluation, Research and Training, etc., out of whom APCCF (FCA) and APCCF (CAMPa) play crucial roles in compensatory afforestation (CA). These APCCsF are assisted by Chief Conservators of Forests (CCsF)/ Conservators of Forests (CsF). In addition to these, 10 CCF(s)/ CF(s) and 37 Deputy Conservators of Forests (DCsF)/ Divisional Forest Officers (DFOs) oversee functions at Circle and division level. There are 37 territorial Divisions under 10 circles. A territorial Forest Division is headed by DCF/ DFO, who is responsible for the proper management of the forest business and finance of his division. Further, Assistant Conservators of Forests (ACsF), Range Officers, Block Officers and Forest Guards assist DFOs in their day-to-day work besides performing their specified duties.

As can be seen from the above organogram, the structure dealing with compensatory afforestation is essentially spread over the entire organisational hierarchy. The

organisational structure of the State CAMPA is discussed at length in **Chapter II** of the Report.

### **1.6 Audit Objectives**

The Performance Audit was carried out with the objective of ascertaining whether:

- The processing for approvals under Forest Conservation Act 1980 was being done efficiently and effectively and in accordance with the prescribed norms; and
- The system for compensatory afforestation and Catchment Area Treatment (CAT) plans provided under the rules were adequately and effectively implemented.

Further, the report of the Comptroller and Auditor General of India on Social, General and Economic Sectors for the year ended 31 March 2013 (Government of Himachal Pradesh) contained a Performance Audit on Himachal Pradesh State Compensatory Afforestation Fund Management and Planning Authority, which was discussed by the Public Accounts Committee (PAC) of the State in August 2019. Audit further checked whether corrective measures were adopted by the Department based on the recommendations of the Public Accounts Committee.

### **1.7 Audit Criteria**

Audit findings were benchmarked against criteria sourced from the following:

- Forest (Conservation Act), 1980 and Forest (Conservation) Rules, 2003
- National Working Plan Code 2004 and 2014
- HP Forest Manual
- Handbook of guidelines issued by Ministry of Environment, Forests and Climate Change (FC Division), Government of India in 2004 and 2019.
- Information available on HP Forest Department website, MIS and other electronic databases maintained by the Department.
- Compensatory Afforestation Fund Act, 2016 and rules thereunder
- State Government notifications for constitution of State Authority and creation of State Fund.
- Documents on administration and functions of the entity, policy files, annual reports and minutes of internal meetings.

### **1.8 Scope and Methodology of Audit**

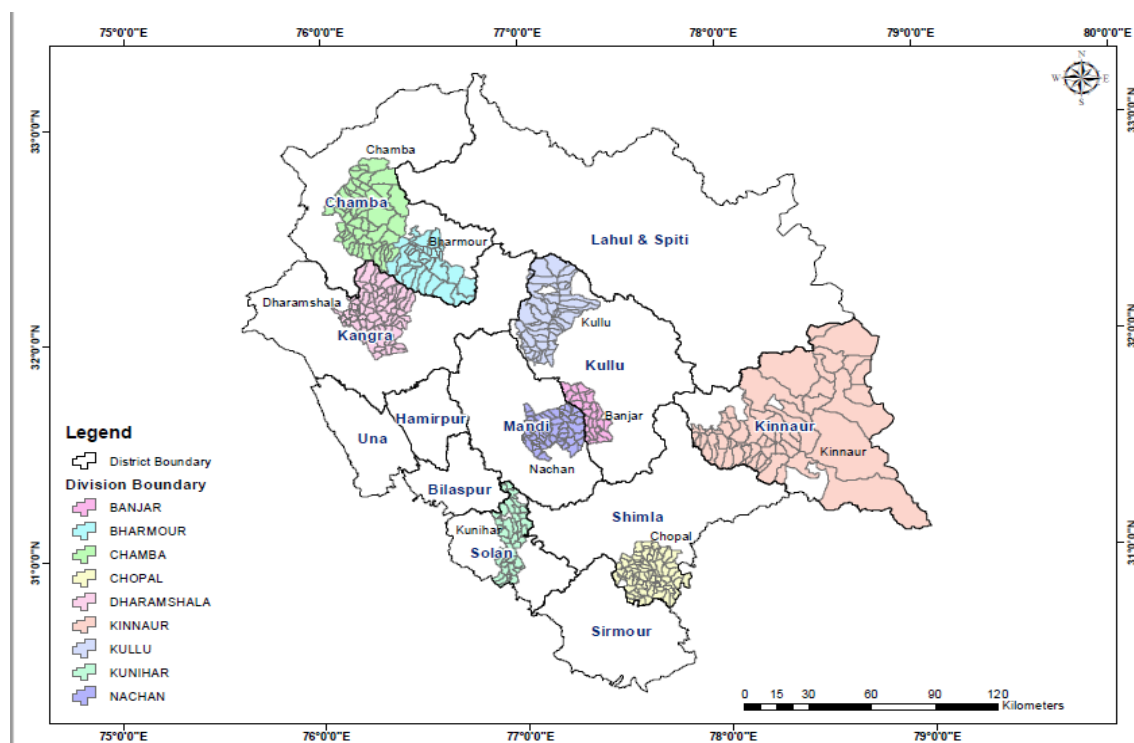
As forest clearances are usually a time-consuming process and the related compensatory afforestation generally has a lag period, hence, sufficient time is to be allowed for a plantation to mature (a provision of ten years' maintenance of plantation is kept in the CA scheme) before an assessment of its efficacy is to be made. The period covered under the PA was from 2006-07 to 2020-21 for examination of efficacy of CA activities and CAT plans. Financial and other data for 2021-22 has been updated wherever available. For all other issues covered in the PA, the period scrutinised was

from 2016-17 to 2020-21. Nine<sup>14</sup> (out of 37) divisions as detailed in **Appendix 1.1** were selected by using stratified simple random sampling without replacement method using IDEA software. 100 *per cent* of 441<sup>15</sup> cases pertaining to these nine divisions for 2006-07 to 2020-21 were audited. 22 cases<sup>16</sup> out of these 441 cases were taken up for Geospatial Studies carried out between October and December 2022 by using services of Aryabhata Geo-Informatics and Space Application Centre (AGiSAC)<sup>17</sup>.

An Entry Conference was held on 9 November 2021 with the Additional Secretary (Forests) and Principal Chief Conservator of Forests (Head of Forest Force) where in the audit objectives, criteria, methodology, scope, and sample for the performance audit were discussed. Further, an Exit Conference was held with the State Government on 9 January 2023 to discuss the audit findings in the draft Performance Audit.

The Performance Audit covered the offices of the State Forest Department dealing with the compensatory afforestation issues with prime focus on the APCCF (FCA), APCCF (CAMPA), the State Authority and the selected Divisions.

**Map 1.2: Distribution of divisions selected for Performance Audit**



Source: India State of Forest Report 2021

<sup>14</sup> Bharmour, Chamba, Chopal, Dharamshala, Kinnaur, Kullu, Kunihar, Nachan and Seraj

<sup>15</sup> 58 cases in Appendix 3.1 and 383 cases in Appendix 4.1

<sup>16</sup> 22 CA sites were selected for geospatial studies on the basis of judgmental sampling and risk analysis of available polygons (keeping in view issues like unclear images from satellite due to polygons falling in shadowy portion, cloud cover over the area etc.)

<sup>17</sup> Nodal agency functioning under the aegis of H.P. Council for Science Technology and Environment (HIMCOSTE), Government of Himachal Pradesh to facilitate the use of spatial and geospatial technologies for planning and developmental activities in the state.

### 1.9 Non-production of records/ information to Audit

The offices (State Authority, Nodal Officer FCA and Monitoring & Evaluation wing) at PCCF level and the selected divisions were audited and information regarding details of FCA cases and timeline for processing, CA stipulation and achievement, expenditure and survival of CA plantations were sought during the course of audit.

In respect of approvals under FCA and CA to be carried out, although information regarding land diverted and CA stipulated was provided by Nodal Officer FCA, no information regarding CA achieved, case-wise funds realised and expenditure incurred on CA and current survival percentage of CA plantations could be provided to Audit as it was stated that no such records/information are maintained by the Nodal Officer FCA. The CEO CAMPA and seven test-checked divisions (DFO Kullu and DFO Seraj) provided case-wise information on CA. Information regarding timeline for processing of FCA cases for cases approved during 2016-17 to 2020-21 were requisitioned from the Nodal Officer FCA and test checked divisions. Nodal Officer, FCA supplied incomplete information and that too was based only on the *parivesh*<sup>18</sup> data, and further there was a mismatch<sup>19</sup> between the two lists supplied to Audit. Forest divisions could not provide any information regarding time taken to process the FCA cases w.r.t. the prescribed timeline as per FCA, 1980. One test-checked division (DFO Kunihar) could not even provide the list of FCA cases in the division during the course of audit.

Further, files pertaining to agenda and meetings of Steering Committee and Executive committee could not be produced to Audit.

In the absence of records/ information, Audit was not able to comment on the above issues.

### 1.10 Acknowledgement

Notwithstanding the above cases of non-production of records, the co-operation extended by the Himachal Pradesh Forest Department during the conduct of the performance audit is acknowledged.

<sup>18</sup> PARIVESH is a web based, role based workflow application which has been developed by MoEF&CC for online submission and monitoring of the proposals submitted by the proponents for seeking Environment, Forest, Wildlife and CRZ Clearances from Central, State and district level authorities. It automates the entire tracking of proposals which includes online submission of a new proposal, editing/updating the details of proposals and displays status of the proposals at each stage of the workflow.

<sup>19</sup> In the first list cases approved during 2016-17 to 2020-21 were requisitioned and in the second list timeline for processing for those cases was requisitioned. The first list contained 456 FCA cases and the 2<sup>nd</sup> list contained 223 cases only.

