

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

IN  
ORIGINAL APPLICATION No. 686 of 2024

IN THE MATTER OF:

PT. GIRDHARI LAL

...APPLICANT

VERSUS

GOVT.OF NCT OF DELHI

...RESPONDENTS

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Date: 17/01/2026



( Bihu Sharma)

Counsel for MoEF&CC

Mobile No. 9811055406

Email: [bihusharma@gmail.com](mailto:bihusharma@gmail.com)

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**ADDITIONAL AFFIDAVIT ON BEHALF OF RESPONDENT NO. 1  
(MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE)**

I, Amit Kumar, aged about 45 years working as Deputy Inspector General of Forest in the Ministry of Environment, Forest and Climate Change (hereinafter referred to as MoEFCC) at Regional Office, Lucknow do hereby solemnly affirm and say on oath that, I am competent, empowered, and authorized to swear this affidavit for and on behalf of the Respondent No. 1.

1. The Hon'ble National Green Tribunal in its order dated 24.09.2025 passed in OA No. 686 of 2024 in the matter of Pt. Girdhari Lal Vs Govt. of NCT of Delhi wherein, the Hon'ble NGT after considering the report of the Joint

*Amit Kumar*



Committee, filed by the Regional Office, Lucknow, inter-alia directed the following:

*“.....6. The substantial questions relating to environment arising in the present case include the aspects of compensatory afforestation and also afforestation on both sides of the Express Way in terms of the recommendations made in Indian Roads Congress Guidelines and also the provisions of the National Highways Act, 1956 and the National Highway Authority of India Act, 1988.*

*7. Respondent no. 1-MoEF&CC, respondent no. 5-PCCF, Uttar Pradesh and respondent no. 11-PCCF, Uttarakhand are directed to file additional responses with respect to all relevant aspects including the aspects highlighted hereinabove within four weeks.....”*

2. It is respectfully submitted that the Central Government has accorded approvals under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of forest land involved in the construction of Expressway in the States of Uttar Pradesh and Uttarakhand. As recorded in the findings of the Joint Committee in its report dated 24.09.2024, which is on record of the Hon'ble Tribunal, project affected trees were reported in the forest area as well in the non-forest land.

*Amir*



3. In lieu of the project-affected trees in the forest land, and in accordance with the conditions of the approvals granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, compensatory afforestation has to be undertaken by the State Government as per the provisions of the Adhiniyam, 1980. The user agency has deposited the requisite funds into the account of the State CAMPA for this purpose. As per the monitoring reports submitted by the Joint Committee, compensatory afforestation has been raised in lieu of diversion of 127.9564 ha over an area of 249.872 ha of land including non-forest land, while in respect of the remaining forest land diverted for the project, compensatory afforestation is yet to be done by the State Forest Department.
4. The identified lands for compensatory afforestation shall be afforested and maintained for a period of ten years by the State Forest Department, utilizing the funds already deposited by the user agency, in line with the compensatory afforestation scheme submitted along with the forest land diversion proposals.
5. Further, in accordance with the specifications of the Indian Roads Congress, the user agency shall also undertake strip plantations along both sides of the road and on the central verge, at its own cost.
6. In lieu of tree felling on non-forest land, compensatory afforestation shall be carried out by the State Government in accordance with the relevant

*Amir*



provisions of the applicable Tree Felling Acts and the local laws of the concerned State.

7. That, as regards illicit felling of trees reported by the Joint Committee during its field inspection, it is respectfully submitted that such offences are to be dealt with strictly in accordance with the relevant provisions of the Indian Forest Act, 1927. The Act prescribes penal measures including fines, imprisonment, and recovery of damages for unauthorized felling of trees. Appropriate action shall be taken by the State Forest Department under the said provisions.
8. It is respectfully submitted that the responsibility for undertaking afforestation along both sides of the Expressway, in accordance with the recommendations of the Indian Roads Congress Guidelines as well as the provisions of the National Highways Act, 1956 and the National Highways Authority of India Act, 1988, lies within the purview of the National Highways Authority of India (NHAI), which is the competent authority to carry out the said activity under the directions of State Forest Department. A copy of aforesaid guideline has been marked and annexed herein as **Annexure- R1/1**.
9. It is submitted that violation of any of the conditions stipulated in the in-principle or final approval will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980 and action would be taken as per

*Further*



para 1.16 of consolidated guideline and clarifications on Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Van (Sanrakshan Evam Samvardhan) Rules, 2023, MoEF&CC. A copy of aforesaid guideline has been marked and annexed herein as **Annexure- R1/2**.

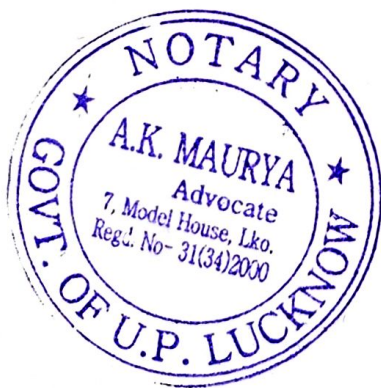
10. That, the answering respondent reserves the right to file additional information before the Hon'ble Tribunal, if required.

11. That, in view of the aforementioned facts and circumstances, this Hon'ble Tribunal may kindly be pleased to pass appropriate order(s)/directions as the Hon'ble Tribunal may deem fit and proper in the interest of justice.

  
**DEPONENT**


### VERIFICATION

Verified at Lucknow on this 16<sup>th</sup> day of January, 2026 that the contents of the above affidavit are true and correct to the best of my knowledge based on records and no part of it is false and nothing material has been concealed therefrom.



EXECUTION ADMITTED  
BEFORE ME  
16/1/26  
  
**A. K. Maurya**  
Advocate Notary  
7, Model House, Lucknow

  
**DEPONENT**

  
I identify the deponent/executor who has signed/put T. before me

# GUIDELINES ON LANDSCAPING AND TREE PLANTATION



INDIAN ROADS CONGRESS  
2009



# GUIDELINES ON LANDSCAPING AND TREE PLANTATION



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**Personnel of General Specifications & Standards Committee (GSS)**  
(20<sup>th</sup> November, 2008)

- |    |                                     |   |
|----|-------------------------------------|---|
| 1. | Sinha, V.K.<br>(Convenor)           | Addl. Director General, Ministry of Shipping, Road Transport & Highways, Deptt. of Road Transport & Highways, New Delhi |
| 2. | Singh, Nirmal Jit<br>(Co-Convenor)  | Addl. Director General, Ministry of Shipping, Road Transport & Highways, Deptt. of Road Transport & Highways, New Delhi |
| 3. | Kandasamy, C.<br>(Member-Secretary) | Chief Engineer (R) S&R, Ministry of Shipping, Road Transport and Highways, New Delhi                                    |

**Members**

- |     |                   |   |
|-----|-------------------|---|
| 4.  | Balachandaran, K. | Chief Engineer (General), Highways Department, Chepauk, Chennai   |
| 5.  | Bansal, K.B.      | Chief Engineer, UP PWD (Retd.), NOIDA   |
| 6.  | Chahal, H.S.      | Engineer-in-Chief (Retd.) Haryana PWD, Vice Chancellor, Deenbandhu Chotturam University of Science & Technology, Murthal, Sonapat |
| 7.  | Chakraborty, S.S. | Managing Director, Consulting Engg. Services (I) Pvt. Ltd., New Delhi   |
| 8.  | Datta, P.K.       | Executive Director, Consulting Engg. Services (I) Pvt. Ltd., New Delhi  |
| 9.  | Deb, P.K.         | Member, West Bengal Public Service Commission, Kolkata, West Bengal   |
| 10. | Dhodapkar, A.N.   | Chief Engineer, Ministry of Shipping, Road Transport & Highways, New Delhi  |
| 11. | Fakir, C.D.       | Chief Engineer (PMGSY) Bunglow No.1, Nagar Link Road, Near Dombas Co., Yarwada, Pune  |
| 12. | Gupta, D.P.       | DG (RD) & AS, MoST (Retd.) New Delhi  |
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| 14. | Kato, Gumge       | Chief Engineer (West Zone) Arunachal Pradesh PWD, Itanagar  |
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| 18. | Narain, A.D.      | DG(RD) & AS (Retd.) MoST, NOIDA   |
| 19. | Negi, S.P.        | Engineer-in-Chief, H.P. PWD, Shimla   |
| 20. | Pradhan, B.C.     | Chief Engineer (NH) Unit-IV, Orissa PWD, Bhubaneshwar   |

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- |     |                       |   |
|-----|-----------------------|---|
| 21. | Puri, S.K.            | Member (Tech.), National Highways Authority of India, New Delhi                           |
| 22. | Rajoria, K.B.         | Engineer-in-Chief (Retd.), Delhi PWD, New Delhi   |
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| 25. | Sachdev, V.K.         | Chief Engineer (Retd.), MoSRT&H, New Delhi  |
| 26. | Sarin, A.K.           | Member (Engg.) Delhi Development Authority, New Delhi                                     |
| 27. | Sharma, Rama Shankar  | Past Secretary General, IRC, C-478, II Floor, Vikas Puri, New Delhi - 110 018             |
| 28. | Sharma, G.P.          | Chief Engineer (NH), Rajasthan PWD, Jaipur  |
| 29. | Singal, K.B. Lal      | E-in-C (Retd.) Haryana PWD, Panchkula   |
| 30. | Sukumar, T.           | Secretary PWD Govt. of Karnataka, Bangalore   |
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| 34. | Ram, Ghasi            | Chief Engineer, Deputy Director General/D&S, HQ DGBR, New Delhi                           |
| 35. | The Engineer-in-Chief | E-in-C Branch, Kashmir House, P.O. AHQ, Rajaji Marg, New Delhi                            |
| 36. | The Engineer-in-Chief | M.P. PWD, Satpura Bhavan, 2nd Floor, Bhopal   |

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- |    |  |  |
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| 2. | Director General<br>(Road Development) | —, Ministry of Shipping, Road Transport & Highways, New Delhi    |
| 3. | Secretary General                      | (A.N. Dhodapkar), Indian Roads Congress, New Delhi               |

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- |    |                      |   |
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# GUIDELINES ON LANDSCAPING AND TREE PLANTATION

## INTRODUCTION

The Manual on Landscaping of Roads was published by the Indian Road Congress as an IRC Special Publication: 21, in December 1979. The Manual provides comprehensive guidelines on both the hard and soft landscaping of roads with respect to the physiographical, environmental, climatic and operational factors. However, with the changing scenario of rapid development and diversification of road infrastructure in the country, especially the highways, a need was felt to revise the Manual in line with the changing specifications for roads.

The draft for the revised manual was prepared by S/Shri V.K. Sharma, Member Secretary and S.P. Sharma, Member of the Environment Committee (G-3). The revised Manual essentially retains the structure of the present Manual with desired modifications in the specifications. Major modifications have been done in the Appendix on roadside arboriculture; since this portion of the Manual was actually required to be changed with the changing specifications for highway construction and improvement. After the draft was prepared, the Committee met on 6<sup>th</sup> September 2008 and discussed the draft and approved it with some suggested modifications. Modifications were incorporated in the draft guidelines.

The Personnel of G-3 Committee is given below:

Bahadur, A.P.	–	Convenor
Bansal, K.B.	–	Co-Convenor
Sharma, V.K.	–	Member-Secretary

### *Members*

Basu, S.B.	Rajvanshi, Ms. Asha
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Director, Highway Research Station	

***Ex-Officio Members***

President, IRC	(Mina, H.L.)
Director General (RD), MOSRT&H	–
Secretary General, IRC	(A.N. Dhodapkar)

The draft finalized by the Environment Committee was discussed by the General Specifications and Standards Committee (GSS) in its meeting held in New Delhi on 20<sup>th</sup> November 2008. The document finalized by the GSS Committee was approved by the Executive Committee in its meeting held on 30<sup>th</sup> November 2008 and approved by the Council in its meeting held on 13<sup>th</sup> December 2008 respectively.

**1 SCOPE**

**1.1** India is witnessing a major change in infrastructure development vis-à-vis the transportation network of the country; viz., the National Highways and State Highways. Various highway improvement projects are being undertaken by different State Governments and Government of India. Implementation of National Highway Development Project (NHDP) is the major step in this direction.

**1.2** There is always a conflict between development and environment and, therefore, a trade off is necessary to balance the two, so that, development is sustainable. The first adverse consequence of widening, from environmental point of view, is the inevitable felling of trees growing along the highways. On the hill sides and other fragile environmental settings, much more adverse impacts are expected on the surroundings.

**1.3** It is the responsibility of the road agencies to offset the loss of trees and other changes resulted into the surroundings. There is a need to follow the approach of “Corridor Development & Management”, rather than “Highway Development”. Apart from mitigating the environmental losses, road agencies must plan to enhance the aesthetics of the highway corridor from all possible angles. Highways should not be looked upon merely as a means of transportation, but as a part and parcel of the environmental and socio-economic milieu.

**1.4** The land needed for the avenue plantation and landscape improvement has to be considered during the project formulation stage itself. As a result, after construction, when the plantation is actually start, the land is available for planting. The width of the remaining ROW is, many times, not sufficient enough to accommodate even a single row of plants;

whereas at some places, three to four rows can be planted. To ensure availability of sufficient width for avenue plantation, the requirement of land for tree plantation should be assessed and included in the land acquisition plans prepared for a highway widening project.

**1.5** Landscape treatment of roads embraces the following measures at different stages of development:

- Designing of horizontal alignment, vertical profile, structures like bridges and retaining walls and road furniture, such as, signs, signals, lighting system etc., so that these components are not out of scale with the surroundings.
- Stabilising the embankment and cutting areas to smoothen the earth profile and unifying the landscape.
- Grass turfing and planting of trees and shrubs.
- Enhancement of surroundings and creation of necessary service facilities for rest, recreation, etc., for the road travellers.

**1.6** It is not possible to lay down rigid and uniform standards for landscaping. The treatments to be adopted vary from place to place depending on the topography, climate and other environmental features. Accordingly, this Manual lays down only broad guidelines, subject to such modifications as may be governed by local site conditions.

**1.7** Highway design and landscaping should be regarded as complementary and tackled as a single planning task. The detailed project reports prepared for the road projects must include landscaping and tree planting as an integral part of the design. The landscape features must be studied during the design process and specific drawing, designs, and specifications must be prepared. There should be no compromise on the cost.

**1.8** The Manual is divided into 11 Sections to focus attention on different aspects of landscaping and broad guidelines on landscaping and plantation, types of species, etc. In brief, Sections 2 and 3 deal with general considerations relating to landscaping, Sections 4 and 5 with specific aspects relevant to rural and urban highways, Section 6 with points deserving consideration with respect to the highway structures, Section 7 with road-safety and roadside amenities, Section 8 with the desired treatment in special areas such as waterlogged or sandy tracts, Section 9 with the landscaping problem of existing roads, Section 10 deals with maintenance of the landscaping facilities and Section 11 deals with broad guidelines on landscaping and plantation along highway.

## **2 MAIN FACTORS AFFECTING LANDSCAPING**

**2.1** Several factors, topography, environment, climate and operational considerations govern the landscaping of roads and need to be kept in view in each case. More important

among these are highlighted below:

### **2.1.1 Terrain**

Terrain has an overriding effect on geometric design features of a road; for instance, gradients, radii of curves, sight distance, central reserve, the extent to which the road is in embankment or cutting, etc. On one hand, these components would determine the appearance of the road and on the other the measures that could be adopted to beautify the road landscape. The objective should be to design the road in such a way that it fits into the existing terrain and harmonises with the general landscape.

### **2.1.2 Surroundings**

**2.1.2.1** The surroundings of the road, whether rural or urban, are an important factor affecting landscape design.

**2.1.2.2** For roads in rural areas, land width for roadside plantation and other landscape measures is generally not a problem. Also, advantage of existing scenic spots etc., can be easily taken to make these a part of the highway landscape.

**2.1.2.3** Important rural highways carrying long distance traffic also have their own requirements. There is need for roadside rest areas and other facilities at periodic intervals for rest and relaxation of the travelling public.

**2.1.2.4** Urban roads, on the other hand, show up a somewhat different picture. Generally, the right-of way is limited and surrounding area is characterized by buildings, paved verges, frequent road intersections, utility services, etc. Also, unlike rural areas; pedestrians, cyclists and other slow-moving vehicles form an important part of the road user. The need to screen off unsightly dumping yards, slum areas, etc. adds to the problem.

### **2.1.3 Highway speed**

**2.1.3** Highways are classified under different categories, e.g., Expressways and Highways and each category is designed for a specific speed. Speed of travel is a factor in landscape design. On fast speed highways, overall composition of the landscape as it unfolds while driving is of greater significance. On the other hand, on slow speed roads, the driver will have an eye even for minor wayside details. Safety is also a concern with respect to the highway speed. On fast speed highways, the landscape improvement and tree plantation needs to be planned while ensuring safety of the travellers.

### **2.1.4 Climatic factors**

**2.1.4.1** Climatic factors like rainfall, humidity and temperature influence road landscape design in a number of ways. For one thing, climate controls the type and extent of vegetation which forms the most important component of road landscape. Nature has devised vegetation in a manner that only specific varieties thrive in particular climates. Plantation of vegetation as a part of landscaping should, therefore, be restricted as far as possible to local species already thriving in the area.

**2.1.4.2** Similarly, climate affects drainage characteristics in a marked way especially in high rainfall areas. In such cases, particular attention has to be paid to the design of drainage system so that it does not disturb the natural environment adversely.

**2.1.4.3** There are also other factors like erosion, wind blows, and snow drifts etc., which may affect landscape design.

### **2.1.5 Public opinion**

Views of local inhabitants who are directly affected should also as far as possible, be taken into consideration while formulating landscape designs.

## **3 GENERAL CONSIDERATIONS NEEDING ATTENTION DURING LANDSCAPING**

### **3.1 Conservation of Existing Features**

**3.1.1** Existing features along a road alignment, whether natural or man-made, can contribute significantly to general road landscape and every effort should be made to preserve, incorporate and integrate these into the landscape. A reconnaissance survey should be made to identify all valuable natural features such as natural wooded areas, streams, ponds, rock outcrops, scenic vistas etc., in addition to man-made features like historical buildings, monuments, gardens, etc. During design, and later during construction, every care should be taken to avoid damage to them. Natural beauty of the landscape can be considerably enhanced by blending the existing features into the road system.

**3.1.2** While planning the highways, it may be desirable to design the median with a varying width so as to conserve natural features along the alignment, hence making the highway safer and more interesting to drive, (Fig. 1). However, since this involves acquisition of additional land, this option should be used in exceptional cases, where the features to be preserved can not be relocated. The best option is to realign the road rather than splitting the highway.

**3.1.3** Similarly, wherever feasible, religious structures, old monuments, gardens etc. having a special architectural character should not only be saved when building a road but suitably incorporated in the general highway landscape even if this means making special efforts (Figs. 2 and 3).

**3.1.4** Conservation of existing grass and plant growth needs no emphasis. In all road cuttings, top soil should be preserved and re-applied after completion of grading operations, on slopes, medians etc., to help growth of vegetation.

**3.1.5** While constructing roads in forest areas, felling of trees should be kept to minimum. Fire should never be used in cleaning operations as this will destroy natural regeneration of young trees and drive out wildlife. The effect of felling on undergrowth and wildlife also needs to be kept in view.

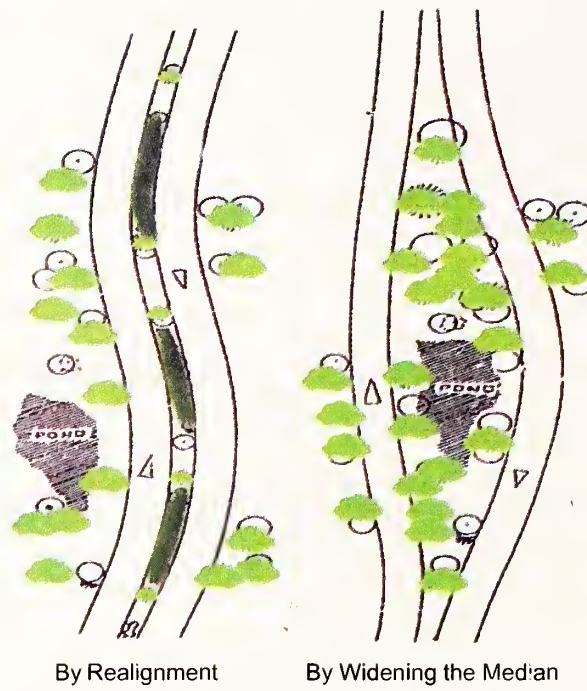
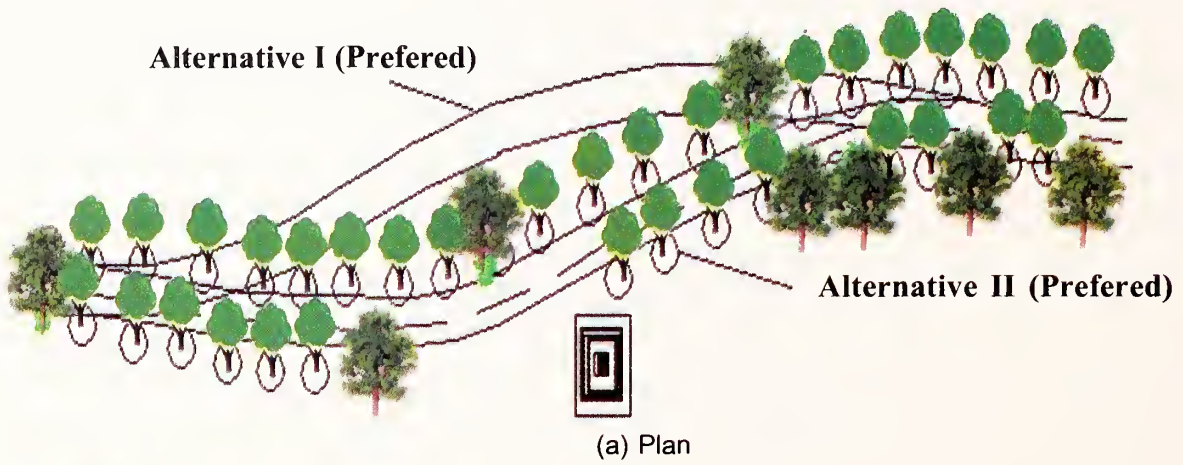
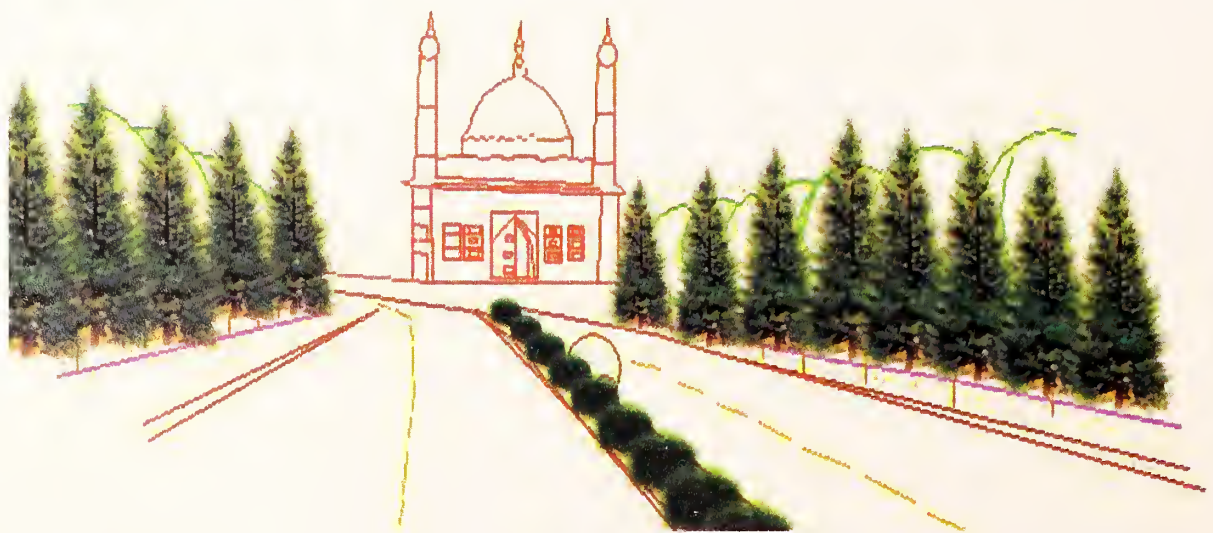


Fig. 1 Preservation of Natural Landscape Features by Suitably Adjusting the Median



(a) Plan



(b) Perspective View with Alternative

Fig. 2 Incorporation of Historical Features in Road Landscape



Fig. 3 Religious Structure Adjacent to Highway

## 3.2 Conservation of Land Values

3.2.1 The effect of road construction on the adjoining land is two-fold:

- (i) acceleration of industrial, commercial, agricultural and other activities; and
- (ii) undesirable impact on environment due to increase in noise, dust and fumes from traffic.

3.2.2 An important objective of any road construction programme should be to minimize the adverse effects mentioned at (ii) above. In this respect, proper landscaping measures can play a vital role.

3.2.3 Acquisition of adequate Right-of-Way, and proper design of the road cross-section with provision for green buffer strips between the shoulders and land boundary, can help a lot to improve the landscape along the road. In urban areas with appropriate screen planting, the nuisance of noise, dust and fumes on account of traffic can be vastly reduced. Attractive landscape treatment will help in preservation of the residential land values.

## 3.3 Fitting the Road into Landscape

3.3.1 While deciding the alignment of the road, the aesthetic factors must also be considered along with usual economic, engineering and administrative considerations.

## 3.4 Road to Follow Natural Terrain

3.4.1 The road should follow the natural terrain as closely as possible. While ascending hills, it is advisable to align the roadway at an oblique angle to the contours. Deep cuts for

the sake of straight alignment should be avoided. In some cases, it may be advantageous to locate the road along rivers, sea shore or water courses to facilitate full enjoyment of the landscape potential.

### 3.5 Geometry of Road with respect to Landscape

**3.5.1** Alignment of the road can be made more pleasing by providing larger radii and spiral transitions or gentle coordinated curves, both in the horizontal and vertical plane. This should be accompanied by appropriate contouring and planting on both sides of the road to yield an overall pleasing effect.

### 3.6 Spacing of Carriageways

**3.6.1** While building divided highways, the two carriageways need not always be sited adjacent to each other or at the same level if the fall of the ground is across the general direction of the road. Not only will this improve landscape design but will also lead to economy. The fall between the two roads can be effectively utilized as central green space (Figs. 4 and 5).

**3.6.2** Similarly, spacing between carriageways can be varied to preserve special environmental and cultural features by adjusting these between the two carriageways instead of cutting across (Figs. 3 and 4). This should, however, be opted only in exceptional cases.

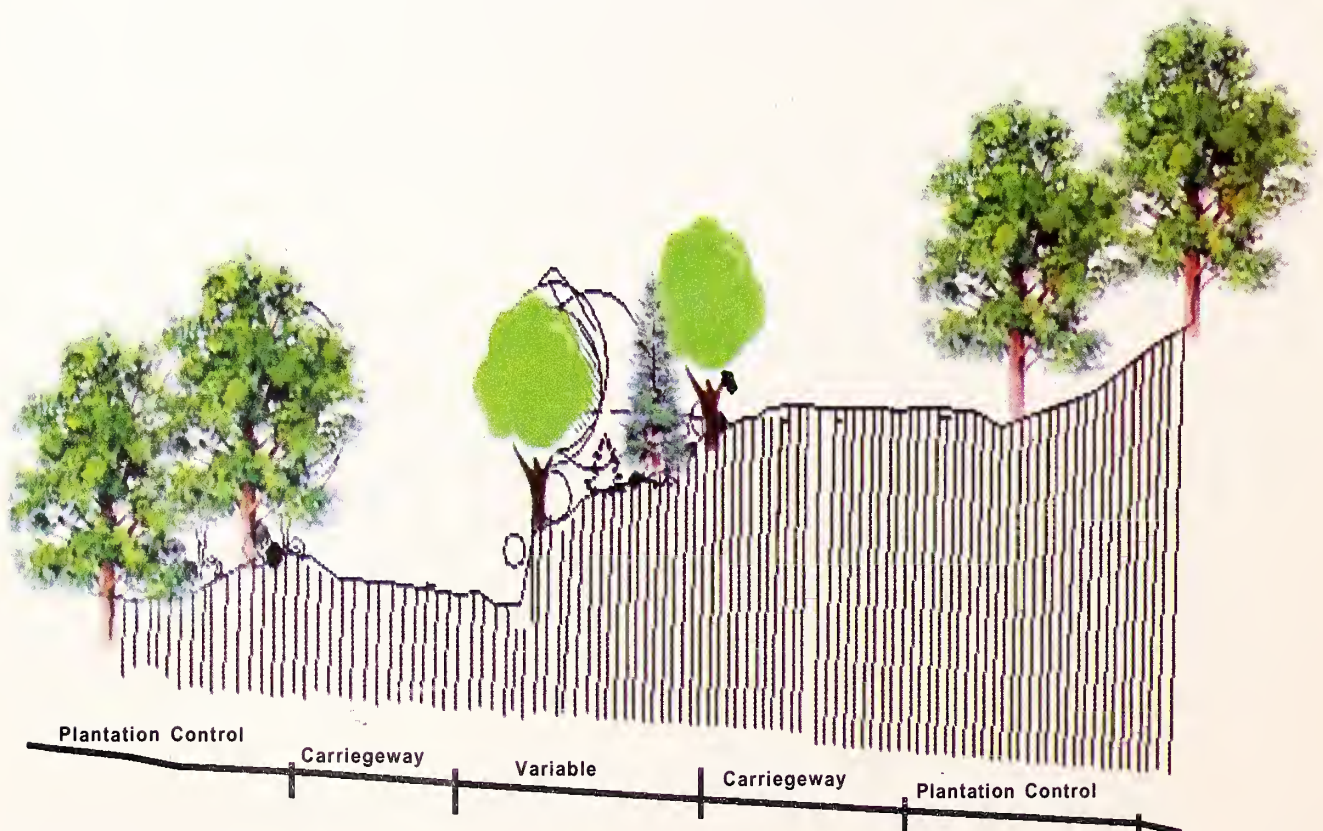


Fig. 4 Cross-Section of a Rural Highway having Carriageway at Different Levels

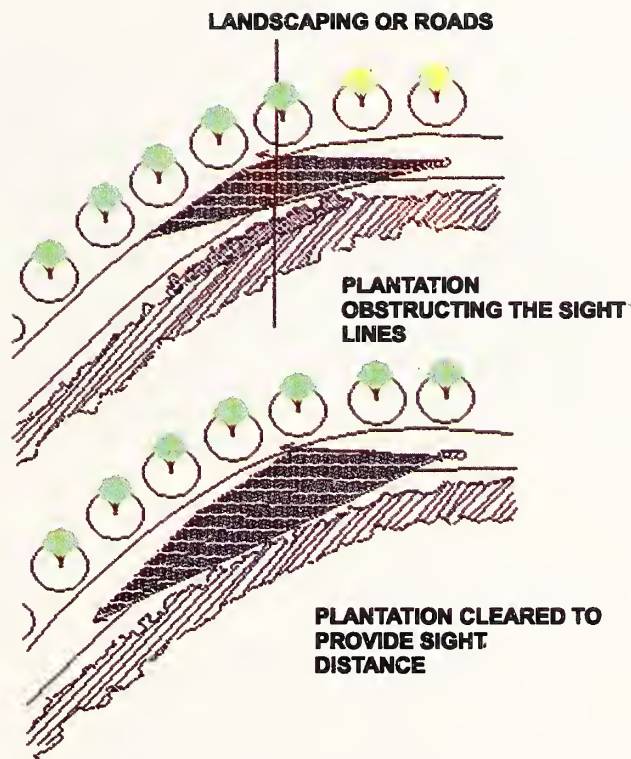


Fig. 5 Set-Back of Plantation at Horizontal Curves to provide Requisite Sight

### 3.7 Tree Planting or Arboriculture

3.7.1 Tree planting or arboriculture is the most important component of landscaping. Planting may be functional, or for aesthetic effects, but in either case the objective should be to help restore the unity of the landscape. Functional planting applies to such problems as protection of slopes against erosion, screening of unsightly views, reducing headlight glare, providing shade in summer and so on. In most cases, such planting also improves the appearance of the road and enhances the natural landscape, planting for aesthetic effects is also by and large functional but goes beyond that to blend the road into the surrounding countryside and enhance the overall beauty (Figs. 6 and 7).



Fig. 6 Well-Planted Multi-Lane Urban Highway



Fig. 7 Well Planted Multi-Lane Urban Highway

**3.7.2** Roadside planting of trees may be in the form of avenues, groups or groves. Where conditions are favourable, for example in groves, fruit bearing trees may be preferred.

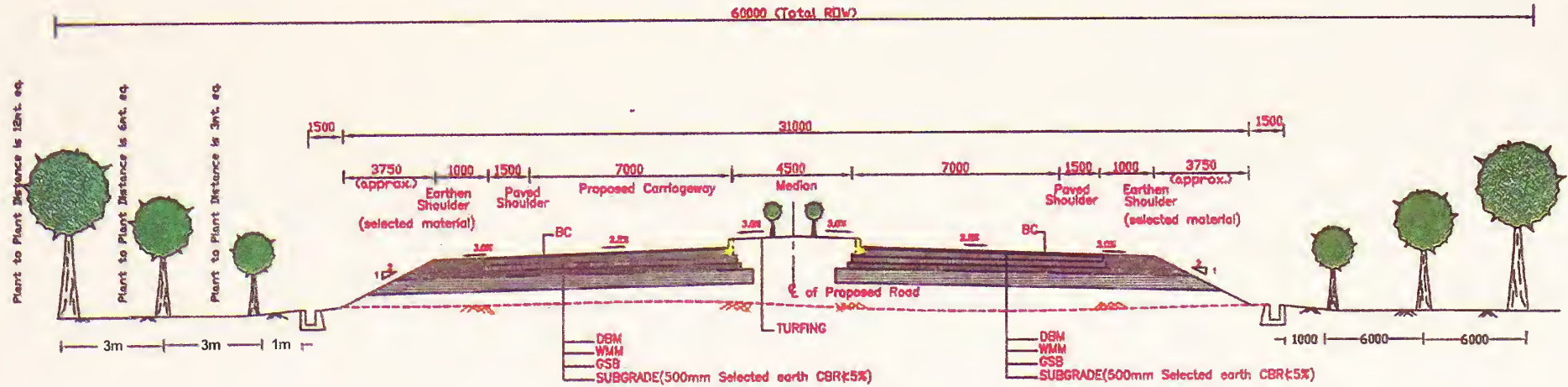
**3.7.3** The amount of planting to be provided at different situations needs careful attention. While roads in landscapes devoid of trees or woodlands may require little or no planting, extensive planting is necessitated in settled rural landscapes where a new road may introduce more new elements than the countryside can absorb.

**3.7.4** In the design and development of arboriculture, certain restrictions imposed by engineering, traffic and safety requirements should be kept in view. Some of these are:

- Position of trees on either side should be fixed taking into account the ultimate development of the roadway with regard to future widening.
- Trees should be offset upto and beyond 1 m back from the ultimate edge of the roadway so that they are not a safety hazard or affect the required sight distances (Fig. 8).
- Considerations of sight distance and safety being of primary importance, these should in no case be subordinated to aesthetics.
- Shrubs and trees should be planted clear of roadside drains and other drainage structures so that their root system do not interfere with efficient working of the drainage facilities.

**3.7.5** To facilitate systematic execution of operations involved in roadside arboriculture, it will be advisable to prepare a detailed work plan including necessary drawings for field use. These should cover the scope and extent of the proposed activities, pattern, type and location of plantings, plant species to be used etc. and should be simple enough to be easily followed by field crews.

**3.7.6** For detailed guidelines about roadside arboriculture, Please refer to Section 11.



**TYPICAL CROSS SECTION FOR NEW 4 LANE ALIGNMENT IN RURAL AREA**

Total Number of Plants/Km.

Sr.No	Rows	Number of Trees
1	Ist. Row	333
2	IIrd. Row	166
3	IIIrd. Row	84
4	Total	583

Note: - All Dimensions are in mm.

Fig. 8 Typical Cross Section For New 4 Lane Alignment In Rural Area

### 3.8 Transplantation of Large Tree

Occasion may arise when a grown-up tree has to be cut for making room for constructing a road, a building or other structure. It would be desirable to save this plant by transplanting it at a suitable site. To do this successfully some time is necessary. In winter when the tree is dormant or less active, it should be pruned heavily leaving a bare framework of the large branches. A 40 to 50 cm wide trench 1 to 2 m deep should be dug around the stem as much distance away from it, depending upon the stature of the specimen, cutting all the roots, big and small, in the process.

The trench should then be compacted with dry leaf, straw or any such material followed by heavy irrigation which would be repeated from time according to necessity. In spring, new shoots will come out along with a new set of fibrous roots. These will grow during the summer months. It would be desirable to execute the transplantation under expert supervision.

In the beginning of rainy season, the trench would be reopened by removing the packing materials, thereby exposing the new roots. The big earth ball at the base of the tree would be wrapped firmly with burlap. The trunk should simultaneously be covered with several rounds of gunny on which a strong iron chain will be tied like a belt.

Now a crane would be summoned and the tree securely attached to it through the iron chain. The basal roots would then be cut to free the tree from the ground and carried on a vehicle to the new site where a suitable pit has already been dug to receive the huge earth ball. The tree would be placed in this pit with its trunk in an upright position. The cavity of the pit would be filled-up with manured soil followed by heavy irrigation.

The tree would grow vigorously in the new place and in 2 to 3 years will put forth so much vegetative growth that it will be difficult to recognize it as a displaced specimen. The percentage of success is very high, if all the operations are done carefully and properly.

## 4 LANDSCAPE DEVELOPMENT – RURAL AREAS

### 4.1 Road Land Width

**4.1.1** Land width is usually not a serious constraint in rural areas. The width acquired should be as liberal and feasible with adequate provision for current as well as anticipated requirements. While taking a decision in this regard *interalia* the following factors deserve consideration:

- Need to have stable side slopes for cuts/fills;
- Requirement of contouring in portions of deep cut or high fill to bring these into scale with the surroundings;

- Provision for roadside arboriculture including screen plantations for shielding unsightly areas;
- Desirability of a wider median or central verge in the case of dual carriageways to avoid headlight glare;
- Incorporation of adjacent plantations and beauty spots in the general road landscape.

**4.1.2** The minimum land width should normally not be less than that recommended by the Indian Roads Congress. Apart from above, consideration should be given to acquisition of additional land width to take advantage of existing plantations, scenic spots, cultivated areas etc., forming a part of the highway landscape and to provide at intervals group plantations and other landscape treatments. Such measures will not only improve the aesthetics of the road, thereby reducing monotony for the road users, but also help in preservation and propagation of natural plant and animal life towards maintaining ecological balance in the area.

**4.1.3** Acquisition of adequate land width by itself is, however, not enough. All efforts should be made to ensure that the land acquired is not encroached upon. It is also advisable to lay down restrictions regarding building line, set-back distance, control line, height of buildings, etc. Guidance in this regard can be had from IRC:SP:15-1996.

## **4.2 Route Location and Road Alignment**

**4.2.1** Route location and road alignment are key elements affecting the road landscape. The alignment should be fluent and blend with the surrounding topography. It should create the impression of moving naturally through the countryside instead of being forced through. To achieve best results, the following points should be kept in view:

- i) Uniformity in design standards is an important factor in road alignment. Consistent application of a standard on a given length of a design element over a given length of road can considerably increase aesthetics and safety. For instance, a short sharp curve in an otherwise good alignment will lead to poor appearance besides creating an accident-prone spot. Similarly, if a change in standards becomes unavoidable, for instance where a hill road enters the plains, it will be desirable to effect the transition smoothly by introducing successive sections with gradually increasing design speed;
- ii) A flowing line which conforms generally to the natural contours is preferable to one with long tangents slashing through the terrain. In this way, construction scars can be kept to the minimum and natural slopes and plant growth preserved;
- iii) A winding alignment composed of short curves or broken-back curves (broken-back curve is one which has a short tangent section between two

curves in the same direction) is aesthetically and operationally poor and should be avoided;

- iv) The alignment can be made more pleasing by providing large radii curves with suitable transitions;
- v) The alignment should be logical and consistent. Sharp curves should not be introduced at the ends of long tangents. Sudden change from areas of easy curvature to areas of sharp curvature should be avoided;
- vi) For small deflection angles, curves should be sufficiently long to avoid appearance of a kink;
- vii) In designing a road alignment, the designer must keep in mind that the road is a three-dimensional entity and does not just consist of a plan and profile. Coordination of plan and profile is, as such, necessary to ensure safety and beauty in appearance.

**4.2.2** For more information on geometric design features of road, reference may be made to IRC:73-1980 "Geometric Design Standards for Rural (Non-Urban) Highways".

### **4.3 Highway Cross-Section**

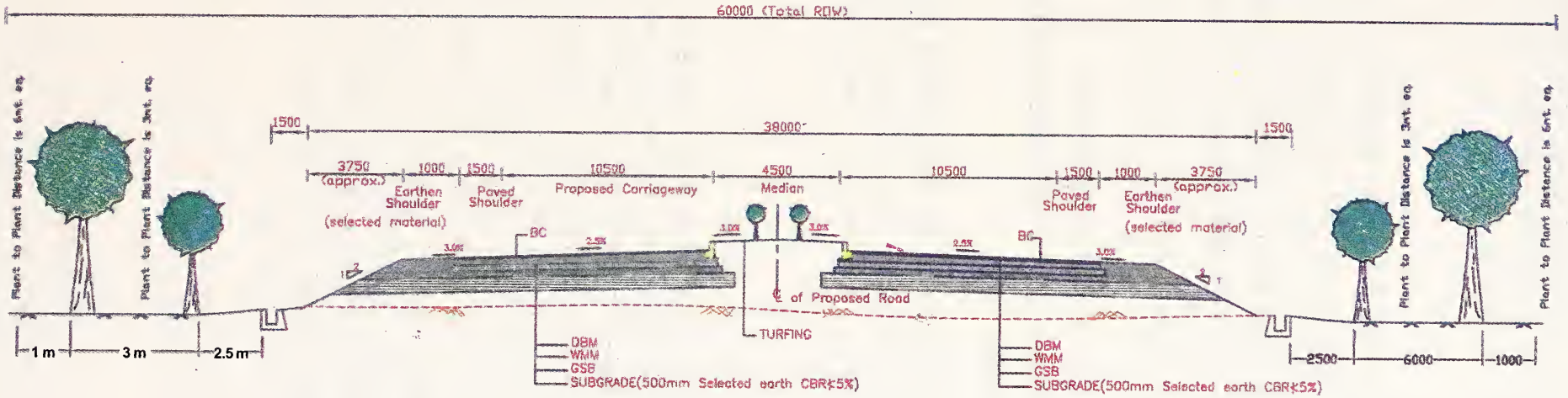
**4.3.1** Cross-Section is an important constituent of highway design as it determines the special relationship between roadside and the component parts of the highway. The elements involved in highway cross-section are the carriageway, shoulders, median, embankment slopes, cut slopes, drainage system and roadside land. Design requirements for these are laid down in relevant standards, for example, IRC:73-1980, but from landscape point of view certain special considerations are required and are highlighted in Fig. 9.

### **4.4 Carriageway**

**4.4.1** Proper marking of the centre-line, edge-line and other pavement markings, and neat and unbroken delineation of the joints between the pavement and shoulder can improve road aesthetics a great deal besides safety. Attention should also be paid to maintain these features in proper order. Guidance about pavement and road marking details are given in IRC:35-1997.

### **4.5 Shoulders**

**4.5.1** Shoulders are the portions of a roadway continuous with the carriageway. This is essentially intended for accommodation of stalled vehicles, for facilitating crossing manoeuvres' or other emergency use and lateral support of the pavement courses. From landscaping point of view, it is desirable that the shoulders should be kept maintained to given lines and levels.



**TYPICAL CROSS SECTION FOR NEW 6 LANE ALIGNMENT IN RURAL AREA**

Total Number of Plants/Km.

Sr.No	Rows	Number of Trees
1	Ist. Row	333
2	IInd. Row	166
3	Total	499

Note: - All Dimensions are in mm

Fig. 9 Typical Cross-Section for New 6 Lane Alignment in Rural Area

**4.5.2** On high speed highways, it is advisable to surface the shoulders with the same material as the main carriageway. On other roads, the shoulders may be turfed or treated with gravel, stabilized soil, metalling or bituminous surfacing.

## **4.6 Median**

**4.6.1** Median is provided primarily to separate opposing traffic streams. To meet this objective, it should have good visibility both during day and night. Moreover, the median should contrast well with the through traffic lanes. A larger width for the median is desirable but this should be in balance with other components of the highway and consistent with economy. In deciding on median width, consideration of following factors will be helpful:

- i) Preservation of natural vegetation or beauty spots by including these within the median area;
- ii) Adequate space for screen planting to check headlight glare;
- iii) Sufficient separation between roadways to eliminate head-on collisions;
- iv) Space for emergency stopping of traffic.

**4.6.2** Considering the width of about 4.5 m, it is normal to provide kerbs on both sides. But, if the median is considerably wider by any chance, the preferred course from landscaping point of view will be to grade the median area suitably towards the middle where a central drain may be provided.

## **4.7 Side Slopes in Cut and Fill**

**4.7.1** Roads may be in embankment, cutting, or partly in cutting and partly in embankment depending on the natural topography of the area. From safety and stability angle, side slopes in cut or fill will depend on the type of material encountered, the height/depth of fill/cut and other related factors. However, from landscape considerations it will be desirable to adopt gentler slopes with corners rounded off smoothly. Flatter slopes improve appearance, prevent erosion, permit seeding, encourage growth of grass and contribute to road safety. In cuttings more than 6 m deep, it will be good practice to provide benches at intermediate heights alongwith softening of profile at top and bottom so that the long cutting slopes fit into the landscape comfortably. High embankments, especially at isolated over bridge crossings, warrant similar care and effort in design to avoid looking unduly conspicuous in the natural skyline. In these cases, satisfactory treatment will usually require taking of more land for contouring.

**4.7.2** The top and bottom of fills and cuts and all other sharp corners in the highway cross-section, should be smoothly rounded off and turfed so that they flow into the natural contours and blend with the original ground.

**4.7.3** Likewise, the transition areas between cut and fill slopes should be treated carefully in order to make the earthworks conform to the adjacent terrain, encourage rapid establishment of vegetation cover and ensure economy in maintenance.

**4.7.4** Slopes of cutting and embankment should be covered with vegetation to prevent erosion and integrate the road with the surrounding landscape. Seeding may be done on freshly graded slopes concurrently with grading or immediately thereafter. Grass is the basic erosion control material for highways but it requires maintenance. The primary function of grass is to stabilize slopes against erosion until voluntary shrubs, trees and weeds can establish themselves on the slopes.

**4.7.5** An alternative to turfing is to encourage growth of ground cover consisting of bushy, dense-foliaged plants which have water holding capacity, along with low growing shrubs which afford protection against erosion. Rapid growing species with inconspicuous flowers may be preferred from the point of view of maximum survival and avoidance of artificial effects. The governing principle should be preservation of natural growth and use of local varieties of grass, creepers and shrubs. Where low growing shrubs are used as ground cover, they are better planted in irregular masses or colonies rather than in rows. In heavy rainfall areas, preference should be given to broad leaf shrubs as they have better resistance against erosion.

**4.7.6** The erosion control devices, such as, kerbs and paved gutters, if required, should be so designed and located that they are not unsightly.

## **4.8 Drainage**

**4.8.1** Drainage of surface and sub-surface water is a vital requirement of road design and construction. From landscape angle, the concern is mostly with surface water. Any ponding of water either on the roadway or in an uncontrolled manner on the adjoining road land is not only injurious to the road structure, but also not permissible from landscape angle.

**4.8.2** Care should be taken to disturb natural drainage to the minimum. In many cases, it should be possible to develop low-lying areas by the roadside into beauty spots by a suitable plantation scheme taking advantage of the natural tendency for water to pond.

**4.8.3** For ensuring better surface water drainage, the road camber should be consistent with the rainfall of the area and the rugosity or surface texture of the road surfacing. Shoulders should also have the requisite slope and there should not be any break in profile between the pavement and shoulder. Side drains should be properly connected to natural outfalls. The drainage system should be so located that it merges into the surrounding landscape. Where necessary, intercepting drains should be provided and other measures taken to protect natural surfaces from water erosion.

## **4.9 Roadside Borrow Areas**

**4.9.1** Roadside borrow pits disturb the natural setting of the ground and as such are undesirable from landscaping angle. Effort should be to balance the cuts and fills as far

as possible, so that borrow pits are altogether avoided, but this is not generally practicable in plain terrain especially where high embankments are involved.

**4.9.2** In selecting roadside borrow areas, due consideration should be given to the requirements set out in IRC:10-1961. Desirably, the borrow areas selected, as also the waste disposal areas, should not be visible from the highway if it can be so managed.

**4.9.3** Roadside borrow areas should be suitably treated, so that these do not have an adverse impact on the road landscape. Basic requirement is that the neighbouring ground should be rendered acceptable in appearance. To achieve this, the cut faces should be moulded to a flatter slope and the corners rounded off. Bottom of the pits should be sloped towards available natural outfalls so that water does not stagnate. If the borrow area is sufficiently large, possibility of converting it into a water spot to serve as a landscape feature should be explored.

**4.9.4** After every major construction or repair work involving borrow of earth, it is essential that the borrow sites should be closely examined for all possible remedial measures to minimize damage to the environment. This should not be left over as a secondary task but regarded as a part of the project itself.

**4.9.5** Where the above measures are not practicable, adequate space should be provided to allow for installation of screen planting.

#### **4.10 Roadside Arboriculture**

**4.10.1** Apart from the consideration of alignment, grades, cross-section, etc. the most important factor in landscaping is tree plantation and preservation. Unless this is done with care, the highway landscaping will not be complete. Plants placed wrongly or badly maintained may, in fact, mar the environment and cause danger to high speed traffic through obstruction of sight distance, risk of collision with tree trunks, and skidding caused by fallen leaves.

**4.10.2** Appropriate planting also contributes to road aesthetics and visual enjoyment by motorists which can act as a check on excessive speeding. For detailed guidelines about roadside arboriculture, refer to Section 11.

#### **4.11 Highway Structures and Appurtenants**

**4.11.1** Different structures like bridges, culverts, subways and flyovers, apart from abutments such as guard-rails, delineators and road signs are encountered along the rural highway. In hilly mountainous terrain, retaining walls and breast walls are a frequent occurrence. Design and construction of all such structures requires care so that these blend well into the natural landscape without being out of scale with the surroundings.

## 5 LANDSCAPE DEVELOPMENT – URBAN AREAS

### 5.1 General

**5.1.1** Principles of landscape development are essentially the same, whether the situation be urban or rural. But their application in and around cities has its own ramifications since the environment is mostly man-made and the scope for natural landscape features is greatly restricted. In larger cities the position is still more difficult because of almost continuous built-up areas along the existing roads. Due to these differences, urban landscape efforts normally require more careful and skillful designs to plan and execute than rural highways.

**5.1.2** The more important factors affecting landscape development in urban areas are discussed below with a view to evolving appropriate designs in such cases.

### 5.2 Road Land Width

**5.2.1** The factors influencing land width for roads in urban areas are:

- i) City zoning requirements as per regional/master plan;
- ii) Functional classification of the road e.g. arterial road, local street, etc;
- iii) Present and anticipated traffic;
- iv) Need for service roads, footpaths, cycle tracks, medians, space for under and over-ground services, rotary intersections, etc;
- v) Provision for environmental protection and landscape development measures, such as noise barriers, screen plantations, etc.;
- vi) Requirement of open space for recreation;
- vii) Cost of land

**5.2.2** Besides the above factors and the tangible economic as well as the intangible aesthetic benefits of roadside, landscape should be weighed while taking a final decision about the land width.

**5.2.3** Road land in urban areas is highly susceptible to encroachment.

### 5.3 Road Alignment

**5.3.1** Location of urban roads is often dictated by the type of road system decided upon in the regional/master plan of the area. It is, therefore, necessary that landscape requirements of these roads be given due consideration at the time of preparation of such plans. Guiding principles should be that the road fits into the city surroundings and is so landscaped that it has a healthy effect on the development of adjoining areas. As such, the landscape measures should fully keep in view the requirements of residents of the locality

besides those of users of the route. Overall attempt should be that residents, pedestrians and road users all derive maximum possible benefit and enjoyment.

## 5.4 Highway Cross-Section

**5.4.1** Cross-section of the road determines the relationship of the roadside to pavement and other component parts of the highway. Guidelines with regard to design of different cross-section elements from landscape angle given in para 4.3 for roads in rural areas apply to urban areas as well, but with certain variations. Important among these are:

- i) Some definite space should be earmarked for underground/ overhead services. The services should be so located and planned that these do not interfere, in any way, with traffic operations and are not out of scale with overall appearance of the road.
- ii) Careful consideration should be given to the location and spacing of all access points including terminals, railway stations, parking areas etc., so as to ensure safety and freedom from congestion.
- iii) The cross-section should have provision for footpaths, cycle tracks, service or frontage roads, etc., depending on the anticipated requirements.
- iv) Due care should be taken to maintain the median plantation in order to avoid its spread beyond the median margins. On urban highways the medians should be provided with a continuous line of shrubs to cut off headlight dazzle. However, in such cases where the median is too narrow (say upto 1.5 m) to permit plant growth, it should be turfed with grass and flowering plants. Narrow medians may be covered with suitable contrasting material or paved with hard materials like chequered tiles for improving the appearance.
- v) It may be necessary in certain cases, for reasons of engineering and cost of land acquisition, to use retaining walls in lieu of slopes (Fig.10). The relationship of the height of the retaining wall to the width of the roadway is important from the stand-point of appearance. Retaining walls may be faced with stone masonry to yield an attractive appearance. As a better alternative, creepers could be trained on the retaining walls to beautify the surroundings.

## 5.5 Drainage

**5.5.1** Surface drainage in urban areas is generally ensured through a gutter and kerb arrangement with drain inlets connected to the storm water system. Desirably, all unpaved areas in the highway cross-section should be provided with erosion-proof turf to prevent soil from being carried into the storm sewer system. Lack of effective erosion control may result in unsightly small channels or eroded areas, which may be costly to repair.

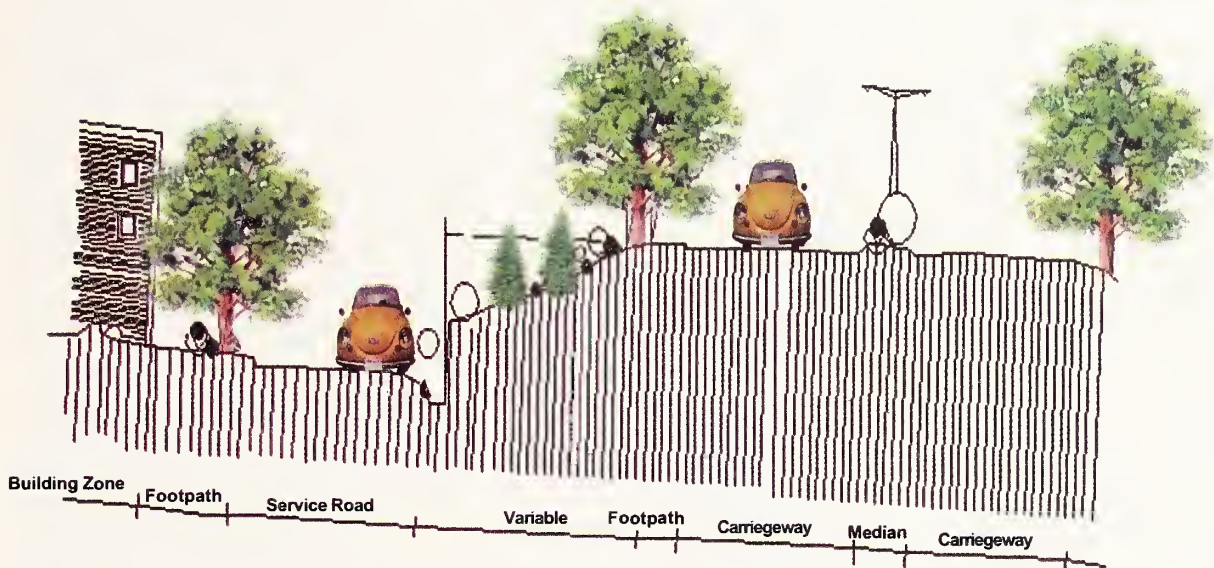


Fig. 10 Economy and Pleasing Effect Achieved by Reducing the Height of Retaining Wall

## 5.6 Borrow Areas

**5.6.1** Borrow pits should not be allowed in urban areas though these may occur in suburban situations. Landscape treatment of such pits should be taken up on lines discussed in Para 4.9.

## 5.7 Roadside Arboriculture

**5.7.1** Because of the high cost of land, Right of Way available is often a limiting factor in urban areas as to the extent and character of landscape development. The land width may vary from an extremely narrow strip, enabling only limited opportunities for planting, to areas of sufficient width, which have all the space required for this purpose. At the same time, if suitable plantation in the form of shrubs, flower beds, avenue trees, etc. can somehow be provided, it can considerably enhance the economic and aesthetic value of area in and around the highway (Figs. 11 and 12).



Fig. 11



Fig. 12 Avenue Plantation

## 5.8 Highway Structures and Appurtenants

**5.8.1** Besides structures like bridges, culverts, subways etc., a large number of miscellaneous appurtenants such as lamp posts, bus shelters, overhead service lines, kiosks etc. frequent the roadside in urban areas. Road intersections occur more frequently and are usually of different type compared to rural highways. Some relevant aspects in this regard are brought out in Section 6.

# 6 HIGHWAY STRUCTURES AND APPURTENANTS

## 6.1 Bridges and Approaches

**6.1.1** In the choice, design and construction of bridges and approaches, the basic consideration is that these should not only be structurally sound but pleasing in appearance and appropriate to the setting. The following points may be kept in view in this regard:

- i) The bridge structure including appurtenants like railings, parapet walls etc. should be designed to contribute to the overall aesthetic quality of the road and landscape.
- ii) The size of the obstacle (e.g. river, railway line etc.) to be crossed, engineering requirements and the physical properties of the site largely determine the type of structure. The general character of the surrounding land, its topography (flat, rolling, hill etc.), and its use (e.g. rural, agriculture, wooded-land, built-up, industrial, etc.) will be relevant to the distant or near view of the bridge. These factors along with the natural/man-made features

will help to determine the scale of the bridge, its proportions and general design including that of railings, parapets etc.

- iii) Where a new bridge is to be built in lieu of an old historic structure, it will be desirable to site it a little bit away, so that a view of the existing bridge is available. It is equally important that the scale and height of the new bridge should be in consonance with the setting.
- iv) Consideration should be given to the use of building materials of such type, colour and texture that these not only make the structures architecturally attractive but also help to harmonise them with the natural landscape of the area. For instance, coarse finished or stone-faced structures will be more appropriate in forest areas.
- v) Approaches to bridges should blend with the terrain of the land, retaining natural beauty of the surrounding areas. Where possible, the approaches to major bridges should be so aligned that the bridge is visible from a distance and catches the eye of the road users, thereby breaking the monotony of travel.
- vi) Adequate planting and other landscape measures in the proximity of bridges can enhance the beauty of the area (Figs.13 to 16).
- vii) Where adequate level ground is available in the vicinity of bridges, the same could be developed into a roadside rest area so that travellers may halt there for short periods and enjoy the beauty of the river, bridge and the landscape.
- viii) Proper merging of bridge structure with the approaches, each of whom normally has a different cross-section, is an important factor which will affect aesthetics of the highway. The transition should be smooth and gradual for better appearance and safety.

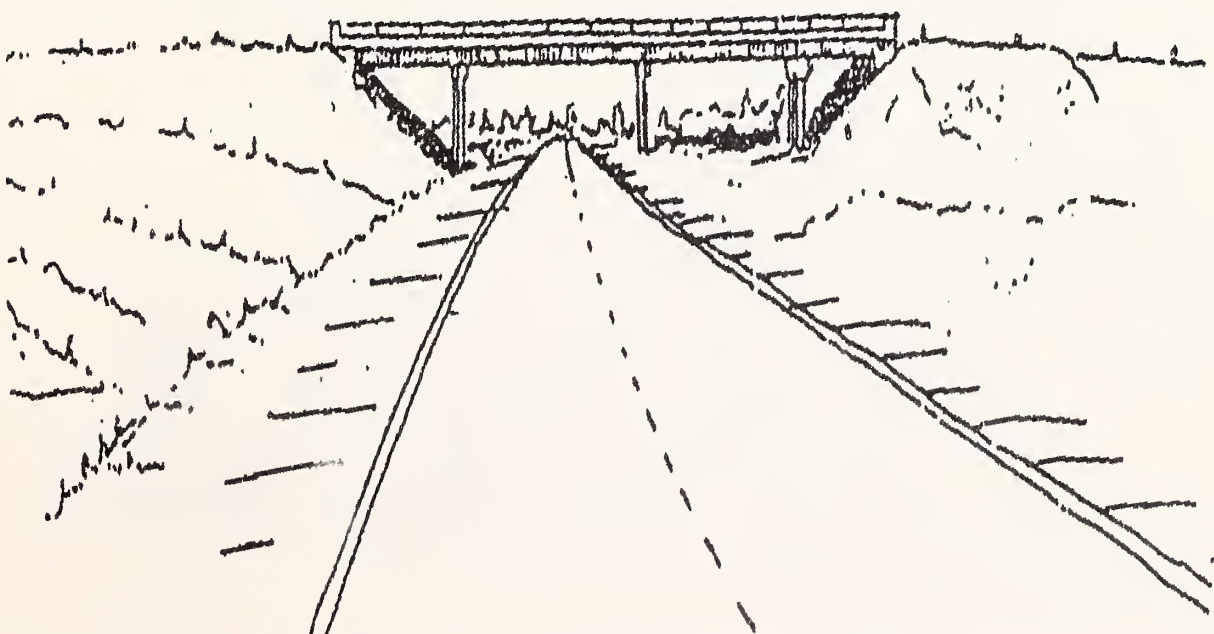


Fig. 13 Underpass without Landscape Treatment

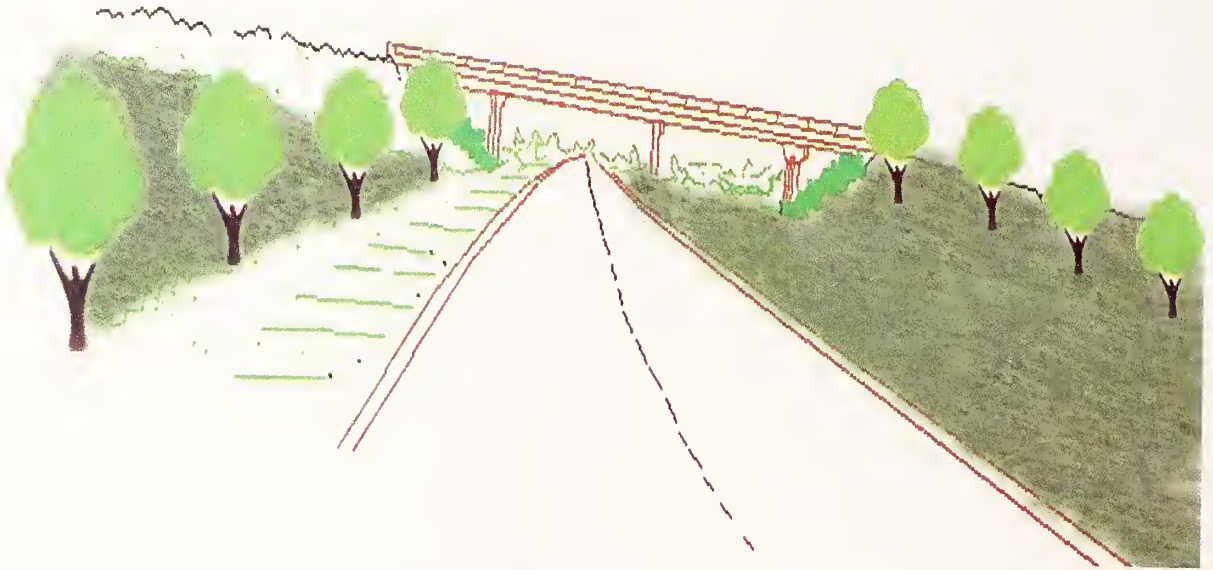


Fig. 14 Underpass in Fig. 13 after Landscape Treatment

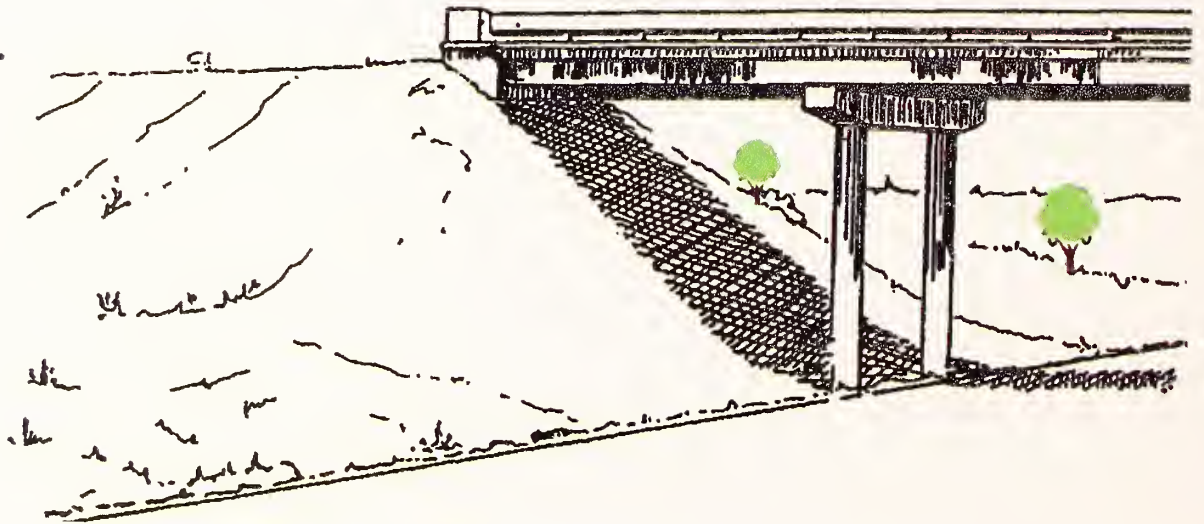


Fig. 15 View of Underpass without Landscape Treatment

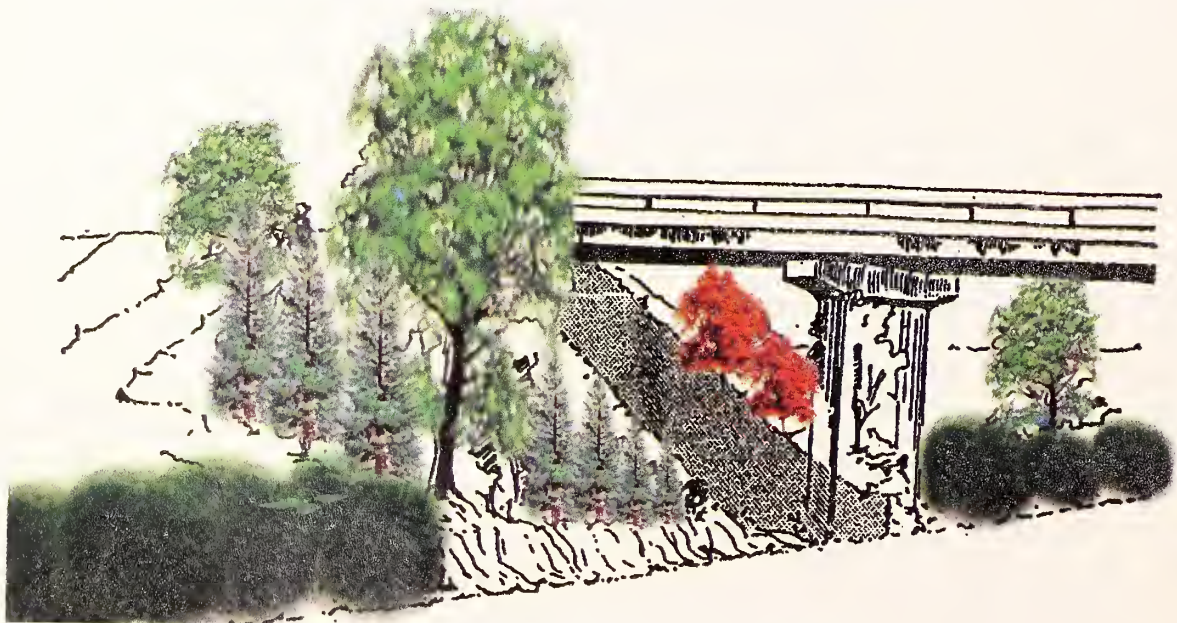


Fig. 16 Underpass After Landscape Treatment

## 6.2 Crash Barrier

**6.2.1** These are generally warranted on approaches to bridges, high embankments and other similar locations. Proper thought should be given to the layout and choice of material for the rails so that these easily blend with the surrounding landscape.

## 6.3 Tree Guards

**6.3.1** Tree guards should be of appropriate design so that these are functional and at the same time add to the aesthetic view of the highway (refer Section 11).

## 6.4 Road-Intersections – Rotary/Roundabout

**6.4.1** Road intersections are main nodal spaces and are of vital importance in terms of road aesthetics. Proper landscaping of the traffic islands and the surrounding areas should integrate these features with the surrounding landscape. The layout of traffic intersections should be fixed by the traffic needs of the junction. The landscape design should consider the basic standards of height limitations, appropriate sight lines and other geometric design elements that are applicable to each type of traffic intersection.

**6.4.2** Different types of intersections are met with along a road. In rural areas, these are generally of channelised type. Occasionally, rotaries with low kerbs for the central island are also used. Grade-separated interchange may also be necessary in certain urban and rural locations.

**6.4.3** Basically, the type and layout of an intersection will depend on the volume and turning movements of traffic. Appropriate landscaping measures at these locations can improve the aesthetics as well as contribute to safety. While the actual landscape treatment will depend on the individual site conditions, the following guidelines will be helpful:

- i) The intersection should be visible for sufficient distance from all the approaching roads;
- ii) Smooth flowing lines and liberal turning curves will improve the appearance, besides safety.
- iii) Traffic islands should be turfed and provided with flower beds or short growing shrubs. Central island and corners of rotaries offer great potentiality for such a treatment. In such cases, particularly in urban areas, provision of fountains and coloured lighting in the central island will not only enhance the overall aesthetics but also provide a place for rest and recreation (Figs. 17 and 18).
- iv) At grade separated intersections, the entire interchange area should be designed as a unit in relation to the surrounding topography and potential land use development of the adjacent area. Slope grading, drainage; erosion control and turfing should be co-related with the design of all roadways and

structures, both to enhance the appearance of the area and to keep construction and maintenance costs to the minimum. Effort should be to make the interchange complex as less out of scale with the surroundings as possible. While preparing the detailed design of the ramps, loops and interchanges, planning should be done with the help of landscaping architects.



Fig. 17 Well Planned Scheme of Planting on Approach Island of a Rotary



Fig. 18 Landscape Treatment of a Large Rotary and included Corners through various Measures

## 6.5 Road Signs

**6.5.1** Road signs are an important component of the traffic control system. Type, size colouring and lettering pattern of the signs should be as per IRC: 67-2001 “Code of Practice for Road Signs”. The sign system can be made more pleasing by treating an entire road section in one go, instead of sporadic actions at individual locations. At intersections, the

signs should be planned in a logical sequence, instead of haphazard placement. On the whole, there should be no proliferation or clustering of signs, especially in conjunction with different utility posts, which could lead to unsightly conditions.

## 6.6 Miscellaneous Roadside Appurtenants

**6.6.1** Design and construction of roadside appurtenants like railings, parapets, retaining walls, light poles etc., need careful consideration with regard to their effect on the landscape. It will be advantageous to associate landscape architects/urban designers in the design of their appurtenants. A typical design for a roadside railing in urban areas is shown in Fig. 19.

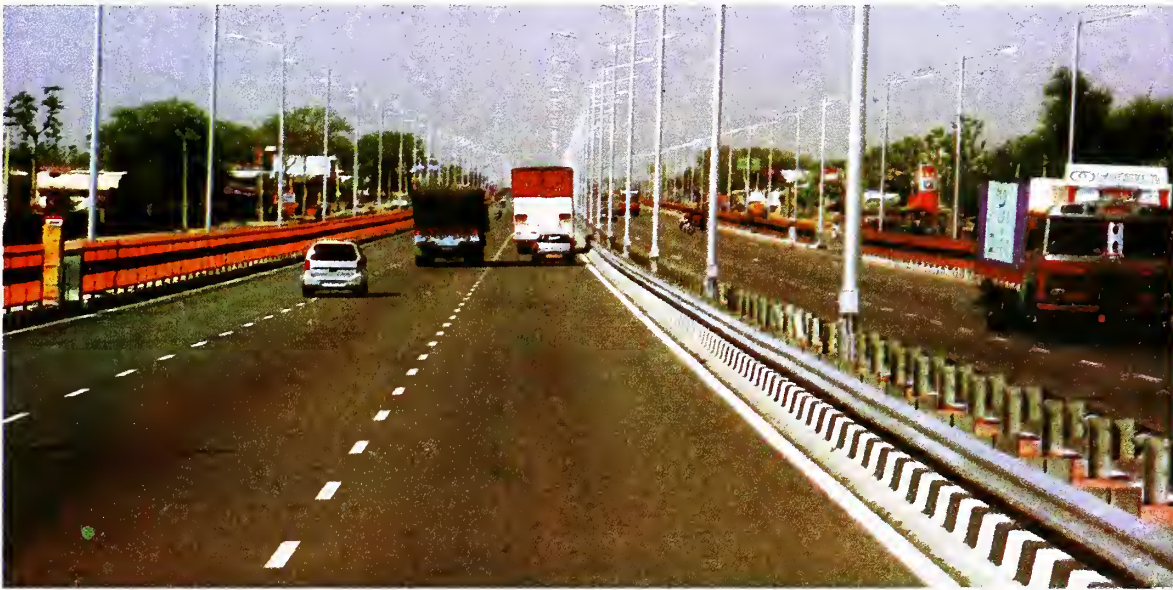


Fig. 19 Typical Design for Road Side Railing in Urban Area

**6.6.2** Lamp posts on urban roads should be of appropriate design, so that in combination with other posts and verticles they produce a pleasing appearance. In historic towns or other areas of special architectural character and on roads having completely open vistas, the effect of some forms of lighting installations which tend to be over prominent can be completely devastating to the surroundings. Special care in the selection of lighting fixtures is, as such, necessary.

**6.6.3** Bus bays and bus shelters should satisfy the functional requirements and also suitably merge with the landscape of the road so as to enhance the general view.

**6.6.4** Letter boxes, telephone junction boxes, electric transformers, overhead power/telephone lines etc., need similar care in design and erection so that these do not spoil the beauty of the road.

**6.6.5** In urban areas, both along the road as well as at junction corners, amenity of the surroundings can be considerably enhanced by constructing small water fountains with lighting arrangement, green grass strips, flower-beds etc. But it should be carefully planned with the help of an architect.

## 7 ROAD SAFETY AND ROAD AMENITIES

### 7.1 Road Safety

7.1.1 The landscaping and plantation along highway play an important role in providing road-safety for road users as under:

- To define the toe and median of the carriageway, specially horizontal sharp curve during night time.
- Prevention of glaring from headlight of incoming vehicles.
- Control of erosion by turfing the slope of the embankments
- Trees along the embankment slopes and near major water bodies play a major role in control of erosion. Similarly, green cover in the form of turfing stabilizes steep slopes and high embankment.
- Moderating the effect of wind and incoming radiation
- Large and spreading shade trees, with thick foliage provide much needed shade.
- To provide much needed shade on glaring hot roads during summer
- To define the historical places by landscaping and turfing as per the existing scenario.

### 7.2 Roadside Amenities

#### 7.2.1 General

7.2.1.1 Importance of roadside amenities along trunk highways needs no emphasis since such amenities can contribute greatly to the safety, convenience and enjoyment of road travellers.

7.2.1.2 Roadside amenities are of the following types:

- Roadside rest areas
- Truck parks
- Off strip parking places (roadside lay byes)
- Service Stations

7.2.1.3 Choice of location, the type of facility and its frequency will depend on the classification of the highway, traffic volume, topography and other related factors. Overall consideration should be that the amenities fit into the natural surroundings and are designed and treated in such a way that these form a part of general road landscape.

7.2.1.4 Specific features of the different types of roadside amenities are discussed further.

#### 7.2.2 Roadside rest areas

7.2.2.1 Roadside rest areas are intended for rest and relaxation of long distance travellers

and may occasionally provide facility for over-night stay also. These may be in the form of rest houses specially developed for the purpose. In the selection of individual sites, due consideration should be given to the topography, existing vegetation growth, scenic and historic values, cost of land, land use pattern, availability of facilities like water supply, sewerage etc. and the distance from other similar areas.

**7.2.2.2** Drinking water supply, toilets, provision for food/snacks, shady or covered areas for rest, space for parking are some of the essential facilities to be provided at roadside rests. Accommodation for over-night stay may also be provided, where feasible.

**7.2.2.3** At the rest areas, ample shady trees should be developed for parking of cars in summer and to provide shade to travellers who may like to use grassy lawns for recreation. The lawns may be provided with proper footpaths to preserve the grass. Footpaths should be planned and constructed in a manner that these become part of the landscape. Suitable plantation for screening the noise of moving vehicles on the highway may also be provided.

**7.2.2.4** Furniture items like benches, tables, litter boxes, etc. should be of natural design so that these form part of the landscape and involve minimum maintenance. The benches could be made of wooden logs, stones etc. All these aspects should be carefully planned in consideration with the natural surroundings.

**7.2.2.5** Normally, spacing of roadside rest spots along National Highways and State Highways should be 100-125 km. In actual location, preference should be given to sites which are of interest to the travellers such as dam sites, bird sanctuaries, water falls and other places with beautiful vistas like snow-clad mountains, river/canal banks or sea shore.

**7.2.2.6** Typical layout design for a roadside rest area is shown in Figs. 20, 21 and 22 which show the views of a roadside rest area developed along a National Highway.

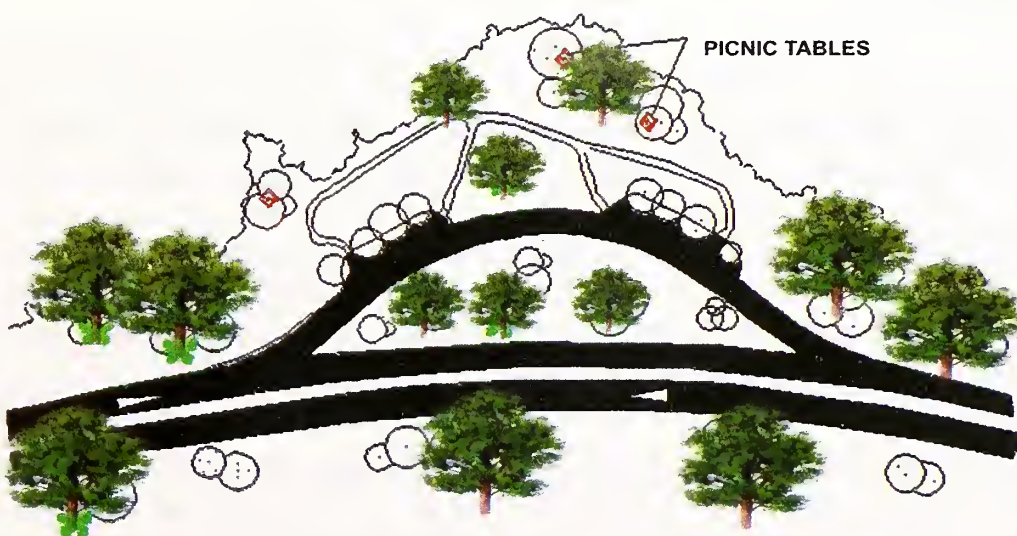


Fig. 20 Typical Layout Design for a Roadside Rest Area



Fig. 21 View of a Roadside Rest Area along a National Highway



Fig. 22 Another View of Rest Area

### 7.2.3 Truck lay byes

**7.2.3.1** Truck lay byes are intended mainly for the convenience of long distance truck operators. These must provide the same basic facilities as at roadside rest areas (vide para 7.2) but the parking lots will have to be bigger in area to accommodate a larger number of trucks.

**7.2.3.2** Truck parks are generally developed near check barriers or at inter-state borders or at places of conventional stops of the truck operators. These places should have ample space for parking where big trees are planted to provide shade for trucks, besides lawns for the relaxation of truck operators. The trees and shrubs should be of hardy type. In order to break harshness of the big parking area, some green pockets should also be developed. As regards open area, it would be advantageous to go for a combination of paving and grassing so as to reduce maintenance cost. Proper screen planting may also be required to insulate the area from the highway. Typical layout for a truck park is shown in Figs. 23 and 24.

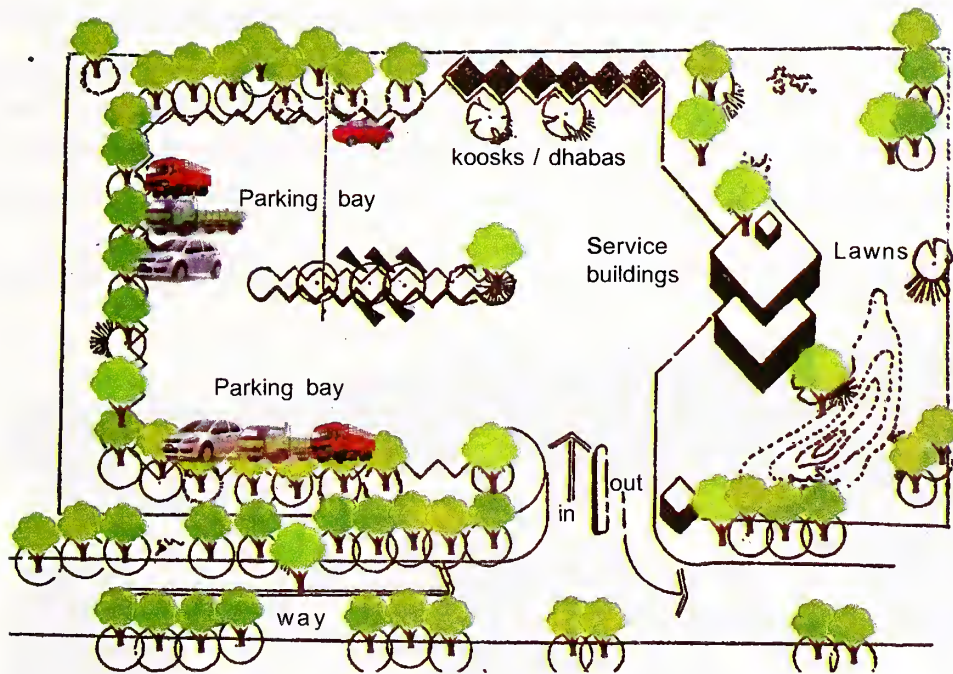


Fig. 23 Typical Layout Design for a Truck



Fig. 24 Screen Plantation along Urban Highway

## 7.2.4 Off-strip parking places (bus lay bays)

**7.2.4.1** Off-strip parking places are basically roadside lay bays constructed parallel to the road. They serve a purpose similar to roadside rest places, except that these are smaller in size, have comparatively limited facilities and are intended to be used for short periods, mainly for stoppage of buses. Because of the nature of their usage, the spacing of such lay bays is generally much closer than full-fledged rest areas. On busy trunk routes, it may be desirable to aim at a spacing of about 70-80 km. At times, it may be advantageous to start with a smaller off-strip parking place and develop it gradually into a bigger rest area.

**7.2.4.2** The direction of the sun may also be considered while planting the shade trees in order to ensure that the shade is available to the parking vehicles. If feasible, the position of off-strip parking places should be adjusted to combine with any natural scenic lookouts by the side of the road. In such locations, besides planting of new trees, existing trees

should be preserved for the purpose of shade and beauty. Benches and tables and a small shelter could also be provided for the facility of drivers. The architectural treatment of these features should be such that they merge with the surroundings and do not appear isolated. Similarly, if any railing is provided, it should be rustic in appearance and made of local materials. An important consideration should be that the maintenance cost is minimum.

**7.2.4.3** Fig. 25 illustrates the salient features of an off-strip parking place in plain terrain.

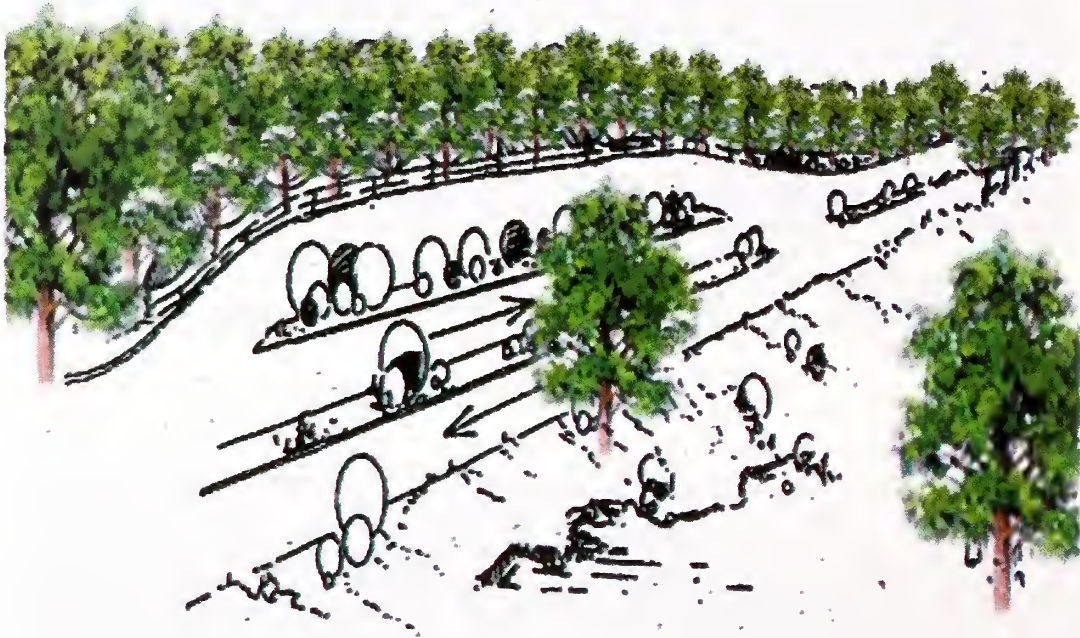


Fig. 25 Typical Layout of an Off-Strip Parking Place in Plain Terrain

## 7.2.5 Service stations

**7.2.5.1** Service stations catering to fuel, oil and repair requirements of vehicles are needed to be spaced out at more or less regular intervals along important highways and as such the choice of sites with respect to the road landscape will generally be restricted. All the same, it should be ensured that these do not adversely affect the natural beauty. All efforts should be made to blend the service stations with the natural landscape by choosing suitable designs for structures and necessary planting.

## 8 LANDSCAPE TREATMENT FOR SPECIAL AREAS

**8.1** Special points needing attention when dealing with landscape treatment of roads passing through industrialized belts, water-logged areas, sandy/desert tracts, forest areas and coastal regions are dealt with in this Section. These are in addition to the basic design considerations discussed in this Manual, which remain the same.

### 8.2 Landscaping Treatment at Sensitive Noise Receptors

**8.2.1** All along the highway corridor certain sensitive receptors for noise should be identified, like the Schools, residential colonies and Hospitals. Special treatment should

be given to all these sites in terms of landscaping and planting. A lot depends on the space available for providing noise barriers. Within the limitations of the available space, physical noise barriers and plantations can be combined to reduce the noise levels considerably. At these sites the first row should be of tall shrub of 1.5-3 m height with dense foliage for the purpose of maximum possible screening effect. Species like *Cassia alata*, *Cassia biflora*, *Hemelia patens*, etc are used for this purpose. Last row could be planted with trees like *Neem* (*Azadirachta Indica*), *Mango* (*Mangifera Indica*), *Shisham* (*Dalbergia Sisso*), *Imli* (*Tamarindus Indica*), and *Karanj* (*Pongamia sp.*). The intermediate rows may have flowering trees like *Amaltas*, *Gulmohar*, *Kachnar* etc. As far as possible, three rows of plantation may be planted for reducing the noise levels.

### 8.3 Landscape Treatment for Highly Industrialized Areas

**8.3.1** If some heavy industry already exists by the side of the road, it will be advisable to provide planting on both sides of the road to screen out any possible unsightly views (Fig. 26).



Fig. 26 Use of Screen Plantation to Insulate Slums and Other Unsightly View

**8.3.2** Where a new industrial area is to be developed, requirements of landscape should be kept in view at all stages of planning, design and construction.

**8.3.3** In areas where some chemical industry has been set up, it is possible that fumes from factories may prove injurious to the drivers or create difficulties in safe driving. To minimize these effects, it will be desirable to create a thick green buffer between the highway and the industrial area, using plants which can safely grow in such environment.

### 8.4 Landscape Treatment in Waterlogged Areas

**8.4.1** The type of landscape treatment to be given will depend upon the extent of water logging in the area.

**8.4.2** If the surrounding area has standing water on both sides of the road, it may not be possible to treat land in the usual way. In such cases, aquatic plants like water lilies, lotus, etc., should be introduced to make the area beautiful.

**8.4.3** At some places where water level is very high, the water logged portion could be developed into a pond or lake for use as a rest spot by the road users.

**8.4.4** Plantation scheme for such areas should be so decided that the plants can grow well under the waterlogged conditions, do not need much maintenance and, if possible, can even help in lowering the water table. For plantation details, refer to Section 11.

## **8.5 Landscape Treatment in Sandy/Desert Areas**

**8.5.1** In sandy areas, only such species of vegetation are recommended which have the least water requirement and are of succulent and spring type with thinner leaves. As far as possible, local plants should be preferred from the angle of easier maintenance and bringing up.

**8.5.2** Besides beautification, one of the functions of vegetation in desert areas is to act as a barrier against shifting sand. Where it is not possible to grow plants for this purpose all along the road, effort should be to develop at least smaller pockets at intervals which could also act as rest areas. Such rest areas in the desert will be able to provide considerable relief to road users in intense heat. For more details about plantation, refer to Section 11.

## **8.6 Landscape Treatment in Forest Areas**

**8.6.1** As far as possible, no new road should be aligned through the forest. Only under unavoidable circumstances, a road may be planned with restricted ROW.

**8.6.2** Cutting of trees should be avoided, as far as possible. But wherever road passes through animal corridor, it may be ascertained that there is minimum disturbance to the forest and the animal life. This is illustrated in Fig. 27.

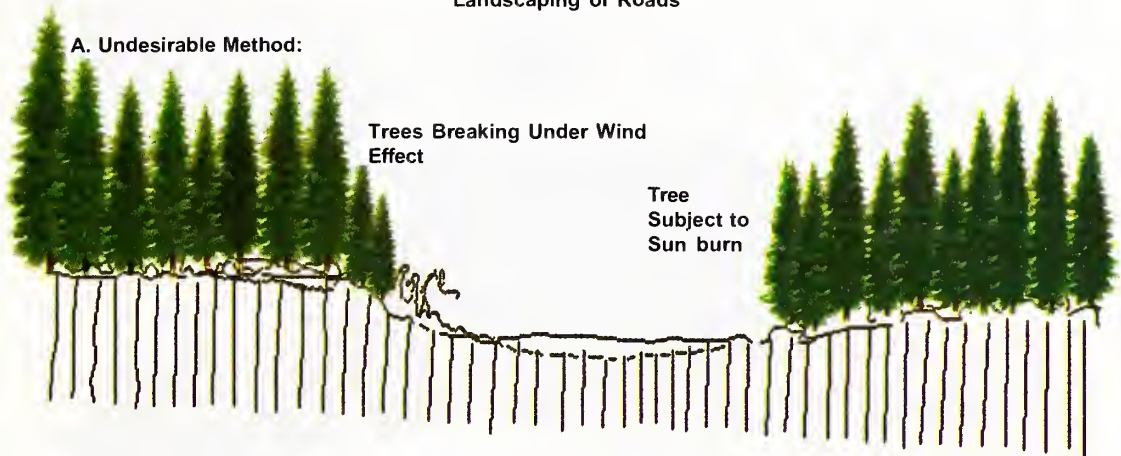
**8.6.3** In continuously wooded areas, there might be scenic spots and open vistas hidden behind vegetation. By selective thinning and pruning of vegetation, contrasting views could be developed so as to break the monotony of travel, (Fig. 28).

## **8.7 Landscaping of Coastal Highways**

**8.7.1** Desirably, the road should be aligned along the sea coast so that the travellers can fully enjoy the natural scenery. At the same time, the road should not be so conspicuous and close to the waterline that there is an adverse effect on the overall surroundings. For instance, the route could be located behind sparingly planted groups of trees which will permit full views to the travellers and yet disturbance as regards visitors to the beach will not be so much. At places, dense plantation could be made use of to screen private areas and undesirable views.

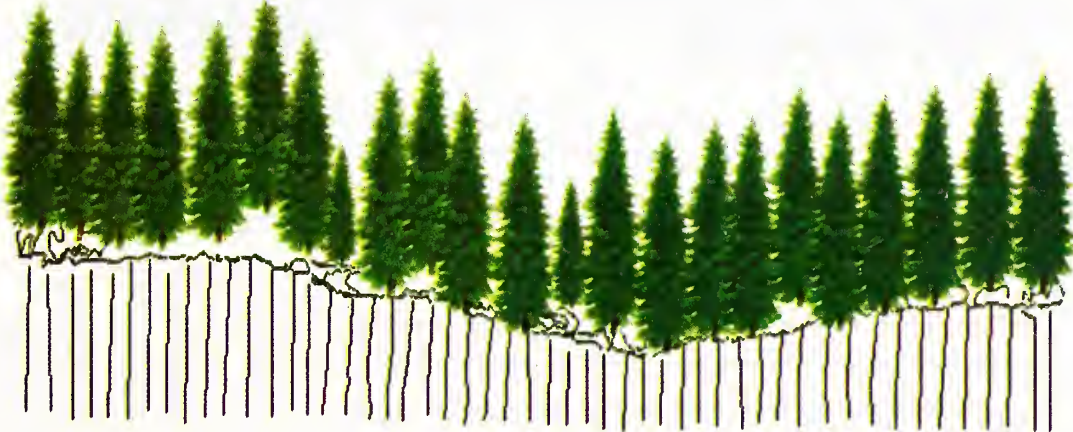
Landscaping of Roads

A. Undesirable Method:



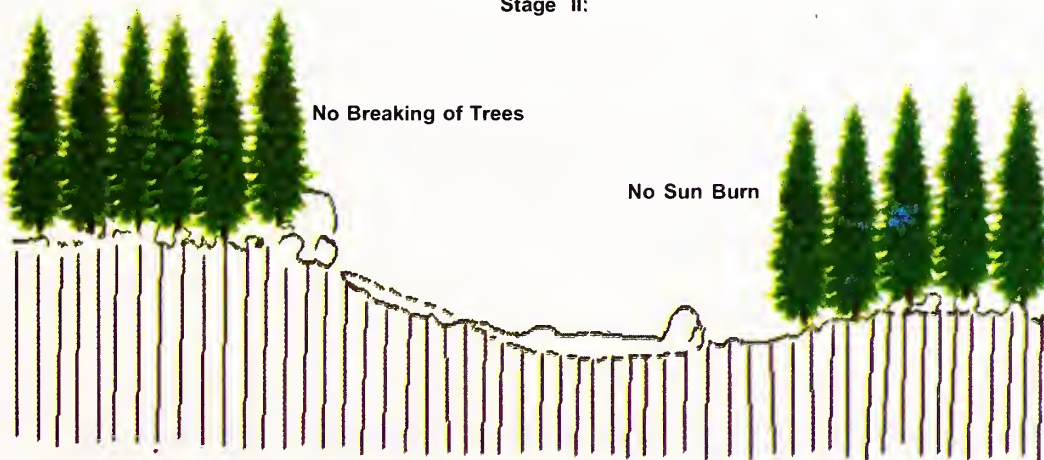
Felling of Tree in one Stroke at the Time of Road Construction may Result in Breakage of Trees by Wind Effect Due To Lack of Gradation of Plantation, and Sunburn on Account of Sudden Exposure of Fresh Trees to hot Sun.

B. Desirable Method Stage I:



- (I) Initially Thinning of Forest should be done Along the Road Alignment.
- (II) Simultaneously, New Plantation should be Provided on the Road Side.

Stage II:



After The New Plantation Comes Up the Central Portion should be Cleared for Road Construction.

Fig. 27 System of Felling Trees in Forest Area



Fig. 28 Exposing Scenic Spots and Open Vistas in Continuously Wooded Areas through Selective Pruning of Plantation

## 9 IMPROVING LANDSCAPE OF EXISTING ROADS

**9.1** To improve the appearance of existing roads through landscaping measures, can prove to be a variably difficult task because of several limitations, e.g. restricted land width, difficulties in road realignment, presence of man-made features not conducive to aesthetic treatment, etc. Yet, every possibility of beautifying the landscape should be investigated and feasible steps taken.

### 9.2 Inventory of Existing Features/Facilities

**9.2.1** The first stage in formulation of a viable programme for beautification of an existing road will be to prepare an up-to-date inventory of all landscape features including existing plants and other amenities by the side of the road. The inventory should be depicted on linear plans together with indication about potential locations where scenic lay byes, roadside parks, group plantations etc., could be developed. The existing features and roadside shoulders should be maintained properly.

### 9.3 Acquisition of Additional Land

**9.3.1** Based on the inventory, an action programme should be prepared as regards additional landscaping measures and traveller amenities. If available land width is insufficient to implement this programme, acquisition of additional land should be seriously considered keeping in view the following requirements:

- i) To provide flatter side slopes in cuts and fills alongwith contouring of the adjacent land.

- ii) To provide enough space for planting suitable trees and plants.
- iii) To provide sufficient area for parking, look out spots and other aesthetic features.

#### **9.4 Borrowpits**

**9.4.1** Treatment to borrowpits should be planned on the following lines:

- i) Improvements to the existing borrowpits by remoulding them into water spot.
- ii) Grading the sides of existing borrowpits with suitable curves to minimize the effect of harsh vertical faces.
- iii) Avoiding future borrowpits, or if absolutely necessary regulating their excavation according to prescribed norms.

#### **9.5 Arboriculture**

**9.5.1** Detailed guidelines about arboriculture are given in Section 11. On existing roads, the following points deserve special consideration:

- i) Adopting an integrated scheme of planting so that the new trees and shrubs go well with existing vegetation.
- ii) Grassing/turfing for erosion prevention.
- iii) Screen planting to block unsightly views.

#### **9.6 Other Measures**

**9.6.1** By properly regulating the advertisement boards and improving the illumination, the road may be made more pleasant to the traveller.

**9.6.2** Sides of roadside drains should be dressed and trimmed properly to improve the appearance. Where there is a steep fall in levels along the drain, small weirs may be constructed at intervals to allow the water to fall in cascades, which will create a pleasant effect.

**9.6.3** Ugly manure pits, dilapidated huts and other unsightly spots which mar the beauty of the landscape should be removed or screened off suitably.

**9.6.4** Removal of tree branches obstructing smooth traffic movement and good view should be carried out judiciously. Similarly, old tree stumps should be removed and the area made presentable by suitable means.

## **10 MAINTENANCE OF ROADSIDE PLANTATION**

**10.1** Maintenance of roadside arboriculture includes a number of operations such as (i) tending saplings of trees and plants till they can stand by themselves, (ii) selective pruning of shrubs, trees etc., from considerations of traffic operations and safety, (iii)

maintenance of grass in turfed areas and (iv) keeping the rest areas neat and clean.

**10.2** For detailed guidelines about tending saplings of trees and plants, refer to Section 1.

**10.3** Selective pruning or cutting of trees and shrubs will be required at situations where these (i) interfere with sight distance, (ii) come in the way of effective street illumination, (iii) are too close to the carriageway so as to be hazardous, (iv) conceal desirable views and scenic vistas and (v) have become too old or dead.

**10.4** Maintenance of vegetation should be scheduled for the most effective seasons for each class of work. For example, grass mowing should be at intervals governed by growth rates, fertilizing of turf should precede maximum growth periods and selective pruning of plants should precede the dormant period. Some items of roadside maintenance such as tree removal and tree care, which are not seasonal, may be scheduled for other periods.

**10.5** On heavily trafficked highways in urban areas, rising dust is a continuous problem, particularly during the dry weather. The dust may settle on roadside plants and shrubs and spoil their beauty. Where the problem is acute, plants and shrubs should be periodically given a wash to remove the dust.

**10.6** The trees and plants should be maintained under the supervision of horticulture staff and new plants put up, wherever necessary, in adequate time, especially to replace the dead and old trees. Proper working plans should be prepared where the work involves felling of mature trees/plantation.

## **11 BROAD GUIDELINES OF ROADSIDE/MEDIAN PLANTATION**

### **11.1 General**

**11.1.1** This Section gives broad guidelines about different aspects of roadside arboriculture. For proper selection of plant, native plant species have been recommended for different climatic regions, In Appendix-I principal details of each of the species, such as, their name in different languages, characteristics of growth and the suggested location of use has been described.

**11.1.2** Tree plantation is the most effective, economical and useful remedy for control of environmental pollution. Besides, it is the cheapest way of landscape improvement. Trees have innumerable direct and indirect benefits of supplying timber and fuel at maturity. During their life time, they supply fodder, fruits, seeds, help in controlling soil erosion and water conservation, offer shade and are oxygen producing industries to combat ever increasing air pollution (Appendix-II). Big foliage trees also help in reducing noise and dust pollution.

## 11.2 Objectives of Tree Plantations

11.2.1 The main objectives of planting along the Highways are as follows:

- To provide for aesthetic enhancement of the project corridors
- To reduce the impacts of air pollution and dust, as trees and shrubs are known to be natural sink for air pollutants.
- To provide much needed shade on glaring hot roads during summer.
- To reduce the impact of ever increasing noise pollution caused due to increase in number of vehicles.
- To arrest soil erosion at the embankment slopes.
- Prevention of glare from the headlight of incoming vehicles.
- Climatic amelioration,
- Moderating the effect of wind and incoming radiation
- To define the ROW especially, to highlight sharp horizontal curves during night

## 11.3 Selection of Tree Species for Landscaping

11.3.1 Trees, shrubs and climbers have been used to enhance the soft natural ambience against harsh elements in most of the enhancement schemes. The planting species are decided based on the physical growth characteristics of trees, like form and shape, foliage pattern, growth rate, branching pattern, soil characteristics and conditions of the strip like water logged areas etc. While selecting the species of trees for landscaping, great care should be taken to choose the species, which already exist along the project corridor.

11.3.2 The selection of plant types and planting arrangement should be based on the following considerations:

- Aim and objective of plantation
- Shape (spread of the tree) and size
- Texture and colour of foliage/flower/fruits in different seasons and stages of growth.
- Adaptability and suitability to agro-climatic regions/zones
- Growth rate (slow/fast) average age of maturity and replacement cycle
- After-care and maintenance required for sustenance and growth
- Economic and other social/recreational benefits
- Drawbacks and demerits, if any, like prone to insects/pests disease, animal grazing and human interference.

#### 11.4 Screening

- Plantation of pollution resistant dwarf shrub species in the median to prevent glare from the vehicles moving in opposite direction during night.
- A mix of medium and large trees along roadside to screen the evening glare for the traffic moving towards west-northwest.
- Screen plantation as a visual barrier in schools, hospitals, residential colonies, etc.

#### 11.5 Aesthetics

- Provision of flowering trees in the urban sections and major crossings
- Provision of flowering shrubs in the median
- Softening of vertical surfaces of the retaining walls of grade separators and raised sections of the carriageway by climbers.

#### 11.6 Shade

- One of the main objectives of Roadside Avenue is to provide shade. Large and spreading shade trees, with thick foliage are proposed to provide much needed shade on glaring, hot roads during summer. Evergreen trees do not have substantial leaf fall, which avoid the nuisance of clogging of lined drains.

#### 11.7 Other considerations

- Trees along the embankment slopes and near major water bodies play a major role in the control of erosion. Similarly, green cover in the form of turfing stabilizes steep slopes and high embankments.

#### 11.8 Plantation Pattern

**11.8.1** A soft landscape should be developed envisaging a holistic approach to the entire stretch. A concept should be evolved so as to maintain visual characteristics and uniformity in terms of landscape along the stretch. In the absence of uniform land availability for the plantations, different schemes may be worked out in tune with the local variations in the design. To achieve this, entire stretch of the project corridor should be divided into homogenous landscape sections based on similarity in terms of soil conditions, climate (temperature and rainfall) and topography. A study on the local flora and vegetative cover native to these sections should be carried out as part of the field surveys to enable the choice of suitable species for particular section.

**11.8.2** Earlier, the first row of plantation along the highways used to be done by using tall shade bearing trees. But with the development of high-speed highways, the concept needs

to be changed. For the sake of better road safety and for enhancing aesthetics, it has now been felt better to provide the shade plants in the last available row. In the first or the only available row; and other intermediary rows, small to medium sized ornamental trees should be planted.

**11.8.3** The planting type should be decided based on the requirement and feasibility at various sites along the project corridor. Physical growth characteristics of trees, like form and shape, foliage and rooting characteristics, growth rate, canopy type and branching pattern are the major criteria in the selection of plantation type and density. The space available in the ROW is one major guiding factor for different themes of landscaping applied in the entire corridor.

**11.8.4** Depending on the available ROW, plantation pattern should be worked out as follows:

- i) The first row along the Highways will be of small to medium sized ornamental trees.
- ii) Subsequent rows, depending on the availability of width, will comprise of ornamental and/or shade bearing species, of more height than those in the first row. In rural sections, the last row will always be of shade bearing tall trees.
- iii) Planting of shrubs in the median.
- iv) Planting of herbaceous species as ground cover in the median, special landscapes and embankment slopes.
- v) Turfing with grass in the median, special landscapes and embankment slopes.

## **11.9 Ornamental Species**

**11.9.1** The first and subsequent rows of plantations along the highway, except the last row, should be worked out based on the land availability within the ROW along the various sections. In case of urban and semi-urban areas, where because of land constraints, only one row of plantation possible, ornamental species should be planted instead of shade bearing species. A combination of ornamental, shade and screening trees have been recommended. The number of rows and the repetition of the trees and their type vary with the landscape section, the typical cross-section and the space available in the ROW for tree plantation.

Table 1 and 2 list a few species, which can generally be planted throughout India for this purpose.

**Table 1 Species Recommended for 1st Row of Avenue Plantations**

S.no.	Soil	Botanical Name	Local Name	Flowering Month/Colour
1.	Normal Loamy soils	Acacia auriculiformis	Vilayati babool	Sep-Oct./Yellow
2.		Bauhinia sps.	Kachnar	Feb-Mar./Pink
3.		Cassia fistula	Amaltas	May/Yellow
4.		Cassia nodosa	Cassia	May June/Pink
5.		Delonix regia	Gulmohar	May/Yellow
6.		Jacaranda mimosaeifolia	Jacranda	April/Blue
7.		Peltophorum ferrugineum	Peltophorum	Oct./Yellow
8.	Water logged areas	Cordia dicotma	Lasoda	
9.		Syzygium cuminii	Jamun	
10.		Terminalia arjuna	Arjun	
11.	Alkaline soils [Usar]	Albizzia lebbek	Kala Siris	
12.		Pongamia pinnata	Kanji	
13.		Terminalia arjuna	Arjun	

**Table 2 Species Recommended for 2<sup>nd</sup> and Subsequent Row, Except the Last Row of Avenue Plantations**

S.no.	Soil	Botanical Name	Local Name	Flowering Month/Colour
1.	Normal Loamy soils	Albizzia lebbek	Kala siris	
2.		Dalbergia sissoo	Shisham	
3.		Gravillea robusta	Silver Oak	
4.		Malia azadiracta	Bakain	
5.		Pongamia pinnata	Kanji	
6.		Terminalia arjuna	Arjuna	

### 11.10 Shade Plants

**11.10.1** One of the main objectives of Roadside Avenue is to provide shade. The shade trees in the last available row should be planted at a spacing of 8-12 m. These tree species should be of local significance and should be mostly evergreen in nature, which ensure no substantial leaf-fall in winters preventing the problem of blockage of roadside drains. Trees with the following characteristics will be planted as shade trees:

- i) Trees with high crown forms secure better visibility and are therefore ideal.
- ii) Trees that retain their foliage longest are preferred to deciduous trees

- iii) Trees with long gestation period and having rapid growth and a capacity to resist fungal and insect attack form ideal avenues.

The tree species recommended as shade plants for roadside avenues are given in Table 3. These species can be planted almost though out India.

**Table 3 Shade Trees Recommended for Roadside Avenues**

Soil	Species	
	LOCAL NAME	BOTANICAL NAME
LOAMY	Arjun	Terminelia arjuna
	Imli	Tamarindus indica
	Jamun	Syzynium cuminii
WATER LOGGED AREAS	Mahua	Madhuca indica
	Mango	Mangifera indica
	Neem	Azadirachta indica [ at pH up to 8.5]
ALKALINE [USAR]	Kanji	Pongamia pinnata [ upto 9.0 pH]
	Peepal	Ficus religiosa
	Paker	Ficus infectoria
	Shisam	Dalberjia sissoo
	Neem	Azadirachta indica
	Shisam	Dalbergia sissoo
SANDY	Shisam	Dalbergia sissoo

The above lists represent common species, which can be planted almost throughout India. Region-wise specific lists have been provided in Annex A to F. It is recommended that local experts from the Forest Department and Horticulture Department should be consulted before finalizing the choice of species for a particular stretch.

### 11.11 Species for Median

**11.11.1** The shrubs to be planted in the median should be of low or medium height for prevention of the headlight glare. One to two rows of flowering shrubs will be provided according to the varying width of the median in different sections. In sections where the median width is less than 1.5 m, only turfing of grass is proposed. Some herbaceous species may also be planted as a ground cover, not only on the medians but on special landscapes and embankment slopes also. The species proposed for the purpose of turfing/ground cover are: Cynodon dactylon, Cythocline perpurea, Solanum nigrum, Alternanthera, Chlorophytum, Eupatorium, Wedelia, Duranta, Portulacca, Ipomea, Pelia cadrii, Beleprone oblongata, Tradescantia, Asparagus, Opheopogon grass etc. The shrub species proposed in the median are mainly Bougainvillea and Thevetia nerifolia (Kaner). However, other suitable species may be planted in consultation with the local horticulture specialists. Region-wise specific lists have been given in Annex A to F.

## 11.12 Plantation Agency

**11.12.1** The entire highway network can be divided into two categories based on the legal status of the existing road-side plantations. In most of the areas, the existing plantations along the highways have been notified as protected forests. For these areas, permission for tree cutting is required to be taken from the Forest Department under the Forest Conservation Act, 1980. While granting the permission, the Forest Department stipulates the conditions not only for compensatory afforestation but also for avenue plantations. In these cases, the amount for plantation is deposited with the Forest Department and normally the work of avenue plantation is taken up by them.

**11.12.2** In other category, such highway corridors are considered where the existing road side plantations have not been declared as Protected Forests. In these cases, as in the cases of bypasses also, the plantation may be taken either through the contractor (if it is a BOQ item), Forest Department as an agency for plantation, or, from a private contractor.

## 11.13 Concept of Plantation in Different Areas

### 11.13.1 Rural Areas

**11.13.1.1** Common plants generally recommended for National Highways and State Highways passing through rural areas are Amaltas (*Cassia fistula*), Neem (*Azadirachta indica*), Jamun (*syzygium cumini*), Imli (*Tamarindus indicus*). Tall trees like Eucalyptus are not suitable (except for waterlogged areas) as they interfere with electric and telephone lines and are safety hazards on the road. Medium trees like, *Acacia auriculiformis*, *Gravillea robusta*, are ideal for screening. In a tropical country like India, where the temperature during summer months may rise up to a maximum of 46°C or more, the 'shade' is of greatest value to the travelers. Thorny trees like *Acacia Arabica* and Ber (*Zizyphus jujuba*) are avoided, as these create a nuisance for the pneumatic tyre of motor vehicles.

### 11.13.2 Urban Areas

**11.13.2.1** Near market places and congested areas, the trees known for behaving as 'pollution sink' are proposed. Though, trees in general absorb the pollutants, filter the air from pollutants, and act as noise barrier, but some trees like Neem (*Azadirachta Indica*), Mango (*Mangifera Indica*), Shisham (*Dalbergia Sisso*), Imli (*Tamarindus Indica*), Karanj (*Pongamia sp.*), and some flowering trees like Amaltas, Gulmohar, Kachnar etc. can do it in a better way.

**11.13.2.2** Near sensitive areas like schools and hospitals, tall trees with thick canopies can create a wind screen through which the air can be filtered and the noise levels be reduced to some extent. Some such trees are *Pongamia sp.*, *Acacia auriculiformis* and *Gravillea robusta*. Tall shrubs like *Casia biflora*, *hamelia patens* etc. are also provided at the sensitive noise receptors for maximum possible screening.

### 11.13.3 Edges Along Clear Zone

**11.13.3.1** The clear zone along the road is of varied nature depending upon the different embankment heights. Some areas have steep gradients that need intensive stone pitching treatment. In order to increase the structural stability, this type of treatments, plant materials such as shrubs and ground covers, can be introduced in the interstices. They can be used with emphasis on their rooting characteristics, so that they help in binding the stone pitching treatments. In areas of high water table or water logging, special emphasis should be given on the selection of plant materials that can survive in moist conditions.

### 11.13.4 Water Logged Areas

**11.13.4.1** Waterlogged areas along the roads are generally due to inadequate drainage pattern. The road acts as a bund and contributes to water logging in the region of high water table or the low lying nature of the terrain.

**11.13.4.2** This type of situation is common throughout the plains in the country. Planting of such sites after proper drainage is now a common practice. T. Arjuna, Jamun and Eucalyptus are usually recommended for waterlogged areas. Bamboos can also be planted in such areas.

### 11.13.5 Alkaline Soils

**11.13.5.1** Alkaline (Usar) soils are frequently encountered along the highways throughout the country. The species recommended for such soils include; Azadirachta indica, Ailanthus, Terminalia arjuna, Pongamia, Albizzia lebbeck, A. procera.

## 11.14 Specifications for Avenue Plantations

**11.14.1** The technical specifications for planting along the Highways are as follows :

### Ornamental Plants (Except Last Row)

Distance from embankment	1.0 m away from the toe of the embankment
Spacing between plant to plant	3 m
Spacing between rows	3 m
Size of the pits	60x60x60 cm (in alkaline soils, kankar panes to be broken by augur. In waterlogged areas, mound with height varying depending on water level)
No. of plants per km	333
Height of the saplings at the time of planting	1.5 m to 2 m
Survival percentage of plantation	90% at any time

**Shade Plants (Last Row)**

Distance from preceding rows	3.0 m
Spacing between plant to plant	8-12 m (6 m if high mortality expected)
Size of the pits	60x60x60 cm (in alkaline soils, kankar panes to be broken by augur. In waterlogged areas, mound with height varying depending on water level)
No. of plants per km	84 (167 at 6 m spacing)
Height of the saplings at the time of planting	More than 2 m
Survival percentage of plantation	90% after replacement of casualties in first two years. 80% afterwards

**11.14.2** In localities where a really bad patch of saline soil (usar) occurs, there is a need to dig deep pits by augur [mechanical device] to break the kankar pan down below and replacing the soil by good quality soil. The pits should be filled with the soil amender, Gypsum (1 to 3 kg per pit, depending on the pH) along with 2 kg compost and sand. The treatment helps in lowering down the pH and thus enabling better survival of plants.

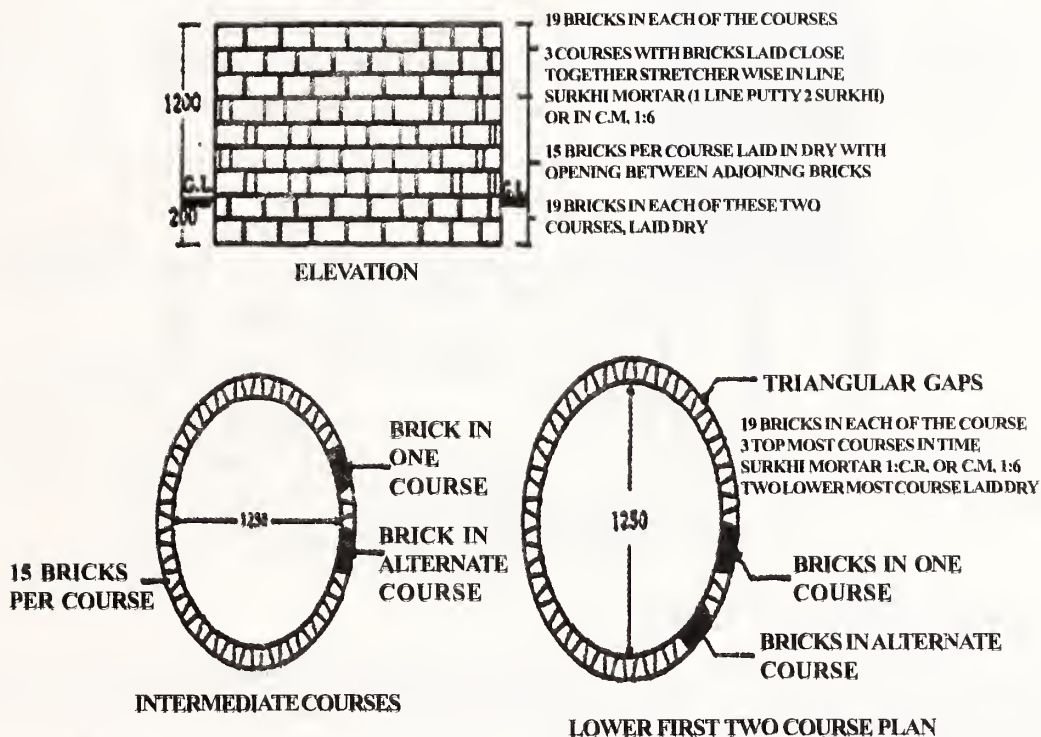
**11.15. Protection Measures**

**11.15.1** The fencing of single row plantations is generally done by using iron/brick/cement guards Fig. 29 (a) (b). Locally available bamboo guards or thorn fencing should be used where protection can be ensured through them. The description and specifications for the iron and brick guards are as given in Figs. 29 to 31.



Fig. 29 (a) Circular Iron Guard

BRICK TREE GUARD



DRAWINGS NOT TO SCALE  
ALL DIMENSIONS ARE IN MM

Fig. 29 (b) Ornamental Tree Guard with M.S. Bars

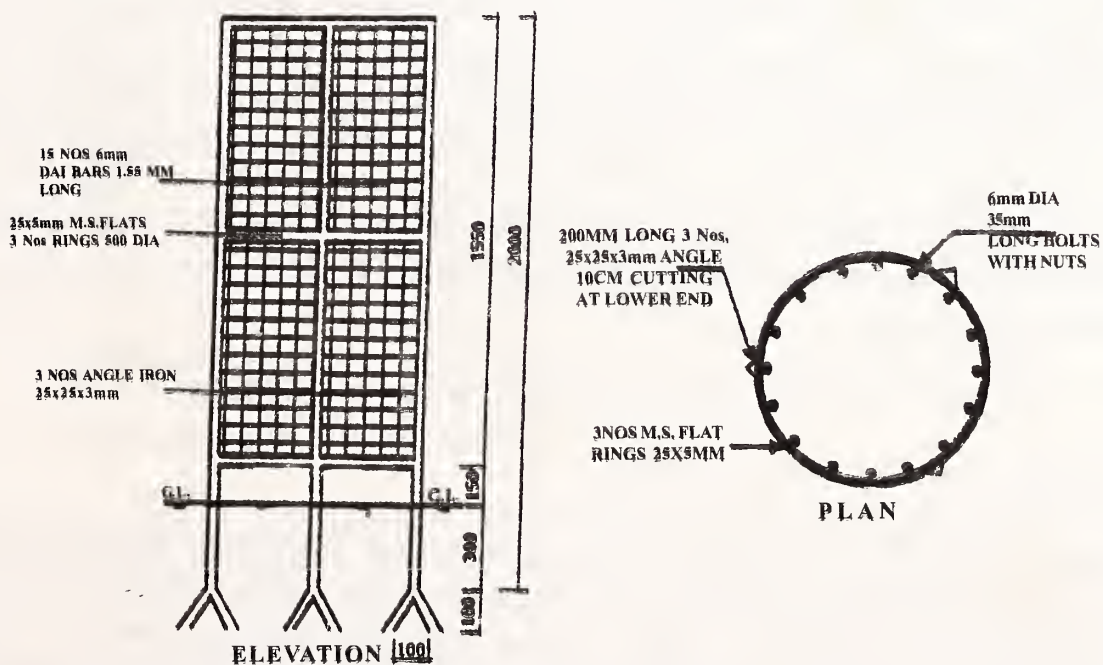


Fig. 30 Ornamental Tree Guard with M.S. Bars

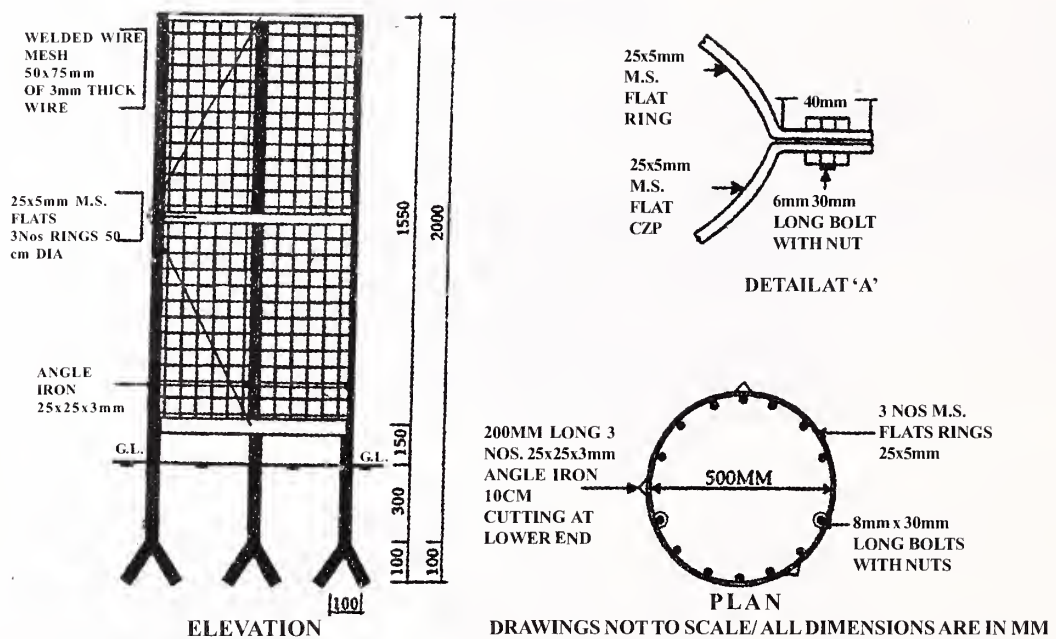


Fig. 31 Ornamental Tree Guard with Welded Mesh

### 11.15.2 Circular Brick Tree Guard

The internal diameter shall be 1.25 m, height above ground level 1.20 m and depth below ground level 0.20 m, walls half brick thick.

This shall be built of bricks of class designation 75. Bricks should comply with the specifications described in 6.1 with the exception that they may not be well burnt and may have a reddish yellow colour throughout or may be over burnt. The first two courses from bottom shall be built dry (without mortar) with the bricks laid close to each other, without honey-comb. Subsequent courses up to 0.30 m from top of tree guard shall be built dry in honey-combed patten, using 15 bricks in each course, with equal opening in between. Thereafter the top three courses shall be built without honey-combing, in lime surkhi mortar 1:2 (1 lime putty: 2 surkhi) or in cement mortar 1:6 (1 cement : 6 fine sand) as directed in the bottom most 2 courses and in the top most 3 courses. Bricks in adjacent courses shall be laid with 10 cm laps. In the honey-combed portion of the work, the vertical edges of bricks in alternate courses shall be in the same line. The laps of bricks on either side of openings shall be equal.

### 11.16 Ornamental Circular Iron Tree Guard with Bars (Fig. 31)

The tree guard shall be 50 cm in diameter.

The tree guards shall be formed of (i) 3 Nos. 25x25x3 mm angle iron verticals 2.00 m. long excluding splayed. Outward at lower end upto an extent of 10 cm (ii) 3 Nos. 25x5 mm MS flat rings fixed as per design (iii) 15 Nos. 1.55 m long 6 mm diameter bars. Each ring shall be in two parts in the ratio of 1:2 and their ends shall be turned in radially for a length of 4 cm at which they are bolted together with 8 mm diameter and 30 mm long MS bolts and nuts.

The vertical angle irons shall be welded to rings along the circumference. 15 nos. bars shall be welded to rings at equal spacing along the circumference of ring. The lower end of the angle iron verticals shall be splayed outwards upto an extent of 10 cm. The lower end of the flat of lower ring shall be at a height of 45 cm and upper end of the flat of top ring shall be at the height of 2.00 m. The middle ring shall be in the centre of top and lower ring. The bars shall be welded to rings as shown in the drawing. The entire tree guard shall be given two coats of paint of approved brand and of required shade over a priming coat of ready mixed primer of approved brand. The design of the tree guard shall be as shown in the drawing.

### **11.17 Ornamental Circular Iron Tree Guard With Welded Mesh (Fig. 32)**

The tree guard shall be 50 cm in diameter.

The tree guard shall be formed of:

- i) 3 Nos. 25x25x3 mm angle iron verticals 2 m long excluding splayed outwards at lower end upto and extent of 10 cm.
- ii) 3 Nos. 25x5 mm MS flat rings 50 cm diameter as per design.
- iii) 1.55 m high welded mesh 50x75 mm size of 3 mm thick wire. Each ring of the tree 1.55 m high guard shall be in two equal parts and their end shall be turned in radially for a length of 4 cm at which they shall be bolted together with 8 mm diameter, 30 mm long bolts and nuts.

The vertical angle iron shall be welded to rings along the circumference. Welded mesh shall be welded to rings in such a way so as to make it sufficiently strong. The lower end of the angle iron verticals shall be splayed outwards upto an extent of 10 cm. The lower end of the lower rings shall be at 45 cm height and middle ring shall be in the centre of the two. The entire tree guard shall be given two coats of paint of approved brand and of required shade over a priming coat of ready mixed primer of approved brand. The design of the tree guards shall be as shown in the drawing.

**11.17.1** The fencing of multiple row plantations should be done preferably by barbed wire. A five strand barbed wire fencing, with cross strands, stretched on angle iron poles fixed at a distance of 4 m from one another; is recommended. Live fencing/bamboo fencing/thorn fencing should be used where protection can be ensured through them.

### **11.18 Specifications for Grass Turfing**

**11.18.1** The surface is to be prepared adequately for grass sowing. The grass and shrub planting is done to provide a strong surface cover but needs a well-prepared surface. All masses of loose debris should be removed. Any convexities should be removed and similarly any concavities are to be filled by good soil. The surface should have sufficient layer of good quality soil [upto 45 cm] so as to have better growth and survival of grasses and shrubs.

**11.18.2** Grass lines are used to provide a strong surface cover but need a well-prepared surface in which to be planted. If grass is to be an effective form, then it must be allowed to establish properly on a slope which does not subject it to undue stress from erosion and mass movement in its initial stages.

- i) Sowing of grasses is intended to create a strengthened surface that is resistant to erosion.
- ii) It is the responsibility of the contractor to ensure that the condition of the site is good enough for the successful establishment of grasses.
- iii) The contractor is required to supervise all field operations like preparation of surface, sowing of grasses and quality of grass seeds used.
- iv) A cover of 25 gram of grass seed per square meter of surface should be achieved.
- v) The timing of sowing is of utmost importance. The seed sowing must be carried out before the onset of monsoon [May & June] so that they yield desired results. The watering of the surface will be done by tankers till the onset of the monsoon.
- vi) After sowing, mulch of prepared and dried out herbs should be laid over the whole seeded area in a thin layer so that the direct sunlight and transpiration loss may not affect the grasses.

### **11.19 Specifications for Plantations**

**11.19.1** The species to be planted in median should be of low or medium height with ornamental value to enhance the visual experience of the road corridor. It will also act as a screen to prevent glare from the incoming vehicles.

**11.19.2** One or two rows of flowering shrubs are recommended in accordance with the varying width of the median in different sections. In sections where median width is less than 1.5 m, only grass turf is recommended. One row of shrubs is recommended on medians of up to 3 m width. Two rows of shrubs should be planted on 4.5 to 5 m wide median, at a spacing of 1.5 m from the inner edge of the median.

**11.19.3** The plants should be at spacing of 3 x 3 m and size of the plants for planting should be 60 x 60 x 60 cm. Therefore, total no. of plants per km will be 333 in case where single row is proposed, and 666 in case of two rows.

**11.19.4** The species recommended for median are mainly Bouganvillia & Kaner. Bouganvillia is considered as the most suitable species as it has a great aesthetic value and it is found in various colours and shades. It can withstand extreme temperature and climatic conditions and also has low requirement of water. The species have been proposed considering the climatic conditions, requirement of water and future management. However, other species listed in the appendices may also be used.

**11.19.5** The surface for the median plantation should be well prepared. The masses of loose debris on the median and any convexities should be removed and similarly any concavities should be filled by good soil. The surface should have sufficient layer of good quality soil so as to have a better growth and survival of grasses and shrubs.

**11.19.6** The height of the plants will not be less than 0.6 m and need to be in polythene bags until the planting.

**11.19.7** All plants supplied must be planted within three days of removal from the nursery.

**11.19.8** The plantation should be watered in case of insufficient rains after planting.

**11.19.9** Size of the pits for planting shrubs:- 60X60X60 cm

**11.19.10** No. of plants per km - 333 in one row

**11.19.11** Use of compost and manure - 1/3 of volume of pit mixed with soil, and refilled

## **11.20 Activity Schedule**

Plantation activities are highly time specific, as the plants respond to the seasonal variations in climatic conditions. Even in highly mechanized irrigated plantations, the growth of plants is not uniform throughout the year and is governed by the atmospheric factors. It is therefore, vital to plan the planting activities in advance as per the prevailing climatic conditions of the area, especially the time and duration of monsoon. Generally, plantations works are started in our country with the onset of monsoon. However, if it is possible to provide irrigation, it is advisable to utilize the high temperatures of summers. Generally, plants respond well to irrigation during peak summer seasons, as the conditions are very favourable for growth if moisture is not the limiting factor.

### **11.20.1 Watering of Plants**

Water is an essential component of living organism, since it constitutes 30-40 percent of their body weight. Most of the organic and inorganic substances are sparingly, partly and completely soluble in it. It is a major raw material for the photosynthesis by which plants produce their food.

The essential nutrient for plants are mostly transported by the water either by itself or when water mixes with other constituents like elemental, molecular or compound form. Sometimes, it may act as a bridge between two or more Intra or Inter-constituents which will help to supply the desired nutrients from soil and also from atmosphere.

The quantity of water requirement largely depends on the nature of species, soil quality, and depth of the first aquifer and on the climatic condition of that area. The relative humidity, temperature, wind speed and wind direction have major role in this regard. About 450 to

650 litres of water is required per plant per year since the very beginning of the plantation till it attains to its normal safe size and growth i.e. about 6-7 years from the date of plantation. The external supply of water is to be continued till the roots of that species may be able to absorb the required quantity of water from the soil strata. The quantity and frequency of watering is given in Table 5.

**Table 5 Activities Schedule For Avenue Plantation/Median Plantation**

Year	Month	Activities to be done	
1st Year	Jan-March	1	Surveying & cleaning of the area
		2	Digging of Pits
		3	Procurement of Angles Iron and barbed wire(or other fencing material), and erecting the fence
2nd Year	April-June	1	Purchase of Farm yard manure
		2	Brick/iron etc. guard for 1 <sup>st</sup> row
		3	Plantation along the Highway
		4	Filling up of Pits with Farm Yard manure and Soil
	July-August	1	Transportation of Plants
		2	Planting of Saplings
		3	Watering
		4	Weeding and hoeing
	Sep-Nov	1	Weeding and hoeing
		2	Watering 4 times a month
	Dec-Feb	1	Weeding and hoeing
		2	Maintenance
	March	1	Watering 4 times a month
3rd year	April-June	1	Watering 6 times a month
	July-August	1	Casualty Replacement ( 20% of the total plants )
		2	Weeding
		3	maintenance by Mali
	Sep-Nov	1	Watering 2 times a month
		2	maintenance by Mali
	Dec-Feb	1	maintenance by Mali
	March	1	Watering 4 times a month
2		maintenance by Mali	
4th Year	April-March	1	Watering
		2	Casualty Replacement ( 10% of the total plants )
		3	maintenance by Mali

## 11.21 Monitoring Requirements

11.21.1 The following Table summarizes the monitoring schedule and the parameters for monitoring the progress and status of plantations:

**Table 6 Proposed Monitoring Arrangements**

Phase	Monitoring Parameter
1 <sup>st</sup> Year (Advance Soil Work)	No. of pits
2 <sup>nd</sup> Year (Plantation of Saplings)	Survival % of saplings
3 <sup>rd</sup> Year (Maintenance of Plantation)	Survival % before & after Casualty replacement. Height of plants
4 <sup>th</sup> Year (Maintenance of Plantation)	Survival % before & after Casualty replacement. Height of plants

## 11.22 Maintenance of the Plantation after 4<sup>th</sup> Year

11.22.1 Although, normally, the plantations get established by the end of 3<sup>rd</sup> year of planting, but in some cases the plantations require maintenance for some more years. It will depend upon the soil and climatic conditions, besides the nature of the plant. The following maintenance measures are recommended:

- i) Regular maintenance of the barbed wire fencing or other fencing material used for protection
- ii) Periodic pruning of trees planted in median so that branches do not spread on to the carriageway
- iii) Casualty replacement of plants before monsoon
- iv) Clearing of weeds where grass is sown
- v) Removal of unwanted dried leaves during the summer season to prevent fire hazard.
- vi) Watering in peak summer season

## 11.23 Training and Pruning of Shrubs

11.23.1 By nature of their growth habit, shrubs tend to take extra growth or unbalanced growth. Thus, regular training and pruning by cutting and removal of undesired parts of twigs is required.

### 11.23.1.1 Training

The process of providing desired form and size to a shrub plant is training. This is done by cutting away all growth that does not come in the desired frame, shape and size. Training

of plants is started when they are still young. 3-4 branches are allowed to grow from main stem near the ground, radially to different directions. These are further divided into 2-3 branches, each making oval shape of 3 m dia in spread near the ground and 1.5 to 2 m high. This process is completed in 3-4 operations of cutting and pruning in first 2 years of growth. The sequence of training is shown through sketches in Fig. 4. When the plants take their final size and shape, they are annually cut to this shape by pruning extra growth once or twice a year.

### 11.23.1.2 Pruning

Pruning involves cutting and removal of parts, twigs limbs or branches of shrubs. Besides, giving desired shape and size, pruning helps in:

- Encouraging vigorous growth by allowing proper air, light and food to the parts retained.
- Removing over-crowding and weak branches.
- Removing dried up, diseased and pest infested parts
- Regulating and increasing flowers/fruit/production.

While doing operations of training/pruning; proper tools and implements like pruning knife, pruning saw, tree pruner & shears etc. should be used. Care should be taken that bark of the plants is not damaged, ruptured, or peeled off. After deciding the framework to be retained, shoots should be cut back to desired size and shape. All the sick, thin and intertwining twigs should be removed for allowing air & light to the desired ones.

Generally, flowering buds are produced in 6-8 month old shoots, which are usually cut away through repeated indiscriminate cutting without applying scientific principles of pruning. Consequently, neither these shrubs take their optimum spread (vertical & lateral) nor produce colourful flowers, as required.

Time of pruning is very important and it should be done only in the season of dormancy i.e. when the plants are not in active growth. In India, this period comes usually from December to January & May to June. Blooming time is February to June & September to December. However, light pruning and pinching of tips can be done any time when it becomes necessary due to other emergent reasons of safety and sanitation etc.

## 11.24 Special Treatment Required for Trees Planted in Median of Divided Carriageways

**11.24.1** At many places medium size trees are also grown in the medians. But it has been observed that if they grow to their optimum height and spread, they may cover approximately 8 to 10 m space, both in height and spread. In that case, following problems may occur which should be considered at the time when these trees are still young and manageable in alternative ways:

**11.24.2** Grown up trees may cover the entire median and may cause shade to the shrubbery planted in the median resulting into very poor growth or non-survival of shrubbery/bushes under shade.

**11.24.3** Large size trees in median are more prone to cyclone damage resulting in accidents and disruption of traffic. Only those plants should be used in the median, which are not prone to cyclone damage.

**11.24.4** During rains and wet weather, roads beneath the tree canopy get damp and slippery due to dripping of water for long time. This causes damage to asphalted road and makes it more prone to accidents due to skidding and slippages when emergency brakes are applied.

**11.24.5** Large size trees develop a very strong and large taproot and lateral root system, which weakens the compaction and pavement of the carriageway with the passage of time.

**11.24.6** Trees planted in the median provide shade in carriageway resulting in poor visibility especially during dawn and dusk.

**11.24.7** It is advisable to avoid planting large size trees in median. Trees already planted in the median, which are still young, should be trained as Topiary and Bonsais as an innovation in the highway landscaping.

**11.24.8** TOPIARY is an art of developing the plants and trees/hardy bushes in special features/figures by regular and repeated training and pruning and keeping them in fixed size and shape.

**11.24.9** BONSAIS are trees developed into miniature or dwarfed forms. These are highly developed art forms of gardening originated in Europe and Japan. Illustration/sketches for artful Topiary and Bonsais for preparation in the median are given in Figs. 5 and 6.

## **11.25 Clearance on Curves**

**11.25.1** For the shade bearing large trees, an average spacing of 8-12 m requiring 84 plants per km will provide ample growing space for most species. Too many trees, apart from involving higher planting costs, very often unnecessarily reduce visibility for fast traffic. Excessive dense avenues serve no useful purpose, apart from affecting the tree growth adversely, also reduces visibility and proves to be dangerous to fast moving traffic. Growth of vegetation close on the road curves may lead to serious reduction of clear sight distance and may cause accidents. Such accidents can be easily avoided by avoiding planting on near the curves. Close spacing on curves and crossing can be dangerous. So best plan is not to plant the ornamental rows, and miss a tree or two of the shade row at such locations. Even the existing vegetation on such areas may need to be removed/thinned or trimmed.

In plain terrain, a stopping sight distance of 170 m corresponding to the design speed of 100 km per hour should be ensured on all curved sections, on the innermost lane of the curve.

## **11.26 No Plantation Zone**

**11.26.1** The plantation may not be carried out in the following areas:

- Within 1.5 m from the toe of the carriageway.
- At median cut and grade separator, at least 5 m blank space shall be left for clear view of the traffic
- At curve, dense and tall height tree reduce visibility in plain terrain, a stopping sight distance of 170 m corresponding to the design speed of 100 km per hour should be ensured on all curved sections, on the innermost lane of the curve.
- At median, medium and large size trees are more prone to cyclone damage resulting in accidents, disruption of traffic and clear view of the carriageway. Long rooted plants may also damage the carriageway.
- Screen plantation as a visual barrier in schools, hospitals, residential colonies, etc.

**Annex A**  
**(Clause 11.11.1)**

**List of Trees Suitable for Arid and Dry Regions of South Haryana, Rajasthan,  
Gujarat, Maharashtra, and Central Plateau**

<b>Botanical Name</b>	<b>Common Name</b>
1. <i>Ailanthus excelsa</i>	Maharukh
2. <i>Azadirachta indica</i>	Neem
3. <i>Alstonia scholaris</i>	
4. <i>Acacia auriculiformis</i>	
5. <i>Butea monosperma</i>	Palas
6. <i>Bombax ceiba</i>	
7. <i>Cassia fistula</i>	Labernum/Amaltash
8. <i>Cassia siamea</i>	Siamese Cassia
9. <i>Calistemon viminalis</i>	Bottle brush
10. <i>Calistemon citrinus</i>	
11. <i>Ceiba pentandra</i>	
12. <i>Cochlospermum religiosam</i>	
13. <i>Casuarina equisetifolia</i>	
14. <i>Dalbergia sissoo</i>	Sheesham
15. <i>Erythrina variegata</i>	
16. <i>Ficus sp</i>	Peepal, Bargad, Pakur, etc
17. <i>Gmelina arborea</i>	Gambhari
18. <i>Heterophragma adenophyllum</i>	
19. <i>Moringa oleifera</i>	Sahjan
20. <i>Melia azadirachta</i>	Bakain
21. <i>Millingtonia hortensis</i>	
22. <i>Pongamia pinnata</i>	Karanj/Papari
23. <i>Plumerio sp.</i>	
24. <i>Parkinsonia aculeata</i>	
25. <i>Syzygium cumini</i>	
26. <i>Tecoma undulata</i>	Rohira
27. <i>Tamarindus india</i>	Imli
28. <i>Terminalia sp.</i>	

**SHRUBS**

1. <i>Bougainvella</i>	Garden glory
2. <i>Cassia glauca</i>	
3. <i>Cassia alata</i>	
4. <i>Jatropha podagarica</i>	

- |    |                             |             |
|----|-----------------------------|-------------|
| 5. | <i>Nerium oleander</i>      | Kaner       |
| 6. | <i>Poinciana pulcherima</i> |             |
| 7. | <i>Thevetia nerifolia</i>   | Yellow Kane |

### **Trees suitable for Moist Areas**

Moist locality consists of areas where rainfall is high and of longer duration. The soil remains moist but not necessarily waterlogged. High humidity pervades the atmosphere. Trees suitable for moist areas are:

1. *Alstonia scholaris*
2. *A. macrophylla*
3. *Amherstia nobilis*
4. *Barringtonia acitangi;a*
5. *B.racemosa*
6. *Bauhinia variegata*
7. *B.pupurea*
8. *Brownea coccinea*
9. *B.ariza*
10. *Cassia marginata*
11. *C.javanica*
12. *C.nodosa*
13. *Colvillea racemosa*
14. *Delonix regia*
15. *Dillenia indica*
16. *Guaiacum officinale*
17. *Lagerstroemia speciosa*
18. *L.thorelli*
19. *Millettia peguensis*
20. *Peltophorum ferrugineum*
21. *Samanea saman*
22. *Polyalthia lognifolia*
23. *P.pendula*
24. *Pongamia pinnata*
25. *Putranjiva roxburghii*
26. *Saraca asoca*
27. *Terminalia arjuna*
28. *Tamarindus indica*

### **Trees Suitable for Marshy Areas**

Areas which remain waterlogged for a considerable period of the year come under this ecological environment. Trees suitable for such areas are:

1. Barringtonia acutangula
2. B.racemosa
3. Eucalyptus rostrata
4. Hibiscus tiliaceus
5. Salix babylonica
6. S.tetrasperma
7. Tamarix articulate

Of the above species eucalyptus rostrata can not only grow under marshy conditions, but has capacity to draw up large quantities of water for transpiration. Sometimes this species is used for drying up marshy land.

### **Trees Suitable for Saline Tracts**

Saline tract is present along the coastal areas where the tidal waves submerge the land periodically. Besides, vast saline tracts are met with in the country where waterlogging is a perennial problem. Here the accumulated body of water finds release mainly in to the atmosphere through evaporation leaving behind the salts on the surface. This condition for decades, or even for centuries, have turned the soil very saline. Trees suitable for such tracts are those that can stand drought as well as high concentration of salinity. The example of such trees are :

1. Acacia auriculiformis
2. Butea monosperma
3. Casuarina equisetifolia
4. Cochlospermum religiosum
5. Eucalyptus Citriodora
6. Heritiera macrophylla
7. Inga dulcis
8. Perkinsonia aculeata
9. Pongamia pinnata
10. Samanea saman
11. Tamarix articulate
12. Thespesia populnea
13. Tamarindus indica
- 14.. Terminalia arjuna

### **Plants Disliked by Cattle**

Truly speaking, this grouping of trees does not belong to the ecological classification. But

this group is useful where stray cattles are plenty and pose a problem for the protection of trees, particularly at the young age. Selection of plants that are disliked by cattle will help to ward off the menace from these animals. Some trees under this group are :

1. Cassia fistula
2. C.nodosa
3. C.javanica
4. C.siamea
5. C.renigera
6. C.multijuga
7. C.marginata
8. C.moschata
9. Holarrhena antidysenterica

**List of Trees suitable for Arid and Dry Regions of South Haryana,  
Rajasthan, Gujarat, Maharashtra and Central Plateau**

1. Acassia ausiculitormis
2. Bombox ceaba
3. Callistemon citrinus
4. Ceiba pentandra
5. Cochlospermum religiosam
6. Erothrina variegatum
7. Heterosphrogma adenophyllum
8. Millingtonia hortensis
9. Pwmerio sp
10. Syzygium umini
11. Casurina equisetitioia
12. Perkirisonia aculiata

**Annex B**  
**(Clause 11.11.1)**

**Trees suitable for temperate and sub-tropical areas of North-West India,  
J&K, Punjab, Himachal Pradesh, Uttranchal, Part of U.P.**

<b>Botanical Name</b>	<b>Common Name</b>
1. Barringtonia accutangula	
2. Cedrus deodara	Devdar
3. Delinia indica	Chilla
4. Grevillea robusta	Silver Oak
5. Holoptelia integrifolia	Papri
6. Juglans regia	Akhrot (Walnut)
7. Michelia champaka	
8. Myrica nagi	Kaphal
9. Pinus sp	Chir
8. Pterospermum acerifolium	
10. Salix sp	Soal
11. Sapindus musorossi	Reetha
12. Taxus baccata	Thuner

**SHRUBS**

1. Artabotrys odoratissima	
2. Bougainvillia	Garden glory
3. Hydrangea	
4. Hibiscus sps.	
5. Nerium oleander	Kaner
6. Rhododendron/Azalias	
7. Salix sps.	
8. Thevetia nerifolia	Yellow Kaner
9. TMC single and double	
10. Tecoma	

**Annex C**  
**(Clause 11.11.1)**

**Trees suitable for Indo Gangatic Plains of Uttar Pradesh,  
Punjab, Bihar and West Bengal**

<b>Botanical Name</b>	<b>Common Name</b>
1. Albizzia lebeck	Siris
2. Albizzia proeera	Safed Siris
3. Butea monosperma	Palash
4. Bauhinia variegata	Kachnar (Pink)
5. Cassia fistula	Labernum/Amaltash
6. Cassia siamea	Siamese Cassia
7. Cedrela toona	Toon
8. Chikrassia tabularis	Chikasi
9. Calistemon lanceolatus	Bottle Brush
10. Dalbergia sissoo	Sheesham
11. Emblica officinalis	Aonla
12. Ficus sp	Peepal, Bagad, Pakur, etc
13. Gravellea robusta	Silver Oak
14. Hardwickia pinnata	Malabar Mahagani
15. Lagerstroemia thorli	Pride of India/Jarul
16. Lagerstroemia floriginea	-do-
17. Morus alba	Shahtoot
18. Mengifera indica	Desi Mango
19. Pterospermum acerifolium	Kanak Champa
20. Putranjiva	
21. Polyalthia longifolia	Ashok
22. Syzigium cumini	Jamoon
23. Terminalia arjuna	Arjun
24. Terminalia belerica	Bahera
25. Terminalia chebula	Harr/Myrobalam
26. Tecoma argentia.	

**SHRUBS**

1. Bauhinia alba	
2. Bauhinia acuminata	
3. Bougainvella	Garden glory
4. Cassia biflora	
5. Cassia alata	
6. Cassia lavigata	

- |     |                       |              |
|-----|-----------------------|--------------|
| 7.  | Calliandra            |              |
| 8.  | Duranta               |              |
| 9.  | Gardenia floria       |              |
| 10. | Hamelia               |              |
| 11. | Hibiscus sps.         |              |
| 12. | Ixora                 |              |
| 13. | Nerium oleander       | Kaner        |
| 14. | Thevetia nerifolia    | Yellow Kaner |
| 15. | Tecoma stans          |              |
| 16. | TMS single and double |              |

**Annex D**  
**(Clause 11.11.1)**

**List of Trees suitable for North Eastern States, North Bengal, Assam, etc.**

<b>Botanical Name</b>	<b>Common Name</b>
1. Alstonia scholaris	Chatuni/Saptarni
2. Albizzia lebeck	Siris
3. Cryptomeria japonica	Dhupi
4. Colvelia racemosa	
5. Cratevea religiosa	Barna
6. Cinchona sps	Cinchona (Quinine tree)
7. Lagerstroemia floriginea	Pride of India
8. Lagerstroemea thoralis	-do-
9. Michelia champaka	Champa
10. Pterospermum acerifolium	Kanak Champa
11. Shorea robusta	Saal

**SHRUBS**

1.	Bauhinia alba	
2.	Bauhinia acuminata	
3.	Bougainvillia	Garden glory
4.	Calliandra	
5.	Duranta	
6.	Gardenia floria	
7.	Hibiscus sps.	
8.	Ixora	
9.	Nerium oleander	Kaner
10.	Thevetia nerifolia	Yellow Kaner
11.	TMS single and double	

**Annex E**  
**(Clause 11.11.1)**

**List of trees suitable for Deccan Plateau; Southern regions of Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra; and Tamil Nadu.**

<b>Botanical Name</b>	<b>Common Name</b>
1. Albizzia procera	Safed Siris
2. Albizzia. amara	Cylone Siris
3. Amhertia nobilis	
4. Bischofia javanica	
5. Colvelia recemosa	Kilbili
6. Dalbergia latifolia	Black Shisham/Rosewood
7. Delonx regia	Gulmohar
8. Mengifera india	Desi Mango
9. Michelia champaka	Swarnchampa
10. Peltophorum pherugenium	Fellow Gulmohar
11. Polyalthea longifolia	Ashok
12. Palms	
13. Saraca india	Sita Ashok
14. Santalum album	White Sandal
15. Tamrindus india	Imli

**SHRUBS**

1. Aphandra
2. Bougainvella
3. Bauhinia alba
4. Bauhinia acuminata
5. Calliandra
6. Crosandra
7. Duranta
8. Gardenia floria
9. Hibiscus sps.
10. Ixora
11. Nerium oleander
12. Musanda
13. Sanchezia
14. Thevetia nerifolia
15. Tecoma stans
16. Tecoma gaurichari
17. TMS single and double

**Annex F**  
**(Clause 11.11.1)**

**List of Trees suitable for Coastal Areas of Maharashtra, Goa, Karnataka,  
Kerala, Tamil Nadu, Andhra Pradesh and Orissa, etc.**

<b>Botanical Name</b>	<b>Common Name</b>
1. Anacardium occidentale	Cashew nut
2. Cinamomum camphora	Kapoor
3. Casuarina equistifolia	Casuarina
4. Dalbergia latifolia	Rosewood
5. Mengifera indica	Mango
6. Palms	
7. Pterospermum acerifolium	
8. Saraca indica	Sita Ashok
9. Sweitenia mahogoni	Mahogoni
10. Sweitenia macrophylla	-do
11. Tabubia spectabilis	
12. Tabubea rosea	

**SHRUBS**

1. Bougainvella	Garden glory
2. Bauhinia alba	
3. Bauhinia acuminata	
4. Calliandra	
5. Crosandra	
6. Gardenia floria	
7. Hibiscus sps.	
8. Hamelia	
9. Musanda	
10. Magnolia sps.	
11. Nerium oleander	Kaner
12. Tecoma stans	
13. Tecoma capensis	
14. TMS single and double	
15. Thevetia nerifolia	Yellow Kaner

**Appendix - I**  
(Refer Para 11.1.1)

**BROAD DETAILS OF PLANT SPECIES NATIVE IN INDIA\***

**Abbreviations:** Mar-Marathi      Kan - Kannada      Tam-Tamil      Guj - Gujarati  
Tel- Telugu      Beng- Bengali      Mal - Malayalam

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
1.	Abies pindrow Abies Webbiana	Silver Fir			Large, Shady	Large evergreen tree, suitable for roadside planting. Grown at altitudes 2500-4000 m
2.	Acacia arabica		Kikar, Babul, Babul		Small, Thorny	Grows well in the plains of the Indo-Gangetic plain, especially the Punjab. It is also grown in U.P., Madhya Pradesh, Rajasthan and Maharashtra. Unsuitable for places of extreme winter frost. Its thorns and thinness of shade are drawbacks as an avenue tree, but it can be used in dry places for checking erosion since it sends deep roots. Good value for timber.
3.	Acacia modesta		Phulai		Small, Thorny	Small sized hardy tree, found indigenously in the Punjab. Suitable for sowing on rocky and dry ground where irrigation is impossible. Does not have a smooth and flowing appearance and is ragged looking. Should be tried only when nothing better will grow.
4.	Adansonia Digitata	Monkey bread tree	Gorakh imli	Gorak chinch (Guj) Perauka (Tam)	Large sized, leafless in hot weather	A large deciduous tree with tapering trunk. Branches spread widely and form a mushroom show head. Leaves are divided into separate narrow leaf lets. Large white flowers are borne single on long stalk. Suitable for dry areas.
5.	Ailanthus excelsa		Coloo		Tall, deciduous, thrives in hot regions	A tall quick growing tree with a straight trunk and spreading branch, leaves compound with serrated margin. Deciduous, suitable for hotter region. Wood used for making catamaran.
6.	Albizia lebbek	Woman's tongue	Siris	Chichola (Mar) Vagai (Tam) Dirsanam (Tel) Vaga (Mal) Bage(Kan)	Flowering, fast growing, drought resistant, weak wood	Large, handsome deciduous tree with a straight bole and a broad-topped crown with spreading limbs. Leafless during January-March. Extensively found in sub-Himalayan tracts and widely planted throughout India. Fast grow but easily uprooted. Not a good shade tree as it loses leaves half-way through the cold weather.
7.	Albizia Procera		Sufed Siris		Large sizes, handsome, quick growing	This is white-stemmed siris with good height. Grown in the Gangetic plains and nearby hill. An excellent roadside tree.
8.	Albizza richardina				-do-	A lofty quick growing tree with a straight trunk, branches go up almost vertically upwards giving the tree a stable shape. A deciduous tree suitable for roadside planting.
9.	Alstonia Scholaris	Devils tree	Chatium	Chattim (Beng)	Large sized, shady flowering	Large evergreen tree, straight growing, branches spread laterally in whorls giving dense shade underneath, leaves palmately compound. Produces greenish white fragrant flowers. Timber used for making boxes, black boards, etc.
10.	Albizia stipulata		Ohi		Large sized, handsome, quick growing	Large, handsome tree with bright green feateaves. Grows naturally in the low hills- especially in Kangra (Himachal Pradesh), but does not thrive in the plains.

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
11.	Anacardium occidentale	Cashewnut	Kaju	Munthri, Andimangottai (Tam) Jidimamidi (Tel) Parangimavu (Mal) Geru(Kan) Kaju (Beng)	Medium sized edible fruits	Medium sized tree, yielding fruits ripening in May-July. Common in west coast of India. Thrives on sandy and gravelly soils. Ideal for preventing wind erosion in coastal belt. Not suitable for avenues.
12.	Anogeissus acuminato		Dhao		Tall, evergree, flowering	A tall evergreen tree with drooping branches. Leaves long and pointed, borne on short stalks. Timber very strong.
13.	Anthogphalus cadamba		Kadamb	Kadam(Beng)	Large sized, flowering	A large tree, with beautiful flowers which are orange coloured and ball shaped. Thrives best on light sandy soil.
14.	Artocarpus integrifolia	Jack	Kathal	Phanas(Mar) Pala(Tam) Panasa(Tel) Pilava(Mal) Halasu(Kan) Kathal(Beng)	Large sized, thick foliage, edible fruits	Tree of considerable size with thick foliage of dark green leaves. Bears large size fruits. Grows in peninsular India, especially in the coastal belt where high rainfall and moist air prevails. It has both timber and fruit value.
15.	Azadirachita Indica	Margosa	Neem	Vembu(Tam) Vepa(Tel) Veppa(Mal) Nim(Beng)	Medium sized, quick growing, drought resistant	Tree of good size and stately presence, ideally suited as an avenue tree. In summer months it is in thick leaf giving excellent shade. Stands a dry climate, but not suitable for water-logged and frost susceptible areas. Yields good timber.
16.	Bambusa bambos	Bamboo	Bans	Mungil(Tam) Bongu Meduru(Tel) Mola(Mal) Biduru(Kan)	Poor shade, economic value	Bamboo grows in fairly moist climate. Not good for shade as its spread is limited. Not a tree for avenue. Bamboo has good economic value.
17.	Barriangtonia racemosa	Indian Oak	Lijul	Samundra(Beng)	Tall, evergreen, flowering	Straight, evergreen with a straight trunk and numerous spreading branches. Leaves broad near the apex, cluster near the end of the branches on short stalk. Bears long pendulous cream rosy flowers.
18.	Bassia Latifolia	Mowa	Mowa	Illuppai(Tam) Kippa(Tel) Irippa(Mal) Ippegida(Kan) Mohua(Beng)	Medium sized, thick foliage slow growth	Medium sized tree, common in the plains of India. Leaves fall off in February-April, and new ones appear in April-May. Affords good shade and is a good avenue tree.
19.	Bauhinia variegata		Kachnar	Kandhan(Beng)	Small sized, quick growth, light foliage, flowering	Common in the northern hills of the country though also found in the Indo-Gangetic Plains. An ornamental tree while in flower, and of moderate size.
20.	Bombax malabaricum	Red silk cotton	Regai Simal Simbal	Mulilavu(Tam) Mundla Burga(Tel) Pula(Mal) Mullu Buraga(Kan) Simul(Beng)	Large sized, quick growth, light foliage, flowering	Fast growing deciduous tree, but short-lived (life about 20 years). Tall tree with a straight bole and branches in whorls. Needs high water table and light rich soil. Timber has great economic value. Grown throughout India, except in arid climate. Fairly good shade. Rather a formal tree, but is useful to mix with others.
21.	Borassus Flabellifera	Palmyra Palm	Thar	Panai (Tam) Thati(Tel) Pana(Mal) Pane(Kan) Tab(Beng)	Palm, slow growth, unbranched, edible fruits	The tree has economic worth because of the juice tapped from it. Well grown trees have large luxuriant leaves, long stems and sturdy trunks. Not for shade.
22.	Callistemon lanceolatus	Bottle brush	Lal botal brush		Handsome, evergreen, flowering	A low evergreen tree with slender drooping twigs, bark very rough and deeply cleft vertically into narrow ridges. Narrow smooth leathery leaves are clustered near the ends of the twigs. Produces bright red bottle brush like flower in abundances. Suitable for avenue planting.

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
23.	Callophyllum inophyllum	Alexandrian laurel	Urdi	Paunnai(Tam) Punnagamu(Tel) Punna(Mal)	Large sized	Tree of considerable size, commonly found near the sea coast. Particularly useful for conserving channel banks.
24.	Cassia auriculata	Tanner's Cassia	Tarvar	Avarai(Tam) Thanged(Tel) Avara(Mal) Avara(Kan)	Small sized, dense foliage, flowering	Small tree with dense foliage. Yellow flowers in winter make it attractive. An inhabitant of dry salt land. Very hardy plant, affording good ground cover against erosion.
25.	Cassia auriculata	Golden shower, Indian laburnum	Amaltas	Konnai(Tam) Rela(Tel) Konna(Mal) Kakke(Kan) Amultas(Beng)	Small sized, quick growth, light foliage, flowering	A small sized deciduous tree, leafless in February-March. The flowers are yellow colour when fresh, later turning to bright green. The tree gives good appearance because of colour of flowers. A good choice for ornamental planting but not suitable for avenue planting as it does not give much shade.
26.	Cassia siamea		Chechwa		Small sized, thick foliage, weak wood, flowering	Quick-growing tree, but short-lived and liable to damage from wind. A good shady tree in hot weather. Not a very good roadside avenue tree, but picturesque because of its yellow flowers in clusters. Drought resistant, grows in poor soils, Successful in Uttar Pradesh and Madhya Pradesh.
27.	Castanospermum australe	Moretan Bay Chestnut			Medium sized, evergreen, thick foliage	This middle sized evergreen tree has a straight trunk, smooth grey bark, rather drooping branches and dense handsome imparipinnate foliage, very suitable for tropics as shade tree owing to its dense and handsome foliage.
28.	Cedrela Toona		Tuna Tun	Todu (Mar) Tundu(Kan)	Large sized, quick growth, light foliage	A large, remarkably handsome tree. Can be grown in the plain regions of the country and in lower hills. Does not thrive in dry area as it needs moisture. Generally needs rich soil. Susceptible to attack by twigborer moth.
29.	Cedrus Deodara	Cedar	Deodar		Large sized, thrives inhills	Common in the slopes of Himalayan Hills at altitudes 1500-3000 m. Great economic value for timber. Large handsome, dark-green tree. Suitable for roadside and groves in the hills.
30.	Ceiba pentandra	Kapok tree	Safed Simal	Swet Simal (Beng)	Tall, deciduous, flowering	A tall tree with straight trunk which is prickly when young. Numerous branches spring from the same level and radiate horizontally outwards. Leaves fall in winter and creamy white flowers appear in clusters at ends of twigs before new leaves appear.
31.	Chorisia speciosa	Mexican Silk Cotton tree	Vilayti Simal		Large sized, deciduous, light foliage	A beautiful tree bearing large pink flowers in October-November on leafless branches. Gives shade in summer months.
32.	Cocos nucifera	Coconut palm	Nariyal	Thenga(Tam) Kobbari, Tenkaya(Tel) Thenga(Mal) Tengina(Kan) Narikel(Beng)	Tall, unbranched, edible fruits	Grows ideally in coastal belt with heavy rainfall. Good economic yield.
33.	Colvillea racemosa	Colville's glory	Kilbli		Large sized, handsome, light foliage flowering	A handsome tall tree. Leaves larger and dark greyish than gulmohar. Bears orange-scarlet flowers in drooping racemes in August-September. Suited to moist or moderately dry low country.
34.	Cordia sebestena	Scarlet Cordia	Lal Lasora	Virigi (Tel) Acchinarurhli(Tam)	Small sized, Flowering	A small tree, some times branching from the base. Has dark grey bark which is rough and marked with longitudinal furrows.
35.	Couroupita guianensis	Cannon ball tree	Shiva-lingam	Nagalingam(Beng)	Tall, evergreen flowering	A tall evergreen tree with a stout straight trunk and rough brownish grey bark. Narrow pointed leaves cluster at the nodes of short branches. The tree is remarkable due to its habit of bearing large and peculiar flowers on short twigs from the lower part of the

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
						trunk. The fruit is large, hard, brown and spherical. Flourishes only in moist tropical climate.
36.	Crataeva religiosa	Bengal quince	Barna	Barum(Beng) Bilpatre(Kan) Varmo(Guj) Mili(Mal)	Small sized, light foliage, slow growth, flowering	A spreading tree with medium height. Leaves triplicate and deciduous. Very beautiful when laden with cream coloured flowers in April. A shady tree in summer. Hardy and drought resistant.
37.	Delbergia sissoo		Shisham, Siscoo		Large sized, good shade, economic value	Grows best in light sandy soil. Stiff soils do not suit it. Requires moisture and hence irrigation is needed in dry districts. Suitable for plains of Indo-Gangetic region for planting in avenues and in groups. Large branches and well-developed crown. Leafless in January-February. Timber has economic value in furniture making.
38.	Dillenia indica	Elephant apple	Chalta	Chalita(Beng) Karambal(Guj) Akku (Tam) Kalinga(Tel)	Medium sized, thick foliage, slow growth flowering	A medium sized tree of compact habit and roundly shaped form. Leaves large with serrated margin. Flowers large, white and fragrant. Prefer moist localities.
39.	Diospyros embryopteris	River ebony	Gab	Gab(Beng)	Small sized, evergreen, thick foliage, slow growth	An evergreen tree with a dense rounded crown of dark green shiny with low spreading branches which sometimes touch the ground. New leaves are bright red.
40.	Ehretia serrata		Punyan	Kulaaja(Beng)	Medium sized, evergreen, flowering	An evergreen tree of moderate size having white grey bark marked with longitudinal cracks. Leave long narrow and pointed. Bears pretty white flowers.
41.	Enterolobium saman	Rain tree	Vitayti svis		Large sized, flowering	A large tree with pinnate leaves, grows very rapidly; flowers appear in pale pink clusters. Wind resistant. Suitable for planting in exposed places. Suitable for avenue planting
42.	Eucalyptus rostrata	Eucalyptus			Tall tree, quick growth, weak wood	Rapid growing tree, grows on ordinary soil. The tree has the disadvantage that large branches are liable to break off. A native of Australia, but has been successfully grown in various parts of the country.
43.	Eucalyptus tereticerius	Grey gum			Tall tree, quick growth, weak wood	Elegant tall tree with thick crown. Avenue may not be shady but appears elegant. A native of Australia, but has been successfully planted in different parts of the country.
44.	Eugenia jambolana	Indian cherry	Jaman	Jambul(Mar) Nerate(Kan) Negai(Tam) Neredu(Tel) Naval(Mal) Jam(Beng)	Large sized, quick growing thick foliage, edible fruits	A fine large tree with shady evergreen foliage. Common in all parts of India except very dry areas. Yields edible fruits. Very suitable for shady avenues. Good value for timber.
45.	Feronia elephantum	Wood-apple	Dharkth Kaveet, Bhel, Kaitha	Vila(Tam) Velaga(Tel) Vilavu(Mal) Baelada(Kan) Kartbal(Beng)	Small sized, light foliage	Not a very shady trees. Grows in any soil and does not require much nursing and care. Not grown on the hills. Yields fruits having medicinal properties. Its leaves are used for worship in Hindu temples.
46.	Ficus Bengalensis	Banyan	Banyan Bor Bargad	Ala(Tam) Marri(Tel) Aal(Mal) Alada(Kan) Wad(Mar) Bat(Beng)	Large sized, Shady, unweildy for avenues	Large, spreading evergreen tree with aerial roots hanging from branches. Not eminently suited for highway avenues as it becomes eventually unweildy. Good for camping ground, and as isolated plantings at intervals along highway avenues. Does not grow in extreme cold or extreme dry climates.
47.	Ficus glomerata	Country Fig	Gular, Dumer	Atthi(Tam) Medi(Tel) Atthi(Mal) Atthi(Kan) Umbar(Mar)	Medium sized, quick growth, shady, weak wood	Medium sized tree with green leaves. Best planted on camping grounds and near wells. Good shade-giver. Quick growing and semi-evergreen. Has weak wood and should not be used for road avenues.

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
48.	Ficus Infectoria		Parkar	Pakur(Beng)	Large sized, thick foliage, quick growing	A large shade tree, practically evergreen. Grown in Uttar Pradesh, Maharashtra and Madhya Pradesh.
49.	Ficus religiosa		Pipal	Ashvatha(Mar) Arali(Kan) Peepul(Beng)	Large sized, light foliage	Large sized tree having religious significance for Hindus. Grows almost throughout the country in the plains. Suitable for roadside arboriculture. Does not look well when mixed with other species in avenues.
50.	Ficus retusa		Pilata	Nandruk(Mar)	Large sized, thick foliage, slow growth	Grows in the south and in the Indo-Gangetic plain. Fairly large tree with dense foliage. Frequently grown as an avenue tree. Grows well and is very hardy in tolerably warm climate.
51.	Gliricidia maculata	Madre tree			Small sized, Flowering	A small quick-growing tree with long feathery leaves. Leaf-fall in February, followed by sprays of pale pink flowers. Suitable for inner avenues of urban roads.
52.	Gamelina arborea	Candahar tree	Gamhar		Medium sized, deciduous, fast growth	A fair sized deciduous fast growing tree having a whitish bark and spreading branches which form a large shady head. The large leaves are heart-shaped with long points. The tree is drought resistant.
53.	Grevillea robusta	Silver Oak			Tall, columnar, thick foliage, slow growth, flowering	A tall narrow graceful tree with rough barks, short branches and deeply divided fernlike leaves which are dark green above and silvery below. The tree forms a beautiful conical shape. Bears orange flower in March-April
54.	Harduickia binata		Anjan		Medium sized, thin foliage	Not very large tree. Slow grower and not a good shade giver, but ornamental. Thrives on rock and sandy soil, but not in water-logged locations. Planted in U.P., M.P., and Maharashtra
55.	Hetrophragma adenophyllum				Medium sized, handsome, evergreen	A handsome evergreen tree of fair size with rough brownish bark marked with cracks, short branches dark green foliage consisting of very large leaves.
56.	Holarrhena antidysenterica	Eastern tree	Verra	Kurachi(Beng)	Small sized, Flowering	This is a low tree with rather rough, pale brownish bark and large narrow leaves set practically without stalk in opposite pairs along the smaller branches. White scented flowers grow in loose clusters at the ends of the twigs.
57.	Holoptelea Integrifolia	India Elm			Sub-Himalayan, Shady	A sub-Himalayan tree, planted for shade. A good tree for avenue planting.
58.	Jacaranda mimofaefolia		Nili gulmo-har		Small sized, Flowering	A small tree with fern-like bipinnate leaves and pyramidal panicles of blue flowers. Suitable for dry areas. Bears violet blue flowers in March-April.
59.	Juglans regia	Walnut	Akrot		Large sized, shady edible fruits	Suitable for roadside plants in the northern hills upto altitudes of 3000 m. High economic value because of nut and timber. Admirable roadside avenue tree.
60.	Lagerstroemia flosreginae	Pride of India	Arjun	Jarul(Beng) Challa(Kan) Atampu(Mal) Kadali(Tam)	Medium sized, light foliage, flowering	A medium sized evergreen tree with a short trunk and bushy crown. Leaves are narrow with blunt points, becomes red before fall, bears brilliant lilac flowers. Timber has good value. Moisture loving tree, thrives on river banks.
61.	Mangifera indica	Mango	Amaltas	Manga(Tam) Mamidi(Tel) Mayu(Mal) Mavina(Kan) Am(Beng)	Large sized, shade edible fruits	Large evergreen tree with a dense round crown of dark-green leaves. Essentially a shade tree and has economic value because of fruits and timber. Practically grows on any soil, but rich loamy soil is preferable. Moisture

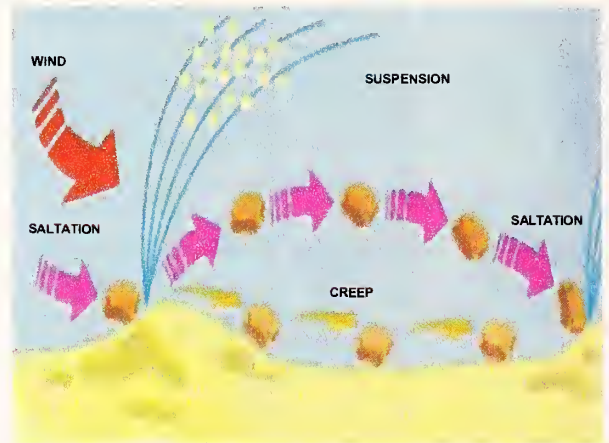
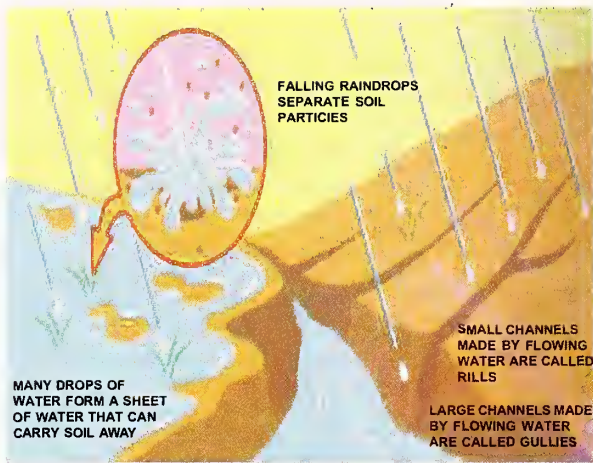
S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
						is essential but stagnant water near roots is fatal to be tree. It is very long-lived tree, but tends to develop hollows with age. Grafting is necessary from trees of a good variety. One of the most useful trees for roadside avenues.
62.	Melia eradirachta	Persian Lilac tree	Bakain	Ghoraneem(Beng)	Medium sized, deciduous, flowering	A handsome tree of moderate size, very fast growing, leaves divided into separate pointed leaflets. It resembles Neem. Deciduous, bears lilac coloured flowers in summer. Rather short lived.
63.	Mesua ferrea			Nagochampa(Mar) Naga Sampighi(Kan)	Small sized, quick growth, light foliage, flowering	A small sized tree yielding highly scented flowers. Good for isolated plantings.
64.	Michelia champaka		Champa	Champa(Mar) Sampighi(Kan)	Small sized, Flowering	A small sized tree yielding highly scented flowers. Good for isolated plantings.
65.	Millingtonia fortensis	Indian Cork Tree	Akas nim	Maramalli(Tam) Akasamalli(Tel) Katesam(Mal) Biratumara(Kan)	Large sized, light foliage, flowering	Lofty tree with exceedingly beautiful foliage. Tree is very brittle and shallow rooted and must be placed away from overhead utilities. Useful as an occasional avenue tree or group tree.
66.	Milletia Ovalifolia	Moulmein rosewood			Small sized, light foliage, flowering	A very beautiful small tree with a rounded crown and branches that have a tendency to drop. Bear brilliant lilac flowers in March-April.
67.	Mimusops elengi	Elengi	Mulsari	Magizh(Tam) Mukuzha(Mal) Ranji or Bakur Bakul(Beng)	Medium sized, thick foliage	Moderate sized tree, widely cultivated. Thrives in moist conditions.
68.	Mimusops hexandra		Khirni	Rayan(Mar)	Large sized, shady flowering	A large, ever green tree. Fruit is edible. Slow grower and requires initial watering for 2-3 years. Prefers moist alluvial soil. Grown in Maharashtra and Madhya Pradesh
69.	Nauclea Cadamba		Chota Kadam		Medium sized, flowering	The tree is of moderate size, having a short straight trunk, large broad rounded leaves covered with minute hairs on lower surface. Bears orange yellow scented flowers of compact spherical heads.
70.	Olea ouspidata	Olive	Kau		Medium sized, thrives in hills	Medium sized tree common in the northern hills upto an altitude of 2000 m. Timber has good value.
71.	Parkinsonia aculeata		Vilayti babool		Small sized, Flowering	A small tree with drooping branches. Leaves are very finely divided, bears bright yellow flowers suitable for dry and saline tracts.
72.	Peltophorum ferrugineum	Rusty Shield bearer	Piligul-mohar	Ivalvagai(Tam) Kondachinta(Tel)	Large sized, evergreen, flowering, handsome	A magnificent evergreen tree with smooth grey back, short branches and elegant dark green foliage. Makes a good crown and dense shade. Bears beautiful yellow scented flowers. Common in Bihar, Bengal and Western Ghats
73.	Phoenix dactylifera	Date-Palm	Khajur	Perichchu(Tam) Karajuramu(Tel) Tenicheha(Mal) Kharjura(Kan) Khejur(Beng)	Salt and erosion resistant, Palm, edible fruits	Tree yields date fruits. Gives good protection against soil erosion. Thrives in arid regions.
74.	Phyllanthus emblica	Indian gooseberry	Amla	Nelli(Tam) Usirika(Tel) Nellikay(Mal) Nellikai(Kan) Amalaki(Beng)	Medium sized, light foliage, quick growth, edible fruits	Medium sized tree yielding sour edible fruits. Not a shady tree.

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
75.	<i>Picea Smithiana</i>	Spruce	Rai, Tos		Tall tree, thrives in hills	A large, evergreen, coniferous tree with tall straight trunk. Common in hills at altitudes 2000-3500 m. Good roadside tree at high elevations.
76.	<i>Pinus excelsa</i>	Blue pine	Kail		-do-	Common altitudes of 1500-3500 m in the Himalayan Hills. Coniferous tree with graceful appearance.
77.	<i>Pinus longifolia</i>	Pine			-do-	Common in the Himalayan Hills at altitudes 600-1500 m. Coniferous tree with graceful shape. A good roadside tree on hills slopes.
78.	<i>Platanus orientalis</i>	Plane tree	Chinar		Medium sized, thick foliage	Very shady tree with large lobed leaves, suited to northern cold parts of the country. Prefer damp climate.
79.	<i>Polyalthia longifolia</i>	Mast tree	Deodar	Debdaru(Beng)	Large sized, light foliage, quick growth	Tall, handsome, evergreen tree suitable for planting in avenues. A very common tree in Oudh and Allahabad
80.	<i>Pongamia glabra</i>	Indian beech	Kanji	Pungu(Tam) Ganuga(Tel) Punja(Mal) Honge Gida(Kan) Karanji(Mar) Kanaj(Guj)	Medium sized, quick growth, shady, flowering	Moderated sized, nearly evergreen, fast growing tree with good shady crown. Prefers moist localities, though it grows also in dry places. Have good timber value and seeds yields oil.
81.	<i>Populus alba</i>		Poplar		Tall, handsome	A very tall, graceful tree, forming magnificent avenue on highways in the Kashmir Valley.
82.	<i>Prosopis apicigerra</i>		Jand Cheonkar		Medium sized, thorny	A moderate sized thorny tree, native of dry regions of Rajasthan, Haryana and Punjab. The tree sends down deep roots and is well adapted for cultivation in dry districts.
83.	<i>Pterospermum acerifolium</i>		Much kand Kanak chmpa		Medium sized, thick foliage, flowering	An elegant middle sized tree with large rounded leaves dark green above and white below. The tree forms a good crown and dense shade. Flowers cream coloured and fragrant, prefers moist climate.
84.	<i>Putranjiva roxburghii</i>	Child life tree	Jiva-putra		Medium sized, thick foliage, slow growth	This is a medium sized evergreen tree with dark grey bark, narrow shining dark green leaves which are arranged in two rows on either side of long drooping twigs. Provides dense shade, slow growing.
85.	<i>Quercus incana</i>	Grey Oak	Ban		Large sized, thrives in hills	A large evergreen tree with grey foliage. Very common in the hills at altitudes 1000-2500 m where rainfall is heavy. Good roadside tree.
86.	<i>Quercus semecarpifolia</i>	Brown Oak	Karsu Kreu		Large sized, thrives in hills	Large tree found at altitudes 2500-3000 m. Suitable for roadside avenues or groves at high altitudes.
87.	<i>Rhododendron arboreum</i>	Rhododendron	Bars		Small sized, flowering, thrives in hills	A small tree with grey foliage and handsome flowers. Thrives at altitudes 1500-2500 m. Suitable for growing in sheltered places on slopes of hills.
88.	<i>Robinia pseudacacia</i>	Robinia			Thrives in northern hills	Suitable for roadside plantings in hills of the north. Thrives on loose soil, but needs fair amount of moisture.
89.	<i>Salix babylonica</i>	Weeping willow			Resistant to waterlogging and erosion	Generally thrives in moist soil in the immediate vicinity of rivers and ponds. Fast growing but short-lived tree. Good for checking erosion.
90.	<i>Salvadora persica</i>		Pilu		Small sized, drought resistant	Small evergreen tree, grown in drier parts of the northern plains. Gives good shade, and when grown in groups, a handsome appearance.
91.	<i>Sapindus detergens</i>	Soapnut tree		Seoge Kali(Kan) Chika Ka:(Tam)	Medium sized, drought resistant	Grows in dry spots throughout the country, especially in the lower hills. Seeds have economic value.

S. No.	Latin Name	English Name	Hindi Name	Name in other Indian Languages	Main Characteristics in brief	Brief description, important habits and suggested locations for use
1	2	3	4	5	6	7
92.	Saraca indica	Ashoka	Ashoka	Achenga(Kan) Ashopalava(Guj) Aemapushpam(Mal) Asogam(Tam) Ashokamu(Tel)	Small sized, handsome, thick foliage, flowering	A very handsome evergreen tree with thick shade. Branches spread in all directions. Flowers in large compact clusters in February-March. Sacred for Hindus.
93.	Schiechera trijuga	Gum Lac tree	Kusum		Medium sized, thick foliage	This is a large tree with a dense shady crown, drops leaves only for a short period. Newly emerging leaves are bright red in colour for which the tree is very much preferred.
94.	Spathodea Campanulata	Tulip tree	Pichkari	Nirukavi(Kan) Patadi(Tel)	Tall, handsome, flowering	A fairly tall tree with short branches and dark green foliage. The large leaves are set in opposite pairs and divided into a number of pointed leaflets. It produces large cupshaped orange-crimson flowers on the top of the tree. Appears very attractive when grown in clumps or avenues.
95.	Sterculia alata	Buddha's coconut			Large sized, thick foliage, quick growth	A very handsome tall evergreen tree with erect growing habit leaves broad, quick growing, makes a very good avenue tree.
96.	Swietenia mahagoni	Mahagoni	Mahagoni		Large sized, economic value	It is a magnificent tall and spreading evergreen tree with a stout trunk, forms a beautiful roundish crown. Leaves are delicately divided into narrow curved leaflets with tapering points. Produces one of the most famous timbers in the world.
97.	Tamarindus Indica	Tamarind	Imli	Puli(Tam) Chintamanu(Tel) Puli(Mal) Hunasehannue(Kan) Chinch(Mar) Tentub(Beng)	Large sized, light foliage, slow growth	Fairly big tree. Drought resistant and thrives in any soil. Not favoured in high altitudes and waterlogged areas. An excellent avenue tree. Has great economic value for fruit. Grows rather slowly.
98.	Tamarix articulata		Farash		Thrives in arid saline soil	A tree hardly, requiring little water when one established. Prefers a loamy soil, but grows when on saline soils, hard clay and sand. Rise to tall heights. Found in the northern plains of the country.
99.	Tectona grandis	Teak	Saguna	Thekku(Tam) Tekko(Tel) Thekka(Mal) Tegu(Kan) Segun(Beng)	Tall, poor shade, economic value	Tall tree with straight bole and foliage of large leaves. Does not yield good shade. Best planted in clusters for column effect. High economic value for timber.
100.	Terminalia arjuna	Arjuna Myrabalan	Arjuna, Aajan, Kahu, Kornaua	Vella Maruthu(Tam) Maddi(Tel) Marutha(Mal) Kaidaryayu(Kan) Arjun(Beng)	Tall, thin foliage, flowering	Tall, graceful tree and very good for avenue purposes, though does not yield much shade. Grows in any rich soil. Timber is valueable.
101.	Terminalia belerica	Belleric Myrobalan	Behera	Balra Beheda(Mar) Jare(Kan) Behera(Beng)	Quick growth	Easy to grow and makes excellent avenue tree.
102.	Thespesia populnea	Portia	Dumbra Paras Peepal	Bhendi(Mar) Huvarasi(Kan) Puvarasu(Tak) Gangaregu(Tel)	Small sized, thick foliage.	Small, evergreen tree with dense foliage. Not recommended for avenues because of twisted trunks and tendency to develop hollows.
103.	Ulmus Wellichiana	Big-leaved Elm.			Large sized, thrives in northern hills	Large, handsome, deciduous tree with large leaves. Grows in Himalayan hills at altitudes 1000-3000 m.
104.	Ulmus leavigata	Small leaved Elm			Large sized, thrives in northern hills	Large shade tree grown in hills.
105.	Zysyphus jujuba	Jujuba	Beer, Ber	Ilandai(Tam) Regu(Tel) Llanda(Mal) Bogari(Kan) Kul(Beng)	Small sized, thorny, edible fruits	Small thorny tree, having rapid growth. Not grown on hills. Timber and fruits have economic value. Grows fast and gives dense shade.

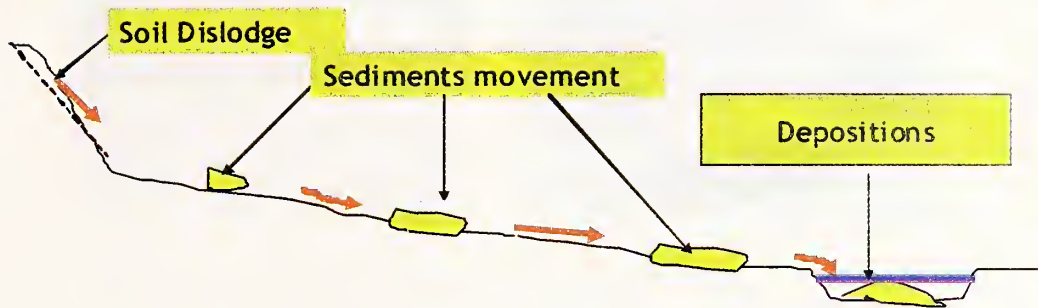
## SLOPE PROTECTION AND LANDSCAPING

### SOIL EROSION

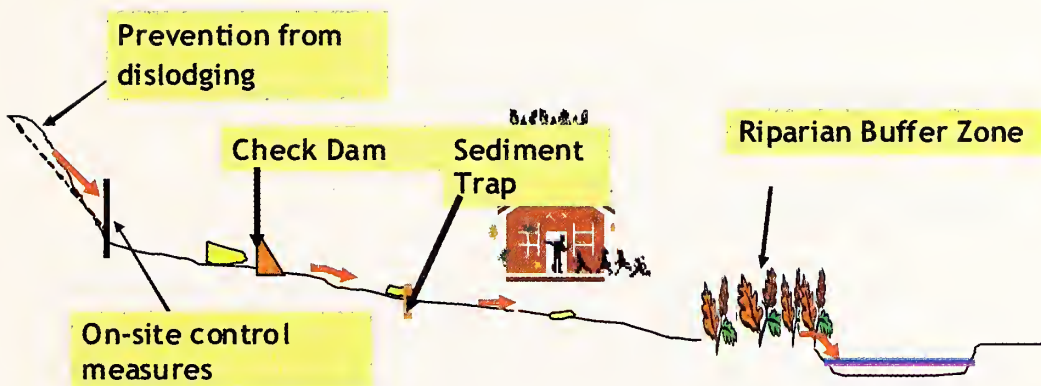


- *When soil erodes, particles move from the place of origin and are deposited elsewhere.*
- *Soil erosion destroys the ability to produce crops*
- *Results in deforestation*
- *Reduces storage capacity of water in Lakes, River, canal.*
- *Wind Erosion starts when the force of the wind overcomes gravity. Soil is carried by the wind in three ways-suspension, saltation and surface creep.*
- *Suspended soil particles can be carried by the wind for great distances. Coarser particles will be bounced along by the wind. The process is called saltation. Surface creep refers to a process where larger particles roll the direction of the wind.*

## Typical Erosion Process



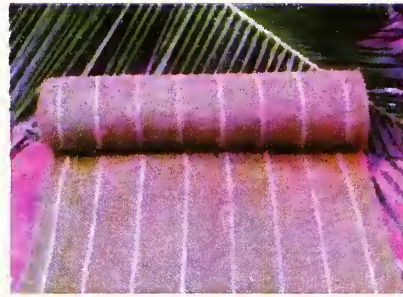
## Controlling Erosion



***SVFU Provides Eco-Friendly Innovative, faster and economical Solutions for:***

- ***Eco Restoration of Mine Waste Dumps***
- ***Soil Erosion Control, Flood Control***
- ***Soil Stabilization, Hill Slope Protection***
- ***Water Courses, Irrigation***
- ***Mulching, Revegetation***
- ***Landscaping***

## **EROSION CONTROL BLANKETS**



***Erosion Control blankets protect soil and seed from erosion by providing a cover against the erosive forces of overland storm water flow and the effect of rainfall. Erosion Control blankets act as a non-deteriorating mulch that promotes seed germination beneath the mat. Vegetation easily grows through it because of its high porosity.***

---

## **SOIL EROSION CONTROL BLANKETS**

### **BENEFITS OF COIR**

- ***Coir is natural and 100% biodegradable. Coir is one of nature's strongest fibres and will maintain its tensile strength under soil & water. It is also highly UV resistant.***
  - ***Coir has the best content of Lignin and is resistant to mould and rot. Coir biodegrades very slowly over a 5-10 year period and***
  - ***Coir retains moisture, act as a mulch and provides an excellent microclimate for faster growth of plant and root system.***
  - ***Re-vegetation measures using coir encourage the restoration of terrestrial and aquatic riparian habitat.***
-

## SOIL EROSION CONTROL BLANKETS

### UNIQUE ADVANTAGES:

- *Faster Binding of Soil*
- *Excellent air and water permeability*
- *Enough sunlight passes through it*
- *Holds the seeds and saplings in place*
- *Excellent medium for quick vegetation*
- *Easy to Install*
- *Eco-friendly and non-polluting*

<b>Naturalization</b>	<b>Hard Armoring</b>
<ul style="list-style-type: none"> <li>➤ <i>Naturalization also called bio engineering, Involves working with Natural materials such as live vegetation and re-vegetation with the help of coco erosion control blankets</i></li> <li>➤ <i>Immediate stabilization that strengthens over time</i></li> <li>➤ <i>Economical</i></li> <li>➤ <i>Provides fish and wildlife habitat</i></li> <li>➤ <i>Decreases water velocities</i></li> <li>➤ <i>Provides shading and decreases water temperature</i></li> <li>➤ <i>Works with natural forces rather than fighting them</i></li> <li>➤ <i>Aesthetically pleasing</i></li> </ul>	<ul style="list-style-type: none"> <li>➤ <i>It refers to solid installations of concrete, rip rap, or metal pilings</i></li> <li>➤ <i>Immediate stabilization</i></li> <li>➤ <i>Expensive</i></li> <li>➤ <i>Destroys fish and wildlife habitat</i></li> <li>➤ <i>Increases water velocities</i></li> <li>➤ <i>Warms stream water</i></li> <li>➤ <i>More likely to cause downstream erosion</i></li> <li>➤ <i>Aesthetically displeasing</i></li> </ul>

### HIGHWAY EMBANKMENT

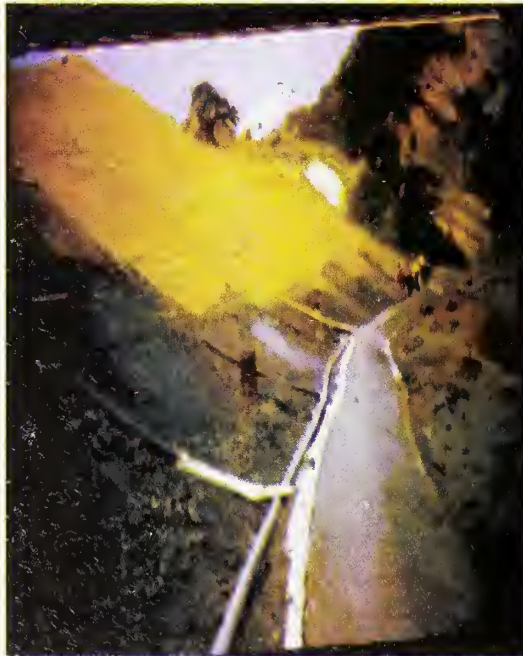
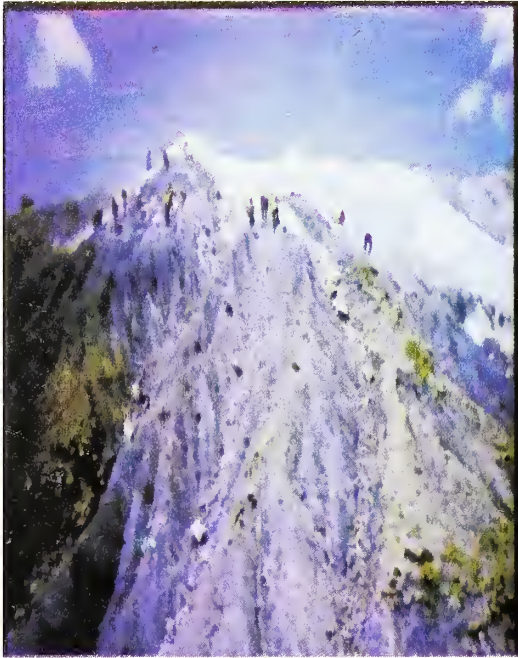


**HILL SLOPE PROTECTION**

**Site before construction, October, 2002. Note old finish grade faces visible at the right hand 10% of the slope indicating volume and extent of loss**

**Site after third winter season, March, 2005. Areas at left and top received less compost**

**HILL SLOPE PROTECTION**





**(The Official amendments to this document would be published by the IRC In its periodical, 'Indian Highways' which shall be considered as effective and as part of the code/guidelines/manual, etc. from the date specified therein)**



# **CONSOLIDATED GUIDELINES AND CLARIFICATIONS**

issued under

**VAN (SANRAKSHAN EVAM  
SAMVARDHAN) ADHINIYAM, 1980**

and

**VAN (SANRAKSHAN EVAM  
SAMVARDHAN) RULES, 2023**



**Government of India**

**Ministry of Environment, Forest and Climate Change**

Government of India  
Ministry of Environment, Forests and Climate Change  
(Forest Conservation Division)

Indira Paryavaran Bhawan,  
Aliganj, Jor Bag Road,  
New Delhi - 110003.


**Dated: 29<sup>th</sup> December, 2023**

**ORDER**

In exercise of the powers conferred under section 3 C of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, the Central Government, in suppression to all previous guidelines, hereby issue a Consolidated Guidelines and Clarifications on Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Van (Sanrakshan Evam Samvardhan) Rules, 2023, including the guidelines issued under sub-section (3) of section 1A, clause (iii) of sub-section (1) of section 2 and sub-section (2) of section 2 of the Adhiniyam for effective and transparent implementation of the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. All the provisions enshrined in these guidelines will be applicable from 1<sup>st</sup> December, 2023.

This issues with the approval of the competent authority.

Yours faithfully,

  
29.12.23  
(Ramesh Kumar Pandey)  
Inspector General of Forest

**Distribution to:**

1. All concerned
2. Director (Technical), NIC with a request to upload the same on the website of the Ministry

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**ABBREVIATIONS**

ABC	Aerial Bunched Cable
AC	Advisory Committee
ACA	Accredited Compensatory Afforestation
ACF	Assistant Conservator of Forest
AONBs	Areas of Outstanding Natural Beauty
APCCF	Additional Principal Chief Conservator of Forests
BRO	Border Road Organisation
CA	Compensatory Afforestation
CA	Competent Authority
CAF	Common Application Form
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CAT	Catchment Area Treatment
CBA	Cost Benefit Analysis
CBA	Coal Bearing Areas (Acquisition and Development) Act, 1957
CCF	Chief Conservator of Forests
CEA	Central Electricity Authority
CF	Conservator of Forest
CNG	Compressed Natural Gas
CPCB	Central Pollution Control Board
CZA	Central Zoo Authority
DCF	Deputy Conservator of Forests
DDA	Delhi Development Authority
DFO	Divisional Forest Officer
DGPS	Differential Geographical Positioning System
DoT	Department of Telecommunications
DPIIT	Department for Promotion of Industry and Internal Trade
DSS	Decision Support System
DWPR	Draft Working Plan Report
EDS	Essential Details Sought
EPA	Environment Protection Act
ESZ	Ecologically Sensitive Zone
FAC	Forest Advisory Committee
FFR	Field Firing Range
FRCM	Fortnightly Regional Coordination Meeting
FRL	Full Reservoir Level
GIS	Geographical Information System
GOI	Government of India
HEP	Hydro Electric Project
HoFF	Head of Forest Force
ICMC	Inter-Ministerial coordination and Monitoring Committee
IFA	Indian Forest Act, 1927
KYA	Know Your Approval
LAC	Line of Actual Control
LoI	Letter of Intent
LWE	Left Wing Extremism
MDDA	Mussoorie Dehradun Development Authority

MHA	Ministry of Home Affairs
MMDR	Mines and Minerals (Development and Regulation) Act, 1957
MoEFCC	Ministry of Environment, Forest and Climate Change
MoRTH	Ministry of Road Transport and Highways
NBWL	National Board for Wildlife
NDC	Nationally Determined Contributions
NGO	Non-Government Organisation
NGT	National Green Tribunal
NHAI	National Highway Authority of India
NHIDCL	National Highways and Infrastructure Development Corporation Ltd.
NOC	No Objection Certificate
NPV	Net Present Value
NTCA	National Tiger Conservation Authority
OFC	Optical Fibre Cable
OISD	Oil Industry Safety Directorate
PA	Protected Areas
PAN	Protected Area Network
PCCF	Principal Chief Conservator of Forests
PESO	Petroleum and Explosive Safety Organisation
PF	Protected Forest
PLPA	Punjab Land Preservation Act, 1900
PMGSY	Pradhan Mantri Gramya Sadak Yojna
PNG	Piped Natural Gas
PNGRB	Petroleum and Natural Gas Regulatory Board
PSC	Project Screening Committee
PSU	Public Sector Undertakings
PWD	Public Works Department
RCCF	Regional Chief Conservator of Forest
REC	Regional Empowered Committee
RF	Reserved Forest
RO	Regional Office
ROHQ	Regional Office Head Quarter
RoW	Right of Way
SBWL	State Board for Wildlife
SFD	State Forest Department
SLC	State Level Committee
SMC	Soil Moisture Content
TOF	Trees Outside Forest
TR	Tiger Reserved
UA	User Agency
UA	User Agency
USF	Un-classed Forest
WII	Wildlife Institute of India
WLMP	Wildlife Management Plan
WLPA	Wild Life (Protection) Act, 1972

**VAN (SANRAKSHAN EVAM SAMVARDHAN) ADHINIYAM, 1980 WITH  
AMENDMENTS MADE IN 1988 AND 2023**

An Act to provide for the conservation of forests and for matters connected therewith or ancillary or incidental thereto.

*“WHEREAS, the importance of forests is to be realised to enable achievement of national targets of Net Zero Emission by 2070 and maintain or enhance the forest carbon stocks through ecologically balanced sustainable development;*

*AND WHEREAS, Nationally Determined Contribution (NDC) targets of the country envisage creating carbon sink of additional 2.5 to 3.0 billion tons of CO<sub>2</sub> equivalent by 2030;*

*AND WHEREAS, the country envisages an increase in the forest and tree cover to one third of its land area, which has to be given impetus with an enhanced growth trajectory;*

*AND WHEREAS, India has a rich tradition of preserving forests and their bio-diversity, and therefore enhancing forest based economic, social and environmental benefits, including improvement of livelihoods for forest dependent communities is envisaged;*

*AND WHEREAS it is necessary to provide for provisions relating to conservation management and restoration of forests, maintaining ecological security, sustaining cultural and traditional values of forests and facilitating economic needs, carbon neutrality .”.*

Be it enacted by Parliament in the Seventy-fourth Year of the Republic of India as follows:-

**1. Short title, extent and commencement.**— (1) This Act may be called the *Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980*.

(2) It shall be deemed to have come into force on the 1<sup>st</sup> day of December, 2023.

**1A. Act to cover certain land.**— (1) The following land shall be covered under the provisions of this Act, namely:-

(a) that has been declared or notified as a forest in accordance with the provisions of the Indian Forest Act, 1927 or under any other law for the time being in force;

(b) that is not covered under clause (a), but has been recorded in Government record as forest, as on or after the 25<sup>th</sup> October, 1980:

Provided that the provisions of this clause shall not apply to such land, which has been changed from forest use to use for non-forest purpose on or before the 12<sup>th</sup> December, 1996 in pursuance of an order, issued by any authority authorised by a State Government or an Union territory Administration in that behalf.

**Explanation.-** (i) For the purposes of this sub-section, the expression ‘Government record’ means record held by Revenue Department or Forest Department of the State Government or Union territory Administration or any authority, local body, community or council recognised by the State Government or Union territory Administration;

(2) The following categories of land shall not be covered under the provisions of this Act, namely:—

(a) such forest land situated alongside a rail line or a public road maintained by government, which provides access to a habitation, or to such rail, and roadside amenity up to a maximum size of 0.10 hectare in each case;

(b) such tree, tree plantation or reforestation raised on lands that are not specified in clause (a) or clause (b) of sub-section (1); and

(c) such forest land, —

(i) as is situated within a distance of hundred kilometres along international borders or Line of Control or Line of Actual Control, as the case may be, proposed to be used for construction of strategic linear project of national importance and concerning national security; or

(ii) up to ten hectares, proposed to be used for construction of security related infrastructure; or

(iii) as is proposed to be used for construction of defence related project or a camp for paramilitary forces or public utility projects, as may be specified by the Central Government, the extent of which does not exceed five hectares in a Left Wing Extremism affected area as may be notified by the Central Government.

(3) The exemption provided under sub-section (2) shall be subject to such terms and conditions, including the conditions of planting trees to compensate felling of trees undertaken on the lands, as the Central Government may, by guidelines, specify.

## **2. Restriction on the de-reservation of forests or use of forest land for non-forest purpose—**

– (1) Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the Central Government, any order directing -

(i) that any reserved forest (within the meaning of the expression "reserved forest" in any law for the time being in force in that State) or any portion thereof, shall cease to be reserved;

(ii) that any forest land or any portion thereof may be used for any non-forest purpose;

(iii) that any forest land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organisation subject to such terms and conditions, as the Central Government may, by order, specify;

(iv) that any forest land or any portion thereof may be cleared of trees which have grown naturally in that land or portion, for the purpose of using it for reforestation:

**‘Explanation—** For the purposes of this sub-section, “non-forest purpose” includes breaking up or clearing of any forest land or a portion thereof for—

(a) cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticultural crops or medicinal plants;

(b) any purpose other than reforestation,

*but does not include any work relating to or ancillary to conservation, development and management of forests and wildlife, such as—*

- (i) *silvicultural operations including regeneration operations;*
- (ii) *establishment of check-posts and infrastructure for the front line forest staff;*
- (iii) *establishment and maintenance of fire lines;*
- (iv) *wireless communications;*
- (v) *construction of fencing, boundary marks or pillars, bridges and culverts, dams, waterholes, trenches and pipelines;*
- (vi) *establishment of zoo and safaris, referred to in the Wild Life (Protection) Act, 1972, owned by the Government or an Authority, in forest areas other than Protected Areas;*
- (vii) *eco-tourism facilities included in the Forest Working Plan or Wildlife Management Plan or Tiger Conservation Plan or Working Scheme of that area; and*
- (viii) *any other like purposes, which the Central Government may, by order, specify. ’;*

(2) The Central Government may, by order, specify the terms and conditions subject to which any survey, such as, reconnaissance, prospecting, investigation or exploration including seismic survey, shall not be treated as non-forest purpose.

**3. Constitution of Advisory Committee** — The Central Government may constitute a Committee consisting of such number of persons as it may deem fit to advise that Government with regard to

- (i) the grant of approval under section 2; and
- (ii) any other matter connected with the conservation of forests which may be referred to it by the Central Government.

**3A. Penalty for contravention -**

Whoever contravenes or abets the contravention of any of the provisions of section 2, shall be punishable with simple imprisonment for a period, which may extend to fifteen days.

**3B. Offences by the Authorities and Government Departments**— (1) Where any offence under this Act has been committed -

- (a) by any department of Government, the head of the department; or
- (b) by any authority, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the authority for the conduct of the business of the authority as well as the authority;

shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render the head of the department or any person referred to in clause (b), liable to any punishment if he proves that the offence was

committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence punishable under the Act has been committed by a department of Government or any authority referred to in clause (b) of sub-section (1) and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of any officer, other than the head of the department, or in the case of an authority, any person other than the persons referred to in clause (b) of sub-section (1), such officer or persons shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

**3C. Power of Central Government to issue directions**— The Central Government may, from time to time, issue such directions, to any authority under the Central Government, State Government or Union territory or any organization, entity or body recognized by the Central Government, State Government or Union territory Administration, as may be necessary for the implementation of this Act.

**4. Power to make rules** — (1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the provisions of this Act.

(2) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

**5. Repeal and saving -**

(1) The Forest (Conservation) Ordinance, 1980 is hereby replaced.

(2) Notwithstanding such repeal, anything done or any action taken under the provisions of the said Ordinance shall be deemed to have been done or taken under the corresponding provisions of this Act.

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**VAN (SANRAKSHAN EVAM SAMVARDHAN) RULES, 2023**

**NOTIFICATION**

**New Delhi, the 29<sup>th</sup> November, 2023**

**G.S.R. 869 (E).** - In exercise of the powers conferred by sub-section (1) of section 4 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 (69 of 1980) and in supersession of the Forest (Conservation) Rules, 2022, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely:-

**1. Short title, extent and commencement.** - (1) These rules may be called the Van (Sanrakshan Evam Samvardhan) Rules, 2023.

(2) They shall come into force on the 1st Day of December 2023.

**2. Definitions.** - (1) In these rules, unless the context otherwise requires, -

(a) “accredited compensatory afforestation” means a system of proactive afforestation to be used for obtaining prior approval under sub-section (1) of section 2 of the Adhiniyam.

(b) "Adhiniyam" means the Van (Sankashan Evam Samvardhan) Adhiniyam, 1980 (69 of 1980);

(c) “Advisory Committee” means the Advisory Committee constituted under section 3 of the Adhiniyam;

(d) “compensatory afforestation” means afforestation done in lieu of the diversion of forest land for non-forest purpose under the Adhiniyam;

(e) “compensatory levies” includes all money and funds specified in clauses (iii) and (iv) of sub-section (3) of section 4 of the Compensatory Afforestation Fund Act, 2016 (38 of 2016);

(f) “Conservator of Forests” means Conservator of Forests, Chief Conservator of Forests, the Regional Chief Conservator of Forests or an officer equivalent to Conservator of Forests appointed by the State Government or Union territory Administration to hold the charge of a forest circle having jurisdiction over the forest land for which the prior approval of the Central Government is required;

(g) “Deputy Director General of Forests (Central)” means head of the Regional Office appointed by the Central Government;

(h) “dereservation” means an order issued by the State Government or Union territory Administration or any authority thereof, for change in the legal status of a land statutorily or otherwise recognised as forest to any other category of land;

(i) “diversion” means an order issued by the State Government or Union territory Administration or any authority thereof for the use of any forest land for non-forest purpose or assignment of a lease of any forest land for non-forest purpose;

(j) "District Collector" includes Deputy Commissioner, to hold the charge of the Administration of the revenue district having jurisdiction over the forest land for which the prior approval of the Central Government under the Adhiniyam is required;

- (k) “Divisional Forest Officer” means Divisional Forest Officer, Deputy Conservator of Forests or an officer equivalent to the Divisional Forest Officer or Deputy Conservator of Forests appointed by the State Government or Union territory Administration to hold the charge of a Forest Division having jurisdiction over the forest land for which the prior approval of the Central Government under the Adhiniyam is required;
- (l) “land bank” means the lands identified or earmarked, as the case may be, by the State Government and Union territory Administration for raising compensatory afforestation in lieu of forest land proposed for diversion or diverted under the Adhiniyam;
- (m) “linear project” means project involving linear diversion of forest land for the purposes such as roads, pipelines, railways, transmission lines, slurry pipeline, conveyor belt etc.;
- (n) “National Working Plan Code” means a code prepared by the Central Government for the preparation of Working Plans;
- (o) “Nodal Officer” means any officer not below the rank of Chief Conservator of Forests, authorised by the State Government or Union territory Administration, as the case may be, or the senior most officer in the Forest Department of the concerned Union territory, if there is no post of Chief Conservator of Forests or above in the Department, for the purpose of implementation of the Adhiniyam and rules thereof and to deal with and to make correspondence with the Central Government, in the matter of forest conservation;
- (p) “Project Screening Committee” means the Project Screening Committee constituted under rule 8;
- (q) “Regional Empowered Committee” means the Regional Empowered Committee constituted under sub-rule (1) of rule 6;
- (r) “Regional Office” means a Regional Office established by, and controlled by the Central Government for the purpose of these rules;
- (s) “survey” means any activity to be taken up prior to initiating commissioning of a project or any activity undertaken for the purpose of exploring, locating or proving mineral deposits including coal, petroleum and natural gas before carrying out actual mining in the forest land, that includes survey, investigation, prospecting, exploration, including drilling therefor, etc.;
- (t) “technological tool” means Geographical Information System based digital tools such as Decision Support System facilitating the decision making process of proposal seeking prior approval under the Adhiniyam;
- (u) “user agency” means any person, organisation or legal entity or company or Department of the Central Government or State Government or Union territory Administration submitting a proposal under section 1 of the Adhiniyam;
- (v) “working permission” means permission granted to linear projects before final approval to mobilise the resources to commence the preliminary project work other than black topping, concretisation, laying of railway tracks, charging of transmission lines, etc. or as specified in the in-principle approval;
- (w) “Working Plan” means the document prepared as per the provisions of the National Working Plan Code published by the Central Government from time to time and having

prescriptions for scientific management of the forests of a particular Forest Division for a specified period;

(2) Words and expressions used herein and not defined in these rules but defined in the Adhiniyam shall have the same meaning as respectively assigned to them in the Adhiniyam.

**3. Constitution of Advisory Committee - (1)** The Central Government may, by an order, constitute an Advisory Committee to advise the Central Government with regards to the grant of approval under sub-section (1) of section 2 in respect of proposals referred under sub-rule (2) of rule 10; and any matter connected with the conservation of forests referred to the Advisory Committee by the Central Government.

(2) The Advisory Committee shall consist of the following persons, namely: -

- (a) Director General of Forests, Ministry of Environment, Forest and Climate Change – Chairperson;
- (b) Additional Director General of Forests, dealing with the forest conservation in the Ministry of Environment, Forest and Climate Change – Member;
- (c) Additional Director General of Forests, dealing with wildlife in the Ministry of Environment, Forest and Climate Change – Member;
- (d) Additional Commissioner (Soil Conservation), Ministry of Agriculture and Farmers' Welfare – Member;
- (e) Three non-official experts to be nominated by the Central Government representing one each from the fields of ecology, engineering and development economics – members;
- (f) Inspector General of Forests dealing with forest conservation and Adhiniyam thereof – Member-Secretary

(3) The Chairperson may co-opt the domain experts as special invitees to a meeting of the Advisory Committee.

(4) The Chairperson shall preside over the meeting of the Advisory Committee and in his absence, the Additional Director General of Forests, dealing with forest conservation, in the Ministry of Environment, Forest and Climate Change shall preside over the meeting.

**4. Terms and conditions of non-official Members of Advisory Committee. –**

(1) A non-official Member shall hold his office for a period of up to two years from the date of his nomination or as specified by the Central Government.

(2) A non-official Member shall cease to hold office if he becomes of unsound mind, or insolvent or is convicted for an offence which involves moral turpitude.

(3) A non-official Member may be removed from his office if he fails to attend three consecutive meetings of the Advisory Committee without any sufficient cause or reason.

(4) Any vacancy caused by any reason mentioned in clauses (b) and (c) shall be filled by the Central Government for the remaining term of two years.

(5) The non-official Members of the Advisory Committee shall be entitled to a travelling allowance and daily allowance as are admissible to an officer of the Government of India holding Group 'A' post.

(6) Provided that where a Member of the Parliament or a Member of a State Legislature has been appointed as a member of the Advisory Committee, he shall be entitled to the travelling allowance and daily allowances in accordance with the Salary, Allowances and

Pension of Members of Parliament Act, 1954 (30 of 1954) or the respective provisions of law pertaining to the member of the concerned State Legislature, as the case may be.

**5. Conduct of business of the Advisory Committee.-** (1) The Chairperson of the Advisory Committee shall call the meeting of the Committee at least once a month, whenever considered necessary;

(2) the meeting of the Advisory Committee shall ordinarily be held at New Delhi except when the Chairperson considers it necessary to inspect the proposed land, then the Chairperson may direct the meeting to be held at a place from where the proposal can be inspected.

(3) the quorum of the meeting of the Advisory Committee shall be five including the Chairperson.

(4) The Member-Secretary shall prepare an agenda of the meeting and present the proposals and matters referred to the Advisory Committee by the Central Government.

(5) The Advisory Committee shall examine in its meeting the proposal or the matter and, in urgent cases, the Chairperson may direct the proposal or the matter to be sent to the members for their opinion, which shall be furnished to the Committee within the stipulated time.

(6) the user agency may be allowed to attend the meeting of the Advisory Committee for such duration as may be necessary to furnish such information or clarify any issue which may pertain to it.

(7) After the examination of the proposal or the matter, the Advisory Committee shall make its recommendation/advise to the Central Government.

**6. Constitution of Regional Empowered Committee. -** (1) The Central Government may, by an order, constitute a Regional Empowered Committee at each of the Regional Offices to examine proposals referred to it under sub-rule (3) of rule 10 and grant approval or rejection of proposals under sub-section (1) of section 2.

(2) The Regional Empowered Committee at each of the Regional Offices shall consist of the following persons, namely: -

(a) Deputy Director General of Forests (Central) or an officer nominated by the Central Government – chairperson;

(b) Three non-official members from amongst eminent persons who are experts in the field of forestry and allied disciplines – members;

(c) The senior-most officer amongst officers of the rank of Conservator of Forests and Deputy Conservator of Forests in the Regional Office – member-secretary.

(3) The chairperson of the Regional Empowered Committee may co-opt the domain experts as special invitees to the meeting.

(4) One representative each from the Forest Department and Revenue Department of the State or the Union territory Administration, not below the rank of Director to the Government of India, shall be invited by the Regional Empowered Committee to attend the meeting as a special invitee, in the examination of the proposals.

**(5) Terms and conditions of non-official members of Regional Empowered Committee.-**

- (1) A non-official member shall hold his office for a period of up to two years from the date of his nomination.
- (2) A non-official member shall cease to hold office if he becomes of unsound mind, insolvent, or is convicted for an offence involving moral turpitude.
- (3) A non-official member may be removed from his office if he fails to attend three consecutive meetings of the Committee without any sufficient cause or reason.
- (4) Any vacancy of a member in the Regional Empowered Committee caused by any reason mentioned in sub-rules (2) and (3) shall be filled by the Central Government for the remaining term of the member in whose place vacancy has arisen.
- (5) The non-official members of the Regional Empowered Committee shall be entitled to a travelling allowance and daily allowance as are admissible to an officer of the Government of India holding Group 'A' post carrying the same scale of pay.
- (6) Provided that where a Member of the Parliament or a Member of a State Legislature has been appointed as a member of the Advisory Committee, he shall be entitled to the travelling allowance and daily allowances in accordance with the Salary, Allowances and Pension of Members of Parliament Act, 1954 (30 of 1954) or the respective provisions of law pertaining to the member of the concerned State Legislature, as the case may be.

**7. Conduct of business of Regional Empowered Committee.** - The Regional Empowered Committee shall conduct its business as follows, namely:-

- (1) The chairperson of the Regional Empowered Committee shall hold the meeting whenever considered necessary, but not less than once a month.
- (2) The meetings of the Regional Empowered Committee shall be held at the headquarters of the Regional Office:

Provided that where the chairperson of the Regional Empowered Committee is satisfied that inspection of site of forest land proposed to be used for non-forest purposes shall be necessary or expedient in connection with the consideration of the proposal referred, he may direct that the meetings of the Regional Empowered Committee be held at a place other than headquarters of the Regional Office for such inspection of site;

- (3) The chairperson of the Regional Empowered Committee shall preside over the meeting of the Regional Empowered Committee and in his absence, Deputy Director General of Forests holding the charge of other Regional Office or Inspector General of Forests dealing with the matter related to the Adhiniyam, as may be authorised by the Central Government, may chair the meeting of the Regional Empowered Committee.
- (4) Every proposal referred to the Regional Empowered Committee for advice or decision shall be considered in the meeting of the Regional Empowered Committee:

Provided that in urgent case, the chairperson of the Regional Empowered Committee may direct that documents may be circulated and sent to the members of the Regional Empowered Committee for their opinion within the stipulated time.

- (5) The quorum of the meeting of the Regional Empowered Committee shall be three.

(6) The user agency may be allowed to remain present for such duration during a meeting as may be necessary to furnish such information or clarify any issue which may pertain to it.

(7) The member-secretary shall prepare agenda of the meeting and present the proposals and matters connected with the Adhiniyam before the committee for making appropriate recommendations and decisions thereafter.

**8. Constitution of Project Screening Committee. - (1)** The State Government and Union territory Administration may, by an order, constitute a Project Screening Committee to examine the completeness of the proposal submitted under clauses (i), (ii) or (iii) of sub-section (1) of section 2 of the Adhiniyam.

(2) The Project Screening Committee shall consist of the following persons, namely:-

- a. Nodal Officer – chairperson;
- b. Concerned Chief Conservator of Forests/ Conservator of Forests – member;
- c. Concerned Divisional Forest Officer- member;
- d. Concerned District Collector or his representative (Not below the rank of Deputy Collector) –member;
- e. Divisional Forest Officer in the office of Nodal Officer- member-secretary

(3) The Project Screening Committee shall meet at least twice every month and the quorum of the meeting of the Project Screening Committee shall be three.

(4) The Project Screening Committee shall, after examination of the proposals, make recommendation to the State Government or Union territory Administration, as the case may be.

**9. Proposals for prior approval of Central Government - (1)** The approval shall be accorded by the Central Government in two stages, namely, (i) ‘In- Principle’ approval; and (ii) ‘Final’ approval.

(2) The user agency shall submit an application to the State Government or Union territory Administration for approval of the Central Government under sub-section (1) of section 2 of the Adhiniyam for dereservation of forest land, use of forest land for non-forest purposes or for assignment of lease online, through the web portal of the Central Government.

(3) A proposal identity number shall be generated online for the proposal submitted by the user agency and the said identity number shall be used for all future references;

(4) The copy of the proposal shall be simultaneously forwarded to the concerned Divisional Forest Officers, District Collectors, Conservator of Forests, Chief Conservator of Forests and the Nodal Officer of the State Government or Union territory Administration each of whom shall independently undertake preliminary examination of the completeness of documentation of the proposal.

(5) The Project Screening Committee shall examine the proposal received from the State Government or Union territory Administration, except proposals involving forest land of five hectares or less, that the proposal is complete in all respects and the proposed activity is not in any restricted area or category.

(6) The Project Screening Committee, for the purpose of screening, may call the user agency for clarification or additional documents, if any.

(7) The Project Screening Committee shall examine the proposal for its completeness and correctness and ensure that deficiencies in the proposal, if any, are identified and the member-secretary shall inform in this regard to the user agency.

(8) The proposals returned to the user agency shall be re-submitted after addressing the deficiency, as identified under sub-rule (7) above, within a period of ninety days, failing which the proposal shall stand de-listed.

(9) In case the user agency submits the information within the given time the proposal will be re-examined by the Project Screening Committee and in case the proposal is not complete in all respect then the same will be de-listed for the reasons to be recorded in writing:

Provided that the after de-listing of the proposal by the Project Screening Committee, the user agency, after addressing the deficiencies, can re-list the proposal only once using the same proposal identity number, as generated under sub-rule (2) above, which will again be examined by the PSC as per procedure given in sub-rule (5) to (7) above and in case the proposal is found still incomplete, it will be rejected and deleted permanently from the portal.

(10) The complete proposal with the proposal identity number shall be forwarded to concerned Divisional Forest Officer concerned, District Collectors, Conservator of Forests or Chief Conservator of Forests for field verification.

(11) Where the forest land or part thereof included in the proposal is not under the management control of the Forest Department, the District Collector shall get the land schedule and map of the forest land included in the proposal authenticated online through joint verification by officers of the Revenue Department and Forest Department.

(12) In addition to every proposal verified in the field by the Divisional Forest Officer concerned, field inspection shall be simultaneously undertaken for every proposal that involves more than forty hectares of forest land by the Conservator of Forests concerned and for every proposal that involves more than hundred hectares of forest land by the Nodal Officer.

(13) The proposal, except involving forest land of five hectares or less, shall come up for consideration of the Project Screening Committee within the period specified in Schedule I, annexed to these rules, from submission of the completed proposal under sub-rule (8), or (9) or (11), as the case may be, and the Project Screening Committee shall examine the feasibility of the proposal for the purpose of recommending it to the State Government or Union territory Administration along with mitigation measures to be adopted by the user agency:

Provided that the Project Screening Committee may seek from the user agency any clarification, additional detail or modification of the proposal in terms of change in forest land proposed for diversion on account of reasons such as minimising the requirement of forest land or minimising adverse impact on forest and wildlife, change in compensatory afforestation land proposed or change in measures proposed to be adopted by the user agency to mitigate the adverse impact of the project, and for this purpose it may ask the user agency to make a presentation:

Provided further that the proposal shall be reconsidered by the Project Steering Committee in case of timely submission of complete information and clarification and additional detail by the user agency online and in case the user agency modifies the original proposal substantially and makes major changes such as change in the forest land or land use plan, the Project Steering Committee may return the proposal to complete the steps given

in sub-rule (7) to (11) and therefore the steps in this sub-rule shall also be repeated in such cases.

(14) Where the user agency fails to submit correct information, additional detail or a modified proposal within the period as specified, the proposal shall stand rejected:

Provided that if the user agency satisfies the Project Screening Committee that the reason for the delay was beyond its control, the Project Screening Committee may reconsider the proposal, after the reasons to be recorded in writing and recommend it to the State Government or Union territory Administration, as the case may be;

(15) The proposal involving forest land of up to five hectares, shall after their examination at the level of Divisional Forest Officer be forwarded by him directly to the Nodal Officer and the Nodal Officer shall forward such proposals to the State Government or Union territory Administration along with his recommendations:

Provided that Division Forest Officer, after receiving the proposals from the user agency, shall assess their completeness and incomplete proposal shall be returned to the user agency for re-submitting it with complete information.

(16) The proposal involving forest land of more than five hectares, shall be forwarded by the Nodal Officer, with the approval of the Principal Chief Conservator of Forests, to the State Government or Union territory Administration, along with the Project Screening Committee's recommendation and the same shall also be forwarded to the Regional Office.

(17) Where the State Government or Union territory Administration, as the case may be, decides not to dereserve, divert for non-forest purposes or assign on lease the forest land as indicated in the proposal, the same shall be intimated to the user agency by the Nodal Officer.

(18) Where the State Government or Union territory Administration agrees 'In-Principle' to dereserve the forest land, divert for non-forest purposes or assign on lease the forest land as indicated in the proposal shall forward its recommendation to the Central Government.

#### **10. In-Principle approval of the proposal.-**

(1) Except the proposals referred to in sub-rule (2), all proposals related to.-

(i) linear projects;

(ii) hydro electric power projects of upto 25 MW capacity proposed in the river basin where cumulative impact assessment to assess the carrying capacity of the river basing has been done

(ii) forest land up to forty hectares; and

(iii) use of forest land having canopy density up to 0.7 irrespective of their extent for the purpose of survey which are not covered under the exemptions provided under clause (iii) of sub-section (1) of section 2 of the Adhiniyam and Guidelines issued thereunder;

shall be examined in the Regional Office and disposed off in the manner specified in sub-rule (3).

(2) All proposals, other than those referred to in sub-rule (1) and following proposals, namely:-

(i) dereservation;

- (ii) mining;
  - (iii) hydro electric power projects of more than 25 MW and those falling in a river basin where cumulative impact assessment study to assess the carrying capacity of river basin has not been done or policy decision on allowing the projects in a river basin has not been taken by the Central Government;
  - (iv) regularisation of encroachment;
  - (v) ex-post facto approval involving violation of the provisions of the Adhiniyam;
- shall be examined and disposed of by the Central Government in the manner specified under these rules.

Provided that, no approval is required for assignment of petroleum exploration licence or petroleum mining lease where the physical possession or breaking of forest land is not involved:

**(3)** The proposals received under sub-rule (1) shall be examined by the Regional Office in the following manner, namely:-

**(i)** all proposals involving forest land up to five hectares, shall be examined by the Regional Office for its completeness and after further enquiry or site inspection, as deemed necessary and giving due regard to the aspects listed under clause (ii) of sub-rule (5), 'In-Principle' approval or rejection may be granted by the Regional Office by recording the reasons.

**(ii)** all linear proposals involving forest land of more than five hectares, all proposals for use of forest land having canopy density upto 0.7 for the purpose of survey irrespective of their extent and all other proposals involving the use of more than five hectares and up to forty hectares forest land, shall be referred, after examination of its completeness, by the Regional Office to the Regional Empowered Committee.

**(iii)** the Regional Empowered Committee shall examine all proposals referred to it under clause (ii) and after further enquiry or site inspection as deemed necessary and giving due regard to the aspects listed under clause (ii) of sub-rule (5), may grant 'In-Principle' approval or reject the same by recording reasons.

**(iv)** The decisions taken by the Regional Empowered Committee or the Deputy Director General of Forests to grant 'In-principle' approval or to reject a proposal, in accordance with the power delegated under this rule, as and when necessary or required, may be reviewed by Central Government and decision taken by the Central Government in such matters shall be the final.

**(4)** Site inspection report shall be prepared for proposals specified in sub-rule (2) by the Regional Office and the same shall be submitted to the Central Government for consideration by the Advisory Committee.

**(5)** The proposals received by the Central Government shall be examined in the following manner, namely:-

**(i)** all proposals under sub-rule (2) along with the site inspection report as required under sub-rule (4) or as asked by the Central Government, shall be referred, after examination of its completeness, to the Advisory Committee.

(ii) the Advisory Committee shall examine all proposals referred to it in clause (i), giving due regards, but not limited to, the following, and after further enquiry, as deemed necessary, shall make recommendation to the Central Government for consideration for approval:-

(a) the proposed use of the forest land is not for any non-site specific purpose such as agricultural purpose, office or residential purpose or for the rehabilitation of persons displaced for any reason;

(b) the State Government or the Union territory Administration, as the case may be, has certified that it has considered all alternatives and that no other alternative in the circumstances is feasible and that the required area is the minimum needed;

(c) the State Government or the Union territory Administration, as the case may be, before making his recommendation, has considered all issues having direct and indirect impacts on the diversion of forest land on the forest, wildlife and the environment;

(d) concerned mandates under the National Forest Policy;

(e) whether adequate justification has been given and appropriate mitigation measures have been proposed by the State Government or the Union territory Administration, as the case may be, if the forest land proposed to be used for non-forest purposes forms part of a national park, wildlife sanctuary, tiger reserve, designated or identified tiger or wildlife corridor, or habitat of any endangered or threatened species of flora and fauna or of an area lying in the severely eroded catchment; and

(f) the State Government or the Union territory Administration, as the case may be, undertakes to provide at its cost or at the cost of the user agency the requisite extent of appropriate land, as per rule 13, for the purpose of carrying out compensatory afforestation.

(6) While making recommendations under sub-rule (5), the Committee may also impose conditions or restrictions and such mitigation measures, which in its opinion would offset the adverse environmental impact of diversion of forest land under the proposal.

(7) The Central Government shall, after considering the recommendation of the Advisory Committee, grant 'In-Principle' approval subject to fulfilment of stipulated conditions or reject and communicate the same to the State Government or the Union territory Administration, as the case may be, and to the user agency.

(8) In case the proposal is found incomplete or information provided is found to be incorrect after its examination, the Central Government shall inform the State Government or Union territory Administration and user agency for furnishing the required information within a specified period.

(9) The State Government or Union territory Administration on receipt of communication under sub-rule (8), may furnish the complete information, after which the proposal shall be considered for 'In-Principle' approval under these rules:

Provided, if the information sought pertains to the user agency, the user agency may directly furnish the requisite information to the Central Government with a copy to the State Government or Union territory Administration, and upon receipt of such information from the user agency, the Central Government, if it considers necessary,

may seek comments of the concerned State Government or Union territory Administration, as the case may be, on the information furnished by the user agency or consider granting 'In-Principle' approval.

(10) The State Government or the Union territory Administration, if so desire, after obtaining the 'In-principle' approval of linear proposal and deposition of compensatory levies such as compensatory afforestation and Net Present Value and cost of mitigation plans such as of the Wildlife Management Plan and Soil and Moisture Conservation Plan, as applicable, notification of the land identified for raising compensatory afforestation as Protected Forest under Indian Forest Act, 1927 (16 of 1927) or local forest Act and compliance of other statutes including the Schedule Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007), may grant 'working permission' for the commencement of project work before grant of 'Final' approval.

### **11. Final approval of the proposal.-**

(1) The Nodal Officer may, after receipt of the 'In-Principle' approval from the Central Government, communicate the same to the Divisional Forest Officers, District Collectors and Conservator of Forests.

(2) On receipt of a copy of the 'In-Principle' approval, the Divisional Forest Officer shall prepare a demand note containing the item-wise amount of compensatory levies, as applicable, to be paid by the user agency and communicate the same to the user agency, along with a list of documents, certificates and undertakings required to be submitted by them in compliance with the conditions stipulated in 'In-Principle' approval.

(3) The user agency shall, after receipt of the communication, make payment of compensatory levies and hand over the land identified for compensatory afforestation, a compliance report along with copies of documentary evidence including undertaking and certificate in respect of the payment of compensatory levies and handing over of compensatory afforestation land to the Divisional Forest Officer.

(4) The Divisional Forest Officer, after having received the compliance report as referred to in sub-rule (3), shall examine its completeness and make his recommendations on the compliance report and forward the same to the Nodal Officer.

(5) the Nodal Officer, after having received the compliance report, ensuring its completeness and obtaining approval of the Principal Chief Conservator of Forests of the State Government or head of the Department in case of Union territory Administration, shall forward such report with his recommendations to the State Government or Union territory Administration, as the case may be.

(6) The Central Government after having received the compliance report and ensuring its completeness may accord 'Final' approval under sub-section (1) of section 2 of the Adhiniyam and communicate such decision to the State Government or Union territory Administration and the user agency.

(7) The State Government or Union territory Administration, as the case may be, after receiving the 'Final' approval of the Central Government under sub-section (1) of section 2 of the Adhiniyam, and after fulfilment and compliance of the provisions of all other Acts and rules made thereunder, as applicable including ensuring settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest

Rights) Act, 2006 (2 of 2007), shall issue order for diversion, assignment of lease or dereservation, as the case may be.

(8) The final order of dereservation under clause (i) of sub-section (1) of section 2 of the Adhiniyam, wherever accorded, shall be published in the official Gazette by the State Government or Union territory Administration, as the case may be, informing dereservation of the forest land;

(9) The whole process of obtaining approval shall be carried out in the online portal developed for this purpose.

(10) Where compliance of condition imposed in the 'In-principle' approval is awaited from the State Government or Union territory Administration, as the case may be, for more than two years, the 'In-Principle' approval shall be deemed to be null and void:

Provided the Central Government may, for the reasons to be recorded in writing, in respect of proposals involving forest land of more than thousand hectares, where 'In-Principle' approval has been obtained, may consider grant of phase-wise 'Final' approval by the competent authority subject to compliance in respect of-

(a) payment of compensatory levies and notification of land identified and accepted for raising Compensatory Afforestation, proportional to the part area for which compliance is submitted; and

(b) any other specific condition that the Central Government may deem fit to have been complied with.

(11) After issue of final approval under sub- rule (7) and Gazette notification under sub-rule (8) the forest land concerned may be handed over or assigned, as the case may be, to the user agency by the State Government or Union territory Administration.

(12) The Regional Office shall monitor the compliance of all conditions imposed at the time of granting 'In-Principle' approval and the State Government or Union territory Administration and the user agency shall also monitor, at least once every year, the compliance of conditions imposed during 'In-Principle' approval and upload the monitoring report in the online portal.

(13) The entire process for processing the proposals by the various authorities in the State shall be completed within the time limit specified in **Schedule-I** appended to these rules.

## **12. Proposal seeking prior approval of Central Government for working plan.-**

(1) The Nodal Officer of the State Government or Union territory Administration shall submit the draft Working Plan of a Forest Division, duly prepared in accordance with the provisions of the National Working Plan Code, along with the recommendation of the State Consultative Committee, in the online portal for prior approval of the Central Government.

(2) The draft Working Plan shall include, *inter alia*, details of forest land diverted, corresponding Compensatory Afforestation lands and status of afforestation thereon.

(3) the draft Working Plan submitted to the Central Government shall be examined by the Regional Office concerned for its conformity with National Working Plan Code, the National Forest Policy and with preamble of Adiniyam for conservation and augmentation of forests and the Regional Office may accord prior approval to the draft Working Plan along with conditions or without conditions or accord approval along with modification

of the provision contained in the draft Working Plan and for a period as it deems fit, or reject the same by recording the reasons therefor.

(4) The State Government or Union territory Administration or its designated officer shall carry out the prescriptions of the Working Plan to which the approval has been accorded by the Regional Office with respect to all or specific provision of the Working Plan and for the period for which the Working Plan has been approved.

(5) The State Government or Union territory Administration shall undertake a mid-term review of the approved Working Plan and submit the review report along with its recommendation to the Regional Office and the Regional Office may, after examination, modify the condition of approval or issue a fresh prior approval by modifying the provision of the previously approved Working Plan for the remaining period or reject the recommendations of mid-term review by recording reasons therefor.

(6) The Regional Office may also consider and approve eligible Annual Working Schemes, in case submitted by the State Government or Union territory Administration.

(7) All proposals under clause (iv) of sub-section (1) of section 2, irrespective of the size of forest land involved, shall be submitted online by the State Government or Union territory Administration to the concerned Regional Office.

(8) The proposals received under sub-rule (1) shall be examined by the Regional Office and after enquiry, the Regional Office may grant approval or reject the same by recording the reasons thereof;

(9) The proposals involving whole or part of forest land bearing a canopy density of 0.4 or more or proposals involving clear-felling of forest land of size more than twenty hectares in plains and ten hectares in hills irrespective of canopy density, shall be forwarded to the Regional Empowered Committee and the Regional Empowered Committee shall deal in the manner specified under these rules and while examining the proposal, the Regional Office shall ensure that the final decision is in conformity with the National Working Plan Code, the National Forest Policy and with preamble of Adiniam for conservation and augmentation of forests.

(10) For the purpose of these rules “clear-felling of forest land” means removal of all natural vegetation in whatever form occurring, by felling, uprooting or burning them and removing them from the forest land over one hectare in size or more, but other types of felling of trees of specified size or species, including their selection felling or coppice felling shall not be considered as clear felling.

**13. Creation of Compensatory Afforestation.-** (1) An user agency shall provide land which is neither notified as forest under the Indian Forest Act, 1927 (16 of 1927) or any other law nor managed as forest by the Forest Department and it shall also bear the cost of raising compensatory afforestation over such land and the requirement of Compensatory Afforestation land shall be as per the **Schedule-II** annexed to these rules:

Provided that in case the non-forest land or portion thereof provided by the user agency is not fit for raising compensatory afforestation of a specified density, then additional compensatory afforestation shall be raised on a degraded notified or unclassified forest land under the management control of the Forest Department which is twice in size of such shortfall in the given compensatory afforestation land and the user agency shall also bear the additional cost on such account:

Provided further that if the non-forest land being made available for compensatory afforestation already bears vegetation of 0.4 canopy density or more, there shall not be an additional requirement of planting of trees on such land but a programme for improvement of the forest crop shall be implemented by the Forest Department in a time-bound manner:

Provided also in exceptional circumstances when the suitable land required for compensatory afforestation under this clause is not available and the certificate to this effect is given by the State Government or Union territory Administration, as the case may be, the compensatory afforestation may be considered on degraded forest land which is twice in extent to the area proposed to be diverted in case of the Central Government agencies or Central Public Sector Undertakings on case to case basis:

Provided also in exceptional circumstances when the suitable land required for compensatory afforestation under this clause is not available, and the certificate to this effect is given by the State Government or Union territory Administration, as the case may be, the compensatory afforestation may be considered on degraded forest land which is twice in extent to the area proposed to be diverted in case of State Public Sector Undertakings for captive coal blocks on case to case basis:

Provided also in case the user agency acquires any non-forest land for the execution of the project, the exceptions in case of Central Government agencies, Central Public Sector Undertakings and State Public Sector Undertakings as above shall not be applicable.

**(2)** The specified density for raising compensatory afforestation under this sub-rule shall be such as to develop, a forest of a minimum canopy density of 0.4 or more in the fifth year of start of compensatory afforestation operation, and the area has sufficient vegetation stock to enable it to mature into land with canopy density of minimum 0.7.

**(3)** In case of non-availability of the non-forest land, the compensatory afforestation can also be raised over the following lands, which will be provided minimum double in extent of the area being diverted or difference between the forest land being diverted and the available non-forest land, as the case may be, is made available and they are notified as Protected Forests under the Indian Forest Act, 1927 (16 of 1927) or local Acts prior to 'Final' approval:

**(a)** revenue forest lands i.e. land recorded as forest in the Government records but not notified as forest under any law and not managed by the Forest Department viz. revenue lands or zudpi jungle or chhote-bade jhar ka jungle or jungle-jhari land or civil-soyam or orange forest lands and all other such categories of forest lands, provided they are transferred and mutated in the name of State Forest Department;

**(b)** the degraded Unclassed State Forests in the State of Arunachal Pradesh, shall be considered for compensatory afforestation provided they are transferred and mutated in the name of State Forest Department;

**(c)** the waste lands in the State of Himachal Pradesh, falling under the category of Protected Forests but have neither been demarcated on the ground nor transferred and mutated in the name of forest department in the revenue records, provided they are transferred and mutated in the name of State Forest Department;

**(d)** lands falling under section 4 and 5 of the Punjab Land Preservation Act, 1900, gair mumkin Pahads, gair mumkin darkhtan, in the States of Haryana, Punjab and Himachal Pradesh, which are not under the management and administrative control of the State Forest Department, provided that such lands will be transferred and mutated in the name of State Forest Department, unless as specified and agreed to by the Central Government

to notify them under Indian Forest Act 1927 (16 of 1927), without transferring them to the State Forest Department, on case to case basis;

(4) Special dispensation for raising compensatory afforestation over degraded forest land, minimum double in extent, may be considered in respect of following proposals, namely.-

(a) in the States or Union territory Administrations, having forest area more than 33% of their total geographical area and a certificate on non-availability of suitable non-forest land for raising compensatory afforestation has been furnished by the State Government /Union territory Administration in the format specified under **Schedule-III**, appended to these rules;

(b) transmission line projects;

(c) laying of telephone or optical fibre lines;

(d) mulberry plantation undertaken for silkworm rearing;

(e) extraction of minor materials from the river beds;

(f) construction of link roads, small water works, minor irrigation works, school building, dispensaries, hospital, tiny rural industrial sheds of the Government or any other similar work excluding mining and encroachment cases, which directly benefit the people of the area in hill districts and in other districts having forest area exceeding 50% of the total geographical area, provided diversion of forest area does not exceed 5 hectares;

(g) actual impact zone of the field firing range considered for diversion under the Adhiniyam or 10% of the total forest area diverted in case entire area of the field firing range is proposed for diversion;

(h) any degraded forest land for the purpose of compensatory afforestation, selected by the State Government or the Union territory Administration, under this sub-rule, may be accepted by the Central Government when the crown density of such degraded forest is below 40 percent and such areas is not a natural or managed grassland being used for the management and conservation of wildlife; and

(5) In the following categories of proposals, cost of plantation of ten times the number of trees likely to be felled or specified number of trees as may be specified in the order for diversion of forest land (subject to a minimum no. of 100 plants), shall be levied from the user agency towards compensatory afforestation-

(a) clearing of naturally grown trees in forest land or in portion thereof for the purpose of using it for reforestation;

(b) diversion of forest land up to one hectare; and

(c) Underground mining in forest land without surface rights.

(6) No compensatory afforestation shall be charged in respect of renewal of mining lease for the forest area for which land for compensatory afforestation and cost of plantation has already been paid.

(7) In respect of diversion of forest land earmarked for the maintenance of safety zone along the inner boundary of a mine, the provisions of the raising compensatory afforestation, as applicable in the entire forest area proposed for diversion, shall be applicable in lieu of forest land located in the safety zone.

(8) Non-forest land identified for raising compensatory, contiguous to forest land, located in the wildlife corridors and protected areas shall be incentivised as per the provisions provided in the **Schedule-II** appended to these rules;

**14. Management of compensatory afforestation.-** (1) The land specified under sub-rule (1) of rule 13, shall be demarcated by concrete pillars of suitable size and handed over, free from all encumbrances to the State Forest Department or Union territory Forest Department and the same shall be notified as protected forest under section 29 of Indian Forest Act, 1927 (16 of 1927) or under any other law for the time being in force before the Final approval is granted under the Adhiniyam.

(2) The land identified and earmarked for compensatory afforestation shall be treated and afforested by the State Government or Union territory Administration or user agency as per the compensatory afforestation plan approved as part of the said forest diversion proposal and the work of compensatory afforestation shall start within two years of issue of order of diversion of the corresponding forest land and the Central Government may issue guidelines on the modalities of compensatory afforestation, including agencies that may undertake compensatory afforestation.

(3) Subject to the consent of the State Governments or Union territory Administrations, in case the forest land to be diverted is in a hilly or mountainous State or Union territory having forest cover of more than two-third of its geographical area or situated in any other State or Union territory having forest cover of more than one-third of its geographical area, creation of compensatory afforestation, accredited compensatory afforestation and land banks may be taken up in another State or Union territory Administration:

Provided that, the money towards compensatory afforestation in such cases shall be transferred to the State Compensatory Afforestation Fund of the State or Union territory in which the compensatory afforestation land has been identified and the remaining money of the compensatory levies shall be deposited in the Compensatory Afforestation Fund Management and Planning Authority Fund of the State Government or Union territory Administration in which the forest land has been proposed to be diverted:

Provided further that in cases, where due to unfulfilment of the conditions specified in this sub-rule such as percentage of forest land of the geographical area, it is not possible to raise compensatory afforestation in the same State or Union territory Administration where diversion of forest land is proposed or in other States or Union territory Administration, the Central Government, in public interest, may allow, on case to case basis, compensatory afforestation in other State or Union territory Administration.

(4) (a) A State Government or Union territory Administration as the case may be, for the purpose of compensatory afforestation, may create a land bank under the administrative control of the Department of Forest;

(b) The minimum size of the land bank shall be a single block of twenty five hectares:

Provided that in case a land bank is in continuity of a land declared or notified as forest under the Indian Forest Act, 1927 (16 of 1927) or under any other law for time being in force, protected area, tiger reserve or within a designated or identified tiger or wildlife corridor, there shall be no restriction on size of the land; and

(c) The lands covered under accredited compensatory afforestation earned under sub-rule (5) may be included in the land bank.

(5) (a) The Central Government may formulate an accredited compensatory afforestation mechanism to be used for obtaining prior approval under sub-section (1) of section 2 of the Adhiniyam.

(b) the accredited compensatory afforestation may be earned by a person if he has established afforestation over land on which the Adhiniyam is not applicable and is free from all encumbrances;

(c) an afforestation shall be counted towards accredited compensatory afforestation if such land has vegetation composed predominantly of trees having canopy density of 0.4 or more and the trees are at least five years old;

(d) the accredited compensatory afforestation shall be earned by developing afforestation of one-hectare area with 0.4 or more canopy density, but there shall be no accredited compensatory afforestation for developing an area below 0.4 canopy density or below one-hectare land;

(e) the accredited compensatory afforestation may be swapped for compensatory afforestation proposed under rule (13):

Provided the accredited compensatory afforestation cover a block of minimum of ten hectares and has been fenced as per norms specified for compensatory afforestation in that area:

Provided further that accredited compensatory afforestation over land of any size situated in the continuity of land declared or notified as forest under any law, protected area, tiger reserve or within a designated or identified tiger or wildlife corridor, may be swapped for compensatory afforestation;

(f) the accredited compensatory afforestation earned out of vacation of non-forest lands on account of voluntary relocation of a village from a national park, wildlife sanctuary or tiger reserve and designated or identified tiger or wildlife corridors shall qualify for compensatory afforestation as per **Schedule –II** annexed to these rules, and may be used by a user agency in lieu of compensatory afforestation under rule (13);

(g) the accredited compensatory afforestation identified under this rule shall be demarcated with concrete pillars of suitable size and handed over, free from all encumbrances to Forest Department of the State Government or Union territory Administration and the same shall be notified as protected forest under section 29 of Indian Forest Act, 1927 (16 of 1927) or under the provision of any other law for the time being in force before the Final approval is granted under the Adhiniyam;

(h) The Central Government, from time to time, may issue detailed guidelines on creation of accredited compensatory afforestation, its stock registry and management for the purpose of its swap for compensatory afforestation land and cost of maintenance thereof up to a period specified by the Central Government.

(i) All entities registered for accredited compensatory afforestation shall register with the Green Credit Registry under the Green Credit Policy Implementation Rules, 2023 and besides their eligibility for compensatory afforestation in lieu of diversion of forest land, the accredited compensatory afforestation will also be eligible for allocation of green credits under the Green Credit Policy Implementation Rules, 2023.

**15. Proceedings against persons guilty of offences under the Adhiniyam.-**

(1) The Central Government may, by notification in official gazette, authorise an officer of the rank of Divisional Forest Officer or Deputy Conservator of Forests and above of the State Government or Union territory Administration concerned, having jurisdiction over the forest land in respect of which any offence under the Adhiniyam is committed or violation of the provisions of the said Adhiniyam has been made, to file complaints against such person or authority or organization, prima-facie found guilty of offence under the Adhiniyam or the violation of the rules made thereunder, in the court having jurisdiction in the matter.

(2) The Central Government, after receiving the information with respect to offence committed or violations made either through State Government or Union territory Administration or authorities or any other source or *suo moto*, shall, after examination, communicate the same to the State Government or Union territory and the authorities concerned under whose jurisdiction the offence under the Adhiniyam has been committed or any provision of the said Adhiniyam has been violated, for filing the complaint against the offenders before the court having jurisdiction and it shall act as a prerequisite for the authorised officer before such complaints are filed within a period of forty five days from the receipt of such communication. The State Government and authorities concerned shall submit a periodic report to Regional Office, from time to time, regarding filing of the complaints.

(3) An Officer of the rank of Assistant Inspector General and above, may be authorized by the Central Government, by notification, to initiate legal proceedings and file complaints, against the offences committed under the Adhiniyam.

(4) The officer authorized by the Central Government in sub-rule (1) and (3) may require any officer or any person or any other authority of the State Government or the Union territory Administration, as the case may be, to furnish to it within a specified period any reports, documents, and any other information related to contravention of the Adhiniyam or the rules made thereunder, considered necessary for making a complaint in any court of jurisdiction and every such State Government or officer or person or authority shall be bound to do so.

**16. Miscellaneous.-** (1) For the purpose of explanation of government records provided under subsection (1) of section 1A of the Adhiniyam, the State Governments and Union territory Administrations, within a period of one year, shall prepare a consolidated record of such lands, including the forest like areas identified by the Expert Committee constituted for this purpose, unclassed forest lands or community forest lands on which the provisions of the Adhiniyam shall be applicable.

(2) The felling of trees on forest lands approved for use for the non-forest purpose under these rules shall be restricted to a bare minimum and to an unavoidable number and shall be done under the supervision of the local Forest Department and the forest produce obtained therefrom shall be handed over to the local Forest Department for disposal in the manner specified by the State Government or Union territory Administration which shall give preference to distribution to local villagers for meeting their domestic bonafide requirement.

(3) The forest land diverted for non-forest purpose under these rules shall be appropriately surveyed jointly by the user agency and the Forest Department or the land-owning Department,

demarcated on the ground by way of appropriate permanent boundary marks at the cost of the user agency and handed over by the Forest Department or land-owning Department to the user agency prior to starting of any non-forest use.

(4) For the purpose of forest cover under these rules, the figures and description used in the latest India State of Forest Report published by Forest Survey of India shall be referred.

(5) The Central Government may cancel approval accorded in respect of a proposal, with or without the request of the State Government or Union territory Administration and may decide to refund the compensatory levies deposited, on case to case basis.

(6) The conditions imposed by Central Government for diversion of forest land for the non-forest purpose shall not be changed or modified after a period of two years from the date of grant of final approval unless some exceptional circumstances arise or the Central Government considers it necessary to impose any additional clause of compliance.

(7) The proposals on forest land under litigation or *sub-judice* on account of an issue pertaining to the Indian Forest Act, 1927 (16 of 1927), local forest Act or Adhinyam will be dealt as per the orders of the Courts or Tribunals passed in such cases and the date of applicability of the Adhinyam in such lands shall be in accordance with the direction, if any, passed by the Courts or Tribunals.

(8) Any proposal which has already been submitted under the provisions of the Forest (Conservation) Rules, 2003 or Forest (Conservation) Rules, 2022 and are currently under consideration of the various authorities in the State Government or Union territory Administration or the Central Government for grant of 'In-principle' or 'Final' approval shall be dealt in the following manner, namely:-

- (i) Any proposals granted 'In-principle' approval shall be dealt under the provisions of the extant rules and be processed and considered for grant of 'Final' approval without amending the conditions stipulated in the 'In-principle' approval; and
- (ii) Any provision of the extant rules will be applicable on the proposals which are yet to be granted 'In-principle' approval under the Adhinyam.

## Schedule-I

**TIME LINE FOR PROCESSING OF PROPOSALS SEEKING PRIOR APPROVAL  
OF CENTRAL GOVERNMENT**

[See rule 8 (1), rule 9, rule 10 and rule 11]

Processing Authorities		Area (Ha)/working days			
		Up to 5*	5 to 40*	40 to 100*	More than 100*
<b>A. State Level</b>	Project Screening Committee	0	30	30	30
	DCF/District Collector	10	10	10	20
	Site inspections by DCF/CF/Nodal Officer	5	5	20	20
	Processing by Nodal Officer/ PCCF	5	10	15	15
	State Govt.	10	15	15	15
	<b>Sub-Total</b>	<b>30</b>	<b>70</b>	<b>70</b>	<b>100</b>
<b>B. Regional Office</b>	Scrutiny to examine completeness	3	3	3	3
	Examination and processing of the proposal by the Regional Office	5	5	5	5
	Site inspection by Regional Office	0	0	15	15
	Examination and approval by the Regional Empowered Committee	0	20	20	20
	Processing and approval by competent authority (CA)	5	5	5	5
	Communication of approval of CA	2	2	2	2
	<b>Total</b>	<b>15</b>	<b>35</b>	<b>50</b>	<b>50</b>
<b>Total (A+B)</b>		<b>45</b>	<b>105</b>	<b>120</b>	<b>150</b>
<b>C. MoEFCC</b>	Scrutiny to examine completeness	3	3	4	4
	Examination and processing of the proposal	6	6	5	5

Site inspection by Regional Office	10	10	20	20
Advisory Committee	20	20	20	20
Approval by competent authority (CA)	10	10	10	10
Communication of approval of CA	1	1	1	1
<b>Total</b>	<b>50</b>	<b>50</b>	<b>60</b>	<b>60</b>
<b>Total (A+C)</b>	<b>85</b>	<b>120</b>	<b>160</b>	<b>160</b>

\*Time line is prescribed for the proposals which are complete in all respects excluding the time consumed in seeking additional details from the State/UT or User agency.

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#### Proposed Time Line for Grant of 'Final' Approval

Level	Activity	Time (days)
<b>State Level</b>	Issue of demand note for payment of compensatory levies by the user agency	2
	Approval of demand note by the Nodal Officer	3
	Payment of compensatory levies and submission of documents/ certificate by the user agency	5
	Examination of the compliance report by the DFO and forwarding of complete compliance report by DFO to the Nodal Office of Adhinyam with intimation to the CF/CCF	5
	Examination of compliance report by the Nodal Officer and issue of shortcomings, if any, to the DFO for compliance, or forwarding of the completed compliance report to the MoEFCC / Regional Office	10
	<b>Sub-Total</b>	<b>25</b>
<b>MoEFCC, New Delhi/ Regional Office</b>	Examination of the compliance report, confirmation of remittance of compensatory levies realised from the user agency in to the CAMPA account and issue of shortcomings, if any, or State-II approval	20
	<b>Sub-Total</b>	<b>20</b>
	<b>Grand Total</b>	<b>45</b>

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## Schedule II

[See rule 13 and rule 14]

Provisions for the requirement of land related to compensatory afforestation

Sl. No.	Description of Compensatory Afforestation Land	Size of Compensatory Afforestation land as compared to forest land to be diverted for non-forest purpose
(1)	(2)	(3)
1.	Land to which provisions of the Adhiniyam are not applicable.	Equivalent.
2.	<p>Land recorded as 'forest' in Government record but does not fulfill all of the following conditions:-</p> <p>(a) notified as forest under any other law for the time being in force</p> <p>(b) managed as forest by Forest Department.</p> <p><i>(This dispensation is allowed to <u>certain</u> proposals of Central Government and State Government or Union territory Administration only.)</i></p>	Two times.
3.	<p>Degraded notified or unclassified forest land.</p> <p><i>(This dispensation is in case of State Public Sector Undertakings for captive coal blocks on case to case basis and Central Government Agencies/Central Public Sector Undertakings on case to case basis involving no acquisition of non-forest land)</i></p>	Two times
4.	<p>Land, qualifying for Compensatory Afforestation under Sl. No. (1), provided is of size of twenty-five hectares or more in one block.</p> <p>Compensatory Afforestation land of less than ten hectares shall not be accepted unless the requirement of Compensatory Afforestation land is less than ten hectares in which case the user agency has to bear</p>	<p>Five <i>per cent</i> less for every additional block size of ten hectares or part thereof subject to a maximum of twenty-five per cent rebate.</p> <p>This percentage will be applicable only on the additional block size acquired beyond the minimum size of twenty five hectares.</p>

	the additional cost of protection of Compensatory Afforestation so raised for a period of twenty years from the date of planting.	
5.	<p>Land, qualifying for Compensatory Afforestation under Sl. No. (1), that is less than 25 hectares size but more than 10 hectares size in one block</p> <p>If the requirement of Compensatory Afforestation land is less than twenty-five hectares but more than ten hectares in size, the provision of excess land for Compensatory Afforestation shall not be applicable but the user agency has to bear the additional cost of protection of Compensatory Afforestation so raised for a period of twenty years from the date of planting.</p>	Five <i>per cent.</i> more for every five hectares smaller block size or part thereof.
6.	Land qualifying for Compensatory Afforestation under Sl. No. (1) above and is located within the notified boundary of a protected area	Twenty-five <i>per cent.</i> less
7.	Land qualifying for Compensatory Afforestation under Serial No. (1) or (2) and is located in continuity of a notified boundary of a National Park or a Wildlife Sanctuary or area linking one protected area or tiger reserve with another protected area and designated or identified tiger or wildlife corridors.	Fifteen <i>per cent.</i> less.
8.	<p>Land qualifying for Compensatory Afforestation under Sl. No. (1) or (2) and is located adjacent to a forest land notified as forest under Indian Forest Act, 1927 (16 of 1927) or any other law.</p> <p>Accredited Compensatory Afforestation land of any size may be accepted in case it is contiguous to a forest land notified under any law.</p>	Ten <i>per cent.</i> less

<p>9. Compensatory Afforestation land made available from complete and voluntary relocation of a village/ habitation (situated in non-forest land) from a Wildlife Sanctuary, National Park or Tiger Reserve, to a non-forest land outside such Sanctuary, Park or Reserve or area linking protected area or tiger reserve with another protected area and designated or identified tiger or wildlife corridors, as the case may be.</p>	<p>(a) Exemption from payment of Net Present Value of forest land equivalent to the Compensatory Afforestation land by way of vacation of village or habitation from National Park/ Wildlife Sanctuary/ Tiger Reserve.</p> <p>Note: “Net Present Value” shall have the same meaning as assigned in clause (j) of section 2 of the Compensatory Afforestation Fund Act, 2016 (38 of 2016).</p> <p>(b) Accredited Compensatory Afforestation in the ratio of 1:1.25 (Non-forest land: Accredited Compensatory Afforestation earned) so vacated by a village by way of voluntary relocation (<i>provided that the same shall be notified as part of the Wildlife Sanctuary, National Park or Tiger Reserve and also notified as Protected Forest or Reserved Forest</i>).</p> <p>(c) Additional Accredited Compensatory Afforestation at the rate of 0.5 ha per relocated family.</p>
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Note 1: The user agency or Accredited Compensatory Afforestation developer shall ensure that relocation is voluntary.

Note 2: No compensation under relevant schemes of the Central Government or State Government would be payable to such relocatees or user agency or Accredited Compensatory Afforestation developer.

Note 3: The State Government can also use this provision, provided no central assistance on such scheme is availed.

## Schedule-III

**CERTIFICATE OF NON-AVAILABILITY OF LAND FOR COMPENSATORY  
AFFORESTATION IN THE STATE/UNION TERRITORY TO BE ISSUED BY THE  
STATE GOVERNMENT//UNION TERRITORY ADMINISTRATION**

[See rule 13(4)]

No.....

Dated.....

I....., Designation.....(Name of State/ Union Territory) do here by certify that:

i.

- i. Relevant records pertaining to non-forest land, revenue lands, *zudpi jungle, chhote jhar ka jungle, bade jhar ka jungle, jungle jhari land, civil-soyam lands* and all other such categories of forest lands (except the forest land under the management and administrative control of the Forest Department) on which the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are applicable, available in each district of..... (name of the State/UT) have been examined; and
- ii. I have also conducted such further enquiry as is required to satisfy myself for issue of this certificate. On the basis of examination of relevant records and such further enquiry, as was required for issue of this Certificate, I do hereby certify that non-forest land, revenue lands, *zudpi jungle, chhote jhar ka jungle, bade jhar ka jungle, jungle-jhari land, civil-soyam lands* and all other such categories of forest lands (except the forest land under management and administrative control of the Forest Department) on which the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are applicable, which as per the extant guidelines of the Central Government may be utilized for creation of compensatory afforestation in lieu of forest land diverted for non-forest purpose, is not available in the entire (name of State/UT)

Issued under my hand and seal on this.....day of.....

Signature &amp; Official Seal

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F. No. FC-11/118/2021-FC

(Ramesh Kumar Pandey)  
Inspect General of Forests

## CHAPTER-1

### GENERAL CLARIFICATIONS AND COURT ORDERS

#### 1.1 Applicability of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980: The provisions of the Act will be applicable in the following:

- (i) Land that has been declared or notified as a forest in accordance with the provisions of the Indian Forest Act, 1927 or under any other law for the time being in force;
- (ii) Land that is not covered under clause (i) of para 1.1 above i.e. lands which is recorded as forest on or after the 25<sup>th</sup> October, 1980 in the government record will also be covered under the provisions of the Adhiniyam. However, such government forest land (revenue forest land) not declared or notified under the IFA or local Act which has been changed from forest use to use for non-forest purpose on or before the 12<sup>th</sup> December, 1996 with the approval of competent authority in the State/UT shall be exempted from the purview of the Adhiniyam as per the *proviso* given under clause (b) of sub-section (1) of newly inserted section 1 A of the Adhiniyam.
- (iii) The proposals on forest land under litigation or *sub-judice* on account of an issue pertaining to the Indian Forest Act, 1927 (16 of 1927), local forest Act or Adhiniyam will be dealt as per the orders of the Courts or Tribunals passed in such cases and the date of applicability of the Adhiniyam in such lands shall be in accordance with the direction, if any, passed by the Courts or Tribunals.
- (iv) The provisions of the Act are not applicable on the tree, plantation and afforestation raised on private lands, except the notified private forests. However, felling of trees, in these private plantations shall, be governed by various State Acts, Rules, and Regulations. Felling of trees in private forests will be as per the working /management plan duly approved by the Government of India.
- (v) For the purpose of explanation of government records provided under subsection (1) of section 1A of the Adhiniyam, the State Governments and Union territory Administrations, within a period of one year, shall prepare a consolidated record of such lands, including the forest like areas identified by the Expert Committee, unclassified forest lands or community forest lands on which the provisions of the Adhiniyam shall be applicable. The record, so prepared shall be updated at regular intervals by State Government and Union territory Administration.

#### 1.2 General Clarifications

- (i) The term 'tree' for the purpose of Adhiniyam will have the same meaning as defined in section 2 of the Indian Forest Act, 1927 and Indian Forest (Amendment) Act, 2017 or in State/ or other forest Act that may be in force in the forest area under question.
- (ii) Development/ construction of facilities which are not of permanent nature, in forest areas for the purpose of ecotourism by Government authorities, as per the

provisions of the approved Working Plan, shall not be considered as non-forestry activity for the purpose of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

- (iii) Eco-tourism activities on the private forest land, ownership of which vest with the private entities, may be allowed subject to the provisions of the Management Plan or Working Plan or Management Scheme, approved by the competent authority prescribed for such private forest lands.
- (iv) ‘Government record’ means record held by Revenue Department or Forest Department of the State Government or Union territory Administration or any authority, local body, community or council recognised by the State Government or Union territory Administration;
- (v) Working permission means permission granted to linear projects before ‘Final’ approval to mobilize the resources to commence the preliminary project work other than black topping, concretization, laying of railway tracks, charging of transmission lines, or any work of permanent nature which entails completion of the project.
- (vi) Any direction, passed by the any court of law, in respect of forest lands falling under the purview of exemptions considered under the Adhiniyam including revenue forest lands put to non-forestry use on or before 12.12.1996, shall be saved and it will be binding on the user agency to obtain prior approval of the Central Government under the Adhiniyam till such a time, the final decision in such matters is passed by the court of law.
- (vii) **De-reservation orders made before 25.10.1980:** The cases in which specific order for de-reservation or diversion of forest lands for any project has been issued by the State Government prior to 25.10.1980, need not be referred to the Central Government. However, in the cases where only administrative approval for the project was issued without specific order of the competent authority regarding de-reservation and/or diversion of forest lands, prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 would be necessary.
- (viii) No work/activity can be taken up in the forest land before issue of order for its diversion for the non-forest purpose unless and to the extent permitted in the Van (Sanrakshan Evam Samvardhan) Rules, 2023 or guidelines issued there under.
- (ix) Any diversion of forest land for non-forest purpose is only a “right to use” granted to the User Agency without any change in ownership and legal status of the forest land. As such, the diverted forest land cannot be mortgaged or reassigned or subleased by the User Agency.
- (x) The Regional Offices and MoEF&CC shall raise all their observations or queries, after preliminary examination of the proposal, in one go and no new or fresh queries will be raised subsequently unless indispensable. The subsequent EDS only be raised in case the incomplete or deficit information or documents are received from the State and Union territory Administration and/or if any new information about the proposal has been brought to the knowledge of the Regional Office.

- (xi) The State Government/UT Administration will not impose any additional condition after in-principle approval has been accorded. However, in exceptional situations, giving due justifications, additional condition may be imposed.

### 1.3 Excerpts from the important Supreme Court orders along with their operational parts:

- (i) **Supreme Court order dated 7.05.1985 : State Of Bihar vs Banshi Ram Modi & Ors in the Hon'ble Supreme Court of India:** We are, therefore, of the view that while before granting permission to start mining operations on a virgin area section 2 of the Act has to be complied with it is not necessary to seek the prior approval of the Central Government for purposes of carrying out mining operations in a forest area which is broken up or cleared before the commencement of the Act".
- (ii) **Supreme Court order dated 11.12.1986: Ambica Quarry Works & Anr vs State Of Gujarat & Ors:** *The primary purpose of the Act which must sub-serve the interpretation in order to implement the Act is to prevent further deforestation. The Central Government has not granted approval. If the State Government is of the opinion that it is not a case where the State Government should seek approval of the Central Government, the State Government cannot apparently seek such approval in a matter in respect of, in our opinion, which it has come to the conclusion that no renewal should be granted. In that view of the matter and the scheme of the Act, in our opinion, the respondents were fight and the appellants were wrong. All interpretations must sub-serve and help implementation of the intention of the Act. This interpretation, in our opinion, will sub-serve the predominant purpose of the Act. In that view of the matter, we are unable to sustain the submissions urged in support of these appeals. The appeals therefore fail and are accordingly dismissed. In view of the facts and circumstances of these appeals, however, we direct the parties to pay and bear their own costs.*
- (iii) **Supreme Court order dated 14.02.2000:** National Parks and Wildlife sanctuaries are to be managed according to approved Management Plan. The Supreme Court has passed an order on 14.02.2000 *restraining removal of dead, diseased, dying or wind-fallen trees, driftwood, and grasses etc. from any National Park or Game Sanctuary.* "
- (iv) **Supreme Court order dated 13.11.2000 : I.A. No. 2 in Writ Petition(C) No. 337 of 1995 in the matter Centre for Environment, Law WWF Vs Union of India and Ors:** Hon'ble Supreme Court directed that *'Pending further orders, no dereservation in forests/sanctuaries/national parks shall be effected'*.
- (v) **Supreme Court order dated 4.08.2006 : Writ Petition(C) No. 202 of 1995 in the matter T.N. Godavarman Thirumulpad Vs. Union of India and Ors. in the Hon'ble Supreme Court of India** The Supreme Court drew procedure for grant of clearances under the Van (Sanrakshan Evam Samvardhan) Adhiniyam and the issuance of TWPs in relation to renewal of mining leases. *The user agency shall submit, in the first instance, to the State Government, proposals seeking renewal of the mining lease under the F.C. Act not less than two years prior to the expiry of the mining lease, except the leases which are due to expire*

before August, 2008, provided applications are made on or before 31st October, 2006.

- (vi) **Supreme Court order dated 4.12.2006: Writ Petition No.460/2004 Goa Foundation V/S Union of India in the Hon'ble Supreme Court of India:** *The Ministry is directed to give a final opportunity to all States/Union Territories to respond to its letter dated 27th May, 2005. The State of Goa also is permitted to give appropriate proposal in addition to what is said to have already been sent to the Central Government. The communication sent to the States/Union Territories shall make it clear that if the proposals are not sent even now within a period of four weeks of receipt of the communication from the Ministry, this Court may have to consider passing orders for implementation of the decision that was taken on 21st January, 2002, namely, notification of the areas within 10 km. of the boundaries of the sanctuaries and national parks as eco-sensitive areas with a view to conserve the forest, wildlife and environment, and having regard to the precautionary principles. If the States/Union Territories now fail to respond, they would do so at their own risk and peril. The MoEF would also refer to the Standing Committee of the National Board for Wildlife, under Sections 5 (b) and 5 (c) (ii) of the Wild Life (Protection) Act, the cases where environment clearance has already been granted where activities are within 10 km zone.*
- (vii) **Supreme Court order dated 6.07.2011: IA Nos.1868, 2091, 2225-2227, 2380, 2568 and 2937 in WRIT PETITION (C) No. 202 of 1995 - Lafarge Umiam matter in Writ Petition(C) No. 202 of 1995 in the matter T.N. Godavarman Thirumulpad Vs. Union of India and Ors. and Lafarge Umiam Mining Ltd Vs Union of India:** Hon'ble Supreme Court inter-alia passed the guidelines so that fait accompli situations do not reoccur. The important of them are as under:
- (a) *Greater Role of National Forest Policy, 1988 : Time has come for this Court to declare and we hereby declare that the National Forrest Policy, 1988 which lays down far-reaching principles must necessarily govern grant of permission under Section 2 of the Forest (Conservation) Act, 1980 as the same provides the road map to ecological protection and improvement under the Environment (Protection) Act, 1986. The principles/guidelines mentioned in the National Forest Policy, 1988 should be read as part of the provisions of the Environment (Protection) Act, 1986 read together with the Forest (Conservation) Act, 1980.*
  - (b) *GIS based Decision Support System, tentatively containing inter-alia the district-wise details of the location and boundary of (i) the each plot of land that may be defined as forest for the purpose of the Forest (Conservation) Act, 1980; (ii) the core, buffer and eco-sensitive zone of the protected areas constituted as per the provisions of the Wildlife (Protection) Act, 1972; (iii) the important migratory corridors for wildlife; and (iv) the forest land diverted for non-forest purpose in the past in the district. The Survey of India topo-sheets in digital format, the forest cover maps prepared by the Forest Survey of India in preparation of the successive State of Forest Reports and the conditions stipulated in the approvals accorded under the Forest (Conservation) Act for each case of diversion of forest land in the district*

*will also be part of the proposed decision support database.*

- (c) *To ensure public accountability, all minutes of proceedings before the Forest Advisory Committee in respect of the Forest (Conservation) Act 1980 should be regularly uploaded on the Ministry's website even before the final approval/decision of the Minister, EF&CC is obtained.*
- (d) *The MoEF will prepare a comprehensive policy for inspection, verification and monitoring and the overall procedure relating to the grant of forest clearance and identification of forests in consultation with the States*
- (ix) **Supreme Court order dated 5.10.2015 : Writ Petition(C) No. 202 of 1995 in the matter T.N. Godavarman Thirumulpad Vs. Union of India and Ors:** *Various applications have been filed by different applicants to exempt them from payment of Net Present Value ('NPV'). Now all those applications will be transferred to MoEFCC by the Registry within 45 days' time from today. The MoEFCC will consider those applications in accordance with law as expeditiously as possible. If, for any reason, any person is aggrieved by the said decision, he shall be free to file an appropriate application/ petition before the National Green Tribunal 'NGT') within 60 days' time from the date of the order passed by the MoEFCC. Liberty is reserved to NGT to condone the delay, if any, in approaching it within the time granted by us if a satisfactory explanation is offered by the applicant/petitioner. With the aforesaid observations and directions, we dispose of the Interlocutory Applications/matters specified in Annexure-III to the note supplied by Shri Harish Salve, learned amicus curiae.*
- (x) **Supreme Court order dated 3.02.2017 : Writ Petition(C) NO. 202 of 1995 in the matter T.N. Godavarman Thirumulpad Vs. Union of India and Ors :** *There is no objection to the recommendations/observations of the CEC. We accept the report of the CEC and clarify and direct that the mining leases having forest area may be renewed only after obtaining prior approval under the Forest (Conservation) Act, 1980 and Rule 24A of the Mineral Concession Rules, 1960 is subject to the compliance of the provisions of the Forest (Conservation) Act, 1980. Needless to say and we direct that this will be applicable to private forests as well.*
- (xi) **Supreme Court order dated 28.01.2019 : IA No. 3924 in Writ Petition (Civil) No. 202 of 1995 :** *MoEF&CC has been authorized to change the the legal status of forest land proposed for rehabilitation of the people from the Protected Areas.*
- (xii) **Supreme Court order dated 21.07.2022 : Civil Appeal No. 10294 of 2013 in the matter Narinder Singh and ors. Vs Divesh Bhutani and Anrs.-** *The lands covered by the special orders issued under Section 4 of PLPA have all the trappings of forest lands within the meaning of Section 2 of the 1980 Forest Act and, therefore, the State Government or competent authority cannot permit its use for non-forest activities without the prior approval of the Central Government with effect from 25<sup>th</sup> October 1980. We may add here that even during the subsistence of the special orders under Section 4 of PLPA, with the approval of the Central Government, the State or a competent*

*authority can grant permission for non if such non-forest use is permitted in-forest use in accordance with Section 2 of the 1980 Forest Act, and to that extent, the restrictions imposed by the special orders under Section 4 of PLPA will not apply in view of the language used in the opening part of Section 2 of the 1980 Forest Act. We also clarify that only because there is a notification issued under Section 3 of PLPA, the land which is ipso facto subject matter of such notification, will not become a forest land within the meaning of the 1980 Forest Act.*

*If a land is shown as a forest in Government records, it will be governed by Section 2. A Government record is a record maintained by its various departments. A Government record is always made after following a certain process. Only the entries made after following due process can be a part of any Government record. Government records will include land or revenue records, being statutory documents. For the same reason, it will also include the record of the forest department. After all, the forest department is the custodian of forests. It is this department of the State which is under an obligation to protect the forests for upholding the constitutional mandate. Further, it is this department which identifies the forest lands and maintains a record. Therefore, the record maintained by the Forest Department of forest lands after duly identifying the forest lands will necessarily be a Government record.*

#### 1.4 Procedure for submission of proposals:

- (i) Applications for diversion of forest land, irrespective of its ownership, for any non-forest purpose, de-reservation, assignment of forest land and approval of Working Plan, shall be submitted online on PARIVESH portal in the prescribed Forms (**Annexure-II**) as per the procedures and requirements prescribed under the Van (Sanrakshan Evam Samvardhan) Rules, 2023, as amended from time to time. Depending upon the nature of the proposal, the following Forms have been prescribed for seeking prior approval of the Central Government under the Act:

S. No.	Name of the Form	Purpose
1.	Form A	Applications involving diversion of fresh forest land
2.	Form B	Application involving renewal of approval granted in the past
3.	Form C	Application involving use of forest land for survey, prospecting, etc.
4.	Form D	Application involving assignment of forest land on lease
5.	Form E	Application involving re-diversion or change in the land use
6.	Form F	Application involving transfer of approval granted under the Act or change in the name of the user.
7.	Form G	Application seeking approval of the Working Plan
8.	Form H	Application involving amendment of the conditions of approval granted in the past

- (ii) Proposals will be submitted and processed through PARIVESH portal only. No physical copy of proposal shall be insisted by any authority in the State or in the Central Government. Only exceptional cases, related to defence, public interest or emergent nature, may be allowed by the Central Government to be submitted offline
- (iii) Rectifications of the entries made in the online proposals which are beyond the domain of user agency and processing authorities in the State/UT and Regional Offices may be allowed by the Central Government through NIC with the approval of Inspector General of Forests on case to case basis.
- (iv) In view the dynamic changes in the various guidelines based on policy decision of the Central Government or direction of Courts/Tribunals, the Central Government may modify the online modules for submission, processing and approval of the proposals to align the online modules with the provisions of guidelines and policy decisions.
- (v) The user agency shall submit an undertaking along with the proposal submitted online to abide by all the provisions of the Adhiniyam, Rules and guidelines issued thereunder by the Central Government from time to time, applicable to their project.
- (vi) Species-wise and diameter class-wise abstract of trees to be felled should be furnished in the prescribed form. Total enumeration is necessary only up to 10 hectares. For larger areas, species-wise and diameter class-wise abstract of trees may be computed either from the working plans or by standard sampling methods.
- (vii) Proposal seeking prior approval of the Central Government under the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 should invariably be accompanied with cost benefit analysis in accordance with the provisions of guidelines enclosed at **Annexure-I**.
- (viii) Inclusion of activities in Annual Plan Operation (APO) of CAMPA of those proposals where 'final approval' has not been accorded under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 shall not be considered. The State Governments/Union Territory Administrations shall ensure that after obtaining 'in-principle' approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, efforts should be made to ensure compliance of 'in-principle' approval and to obtain 'Final' approval as soon as possible to avoid *fait accompli* situation and also to ensure timely implementation of provisions of APOs containing the mitigating measures in lieu of non-forestry use of forest land allowed by the Central Government.
- (ix) Completeness of the proposal, submitted by the State Government and Union territory Administration, shall be assessed, as per the checklist annexed at **Annexure-V** before its submission to the Regional Empowered Committee and Advisory Committee.

### 1.5 Payment of compensatory levies:

- (i) As per the provisions of the clause (iii) of sub-section (3) of Section 4 of the Compensatory Afforestation Fund Act 2016, the monies realized from the User Agency in compliance of conditions stipulated in the approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are to be deposited into the State/UT specific CAMPA accounts maintained in the Union Bank of India, New Delhi and managed by the National Authority (CAMPA). The State Government/UT Administration shall also ensure adherence to aforementioned provisions and that complete amount of compensatory levies, estimated for implementation of Wildlife Management Plan, Catchment Area Treatment Plan, or any other Plan, shall be deposited into the CAMPA account, managed by the National Authority;
- (ii) Monies, if any, realized pursuant to recommendation made by the Standing Committee of the NBWL for diversion of forest land for non-forest purposes, located in the Protected Areas including the ESZ and tiger/elephant corridors, shall be deposited into the State/UT specific CAMPA accounts maintained in the Union Bank of India, New Delhi and managed by the National Authority (CAMPA)

**1.6 Monitoring of compliance of conditions:** The Regional Office of the MoEF&CC and the State /UT Government being the custodian of the forests in their respective State/UT, shall monitor compliance of conditions stipulated in the ‘in-principle’ approval, at least once in a year and monitoring report should be uploaded in the online portal.

**1.7 Temporary use of forest land:** (a) Temporary activity in any forest area which does not involve part of any Protected Area, breaking up or clearing of forest area or any portion thereof, assigning by way of lease or otherwise to a firm, person or organisation and does not create any right over such forest land of such person, firm or organisation, will not require prior approval of Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. The State Government/Union territory Administration may authorize officer not below the rank of Divisional Forest Officer (DFO) having jurisdiction over the forest land proposed to be utilized temporarily, to accord permission for such temporary activities. While taking such decisions, it shall be ensured that such use of forest land is unavoidable, for public purposes and of emergent nature. Such temporary use of forest land may be allowed for a period not exceeding two weeks in a single approval and altogether such temporary working permission granted in a year for the said forest land should not exceed 60 days. Before allowing temporary use of such land, however, such authority shall ensure that there is no alternate non-forest land available for the proposed temporary use.

(b) Proposals conceived in forest with the intention to avert imminent disaster and to mitigate or deal with the natural disaster as per the recommendation made by the District Disaster Management Authority (DDMA) should be examined and recommended by concerned the DCF (as a member of the authority) for limited period of time, till threat of the disaster vanishes. Such proposals should be formulated with minimum damage to trees and involvement of barest minimum forest area. Proposals conceived due to permanent change in the forest land use due to a natural disaster, should be submitted for ex-post

facto approval by the DCF concerned within a period of 30 days from the date of such decision made by the DDMA.

**1.8** In case the user agency approached any legal fora against any condition(s) of approval for redressal, the approval shall stand revoked/be kept in abeyance unless the court cases are withdrawn with compliance of conditions or till the cases are decided by the Courts.

**1.9 Projects involving both forest and non-forest lands:** Some projects involve use of forest land as well as non-forest land. State Governments/project authorities sometimes start work on non-forest lands in anticipation of the approval of the Central Government for release of the forest lands required for the project. Though the provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam may not have technically been violated by starting of work on non-forest lands, expenditure incurred on works on non-forest lands may prove to be infructuous if diversion of forest lands involved is not approved. Therefore, if a project involves forest as well as non-forest land, work should not be started on non-forest land till approval of the Central Government for diversion of forest land under the Act has been obtained unless and to the extent permitted by the Van (Sanrakshan Evam Samvardhan) Rules, 2023 or guidelines issued thereunder. However, in exceptional circumstances, after obtaining 'In-Principle' approval and environment clearance and deposition of applicable compensatory levies into the account of CAMPA, mining operations in non-forest land of mining leases involving forest as well as non-forest land can be commenced by the User agency subject to following conditions:

- (i) The mining plan for working in the non-forest area within a coal block/lease (which also has forest area within it), shall not involve any forest area in the coal block/lease concerned i.e. authorities concerned should ensure preparation of a separate Mining Plan or execution of a separate mining lease for full or part of non-forest land thereof before allowing mining operations in the non-forest land of such mining leases.
- (ii) No component/activity of the mining in the non-forest forest of such block/lease shall have any dependency in the forest area of the same block/lease.
- (iii) Such permission in the non-forest area shall not create any obligation or *fait accompli* with regard to approval (in-principle or final) under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 by the Central Government.
- (iv) In case of any violation over forest area is reported, matter shall be dealt as per the provisions in the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and Rules made thereunder.
- (v) Provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s), pertaining to mining, for the time being in force, as applicable shall be complied with.

**1.10 Diversion of forest land for non-site-specific projects:**

- (i) Utilization of forest area for establishing industries, construction of residential colonies, institutes, rehabilitation of displaced persons, etc. are non-site-specific activities and cannot be considered on forest land as a rule. For that matter, no non-site specific proposal can be entertained for considering approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. In exceptional

circumstances, residential projects up to one ha, can be considered for approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 by the MoEF&CC, subject to appropriate justification and recommendation by the concerned State Government and the Regional Office of the MoEF&CC.

- (ii) In case of any ambiguity regarding non-specificity of a particular project, the same shall be referred to the Ministry for decision. Further, the Regional Offices/Sub-Offices shall ensure that non-site specific proposals, which have been recommended by the Regional Empowered Committee (REC) or Regional Office, need to be submitted to the MoEF&CC, New Delhi for decision on case to case basis. Proposals which have been rejected by the REC or Regional Office/Sub-Office should not be submitted to the MoEF&CC, New Delhi.

**1.11 Diversion of forest land for rehabilitation:** Diversion of forest land for rehabilitation of people is not allowed except for diversion for the rehabilitation of persons belonging to Scheduled Tribes, Scheduled Castes and other people who may have to be shifted from the core zone of a national park, sanctuary or tiger reserve. All such cases of relocation/rehabilitation of the villages from the core/critical Tiger reserves and core of the Protected Areas (National Park and WL Sanctuaries) to the periphery of Reserved forests/Sanctuaries/National Parks shall subject to conditions as given under para 12.8 and 12.9 of Chapter – 12 of the Handbook.

**1.12 Nistar and other rights of local people:** The provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, do not interfere in any manner or restrict the Nistar, recorded rights, concessions and privileges of the local people for bonafide domestic use as granted by the State Government under Indian Forest Act, 1927 or State Forest Acts/Regulations. However, it has to be ensured that while allowing such rights, concessions and privileges to be exercised, the right holders do not resort to felling of trees or break up the forest floor so as to procure stones, minerals, or take up constructions, etc.

Right holders are permitted to collect stones/slates/boulders for bonafide domestic use from the forest area within the Gram Panchayats of right holders and to the extent such right are permitted under the IFA 1927 or the State Forest Act.

The forest produce so obtained shall not be utilised for any commercial purposes.

The collection of such forest produce should be manual and should be transported through local modes or transport like bullock carts, camel carts, etc. and no mechanized vehicles shall be allowed to be used in transporting such forest produce and only in exceptional cases with the approval of concerned Divisional Forest Officer, tractors mounted with trolley may be used.

The Supreme Court has passed an order on 14.02.2000 restraining removal of dead, diseased, dying or wind-fallen trees, driftwood, and grasses etc. from any National Park or Game Sanctuary....." *In view of this, rights and concessions cannot be enjoyed in the Protected Areas (PAs).*

**1.13 Reopening/reconsideration of proposals:** Proposals, where essential detail/information sought by the processing authorities in the State as well as in the Central Government, is delayed by the user agency for a period of more than 90 days, shall be de-listed automatically from the PARIVESH portal. The user agency, after

having addressed the concerns of the processing authorities, may submit an online request for re-listing of the proposal. The Nodal Officer in the State or the Inspector General of Forest (Forest Conservation) in the Central Government, DDG (Central) in the Regional Office, as the case may be, after examining completeness of the information furnished by the user agency, will consider re-listing of the proposal for consideration of approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

- 1.14** In case the Advisory Committee or the Regional offices of this Ministry are of the view that State Government or Union territory Administrations needs to formulate a policy or change in an existing policy, in the interest of conservation and development of flora and fauna, they may advise the MoEF&CC to issue appropriate advisory to the concerned State Government or Union territory Administration. Issue and compliance to such advisory, however, may not be linked to grant of approval under the Act for diversion of forest land for a specific project.
- 1.15 Approval after ensuring compliance of provisions stipulated in the rules and guidelines:** Some proposals are recommended for grant of 'In-Principle' approval by the REC and Regional Offices subject to conditions like change in the CA sites, change in the area in online proposal, change in the area of CA site, etc. Such conditional approval are not in consonance with the online process envisaged in the PARIVESH portal as after grant of 'In-principle approval all relevant fields of the application become frozen/locked and the user agency or the processing authority cannot change the values of these fields including updating the fields related to CA land. This situation often delays the grant of 'Final' approval as the processing authorities cannot submit the compliance of 'In-principle' on PARIVESH. Such situations often call for intervention of NIC which is not desirable in any case. Therefore, Regional Offices and RECs of the Ministry shall restrain themselves from granting such conditional approval to avoid delays in the approval process.
- 1.16 Ex-post Facto approval and Penal Provisions:** Proposals seeking ex-post-facto approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are normally not to be entertained. The Central Government will not accord approval under the Act unless under exceptional circumstances that may justify the case. In such cases Central Government shall ensure penalty from user agencies/State as follows:
- (i) **In cases where the proposal under Van (Sanrakshan Evam Samvardhan) Adhiniyam has not been submitted and forest land is diverted without FC**
- (a) The diversion of forest land for non-forestry purposes without the prior approval of the competent authority in the State will be dealt under the provisions of Indian Forest Act 1927 and other State Acts dealing with the conservation of Forests by the State Government concerned. The land in question will not be considered as diverted under Van (Sanrakshan Evam Samvardhan) Adhiniyam,1980 and the status of the land shall continue to be forest.
- (b) If the permission for use of forest land for non-forestry purposes have been granted by the State authority without the prior approval of the central government under section 2 of the Van (Sanrakshan Evam Samvardhan)

Adhinyam then action under section 3A and /or 3B of Van (Sanrakshan Evam Samvardhan) Adhinyam, as may be applicable, shall be taken against the authority causing such diversion. A report with full details of violation shall be submitted by the State Government on the recommendation of the Forest Department of the State to the Ministry of Environment, Forests & Climate Change Government of India, New Delhi and formal enquiry shall be conducted by the Regional Office of the MoEF&CC.

**(ii) In cases where the proposal under Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980 is under consideration and forest land is diverted before grant of FC**

- (a) The penalty for violation shall be equal to NPV of forest land per hectare for each year of violation from the date of actual diversion as reported by the inspecting officer with maximum up to five (5) times the NPV plus 12 percent simple interest from the date of raising of such demand till the deposit is made.
- (b) State Government will initiate disciplinary action against the official concerned for not being able to prevent use of forest land for non-forestry purpose without prior approval of Government of India.
- (c) Central Government will initiate suitable action against the concerned offender.
- (d) User Agency responsible for violation shall be prosecuted under relevant local Act of the State and/or Central Act for unauthorized use of forest land without the permission of State authority.

**(iii) Violation /non-compliance of any conditions imposed while granting approval under The Van (Sanrakshan Evam Samvardhan) Adhinyam:**

- (a) In such cases the penalty will be imposed on the recommendation of the Dy. Director General of Forests (Central), Regional Office in whose jurisdiction the alleged violation has occurred. The violation will be reported to REC/AC and the committee will give time to comply the conditions within stipulated time.
- (b) In case the offence is proved then the penalty shall be imposed for violation committed over forest area without approval equal to twice the normal NPV.
- (iv) **Violation on account of change of land use :** Any violation of change in land use, other than mining operations, penalty of two times the NPV plus simple interest 12 per cent from the date of actual violation committed will be imposed.
- (v) If the violation is not attributable to the user agency, no penalty shall be imposed on user agency.

**1.17 Zoo, Rescue, Rehabilitation Centre and captive breeding facility.**

Establishment of Zoo over forest area, other than Protected Areas, by the Forest Department/State Zoo Authority/Society formed by the State Forest Department and its management by the Forest Department/ State Zoo Authority/ Society formed by the State Forest Department/any agency authorized by the State Forest Department under PPP mode or otherwise, after it is duly approved by CZA, a central regulatory authority under the Ministry, shall be considered as a forestry activity for the purpose of implementation of provisions of Van (Sanrakshan Evam Samvardhan) Adhinyam,

1980. CZA shall ensure that following guidelines (Do's and Don't) are adhered to while according approval for such zoos over forest land and during the operations phase of such zoos:

**Desirables (Do's)**

- (i) Only degraded forest land, i.e. with a crown density below 40 percent, may be used for the establishment of Zoo.
- (ii) Only zoos operated by State Forest Departments or State Zoo Authorities or a society formed by the State Forest Department or by any agency authorized by the State Forest Department under PPP mode or otherwise should be allowed to be established on forest lands under these guidelines.
- (iii) Zoos that intend to support in-situ conservation by the means of conservation outreach, conservation breeding of endangered species and providing rescue and veterinary health facilities to wild animals in accordance with the objectives of sub-section 4 of section 38H of the Wild Life (Protection) Act, 1972 shall be encouraged.
- (iv) An application for obtaining prior approval of the Central Zoo Authority under sub-section (1A) of Section 38H of the Wild Life (Protection) Act, 1972 for the establishment of a new zoo over forest land should be made to the Central Zoo Authority in Form-I of the Recognition of Zoo Rules, 2009 along with a Detailed Project Report in terms of Rule 3(2) of the Recognition of Zoo Rules, 2009 and fee as applicable.
- (v) Guidelines for Establishment and Scientific Management of Zoos in India (2008) and Recognition of Zoo Rules, 2009 and the various Guidelines/Advisories issued by the Central Zoo Authority from time to time shall be followed in its letter and spirit.
- (vi) A minimum of 70% of the total area of a zoo established on forest land shall be maintained as/ natural forest/green cover. Enumeration of trees and vegetation mapping done by the concerned Divisional Forest Officer/Authority may be included in the Detailed Project Report for the establishment of zoo on forest land.
- (vii) Zoo operating on forest land shall carry out its operation in a manner that causes minimum stress on natural resources by exploring eco-friendly construction methods.
- (viii) Zoo established over forest land shall endeavour to achieve carbon neutrality by reducing energy consumption and emissions-producing activities and also exploring renewable/alternate/green sources of energy.
- (ix) Landscaping and aesthetical expansion etc. of a Zoo established over forest land should be done with an emerging concept keeping an eco-sensitive approach.
- (x) Forest fire disaster prevention and control measures, as applicable, may be strictly followed. Efforts for disaster preparedness/Forestalling may be taken to avert forest fire and disaster.
- (xi) Only rescue centres, conservation breeding centres and zoos with established

links to an in-situ Government conservation program should be considered as forestry activities for the purpose of exemption under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

- (xii) The site selected for the zoos in the forest should not hinder the movements of mega faunal species, particularly elephants. Such zoos must cater to the need of housing rescued animals of the area.
- (xiii) The concept of carrying capacity of the visitors should also be taken care of to keep the zoo free from excessive human foot fall. Further, there should not be any deviation of master plan and master layout plan unless the same is duly approved from CZA.
- (xiv) Not more than 5% of the forest land shall be used for construction of office, parking, and other amenities under any circumstances.
- (xv) Existing zoos that are operating on forest land may also comply with these Guidelines in a reasonable time.

#### **Non-Desirable (Don'ts)**

- (i) There shall be no deviation from the Recognition of Zoo Rules, 2009 and Guidelines/Advisories issued by the Central Zoo Authority from time to time.
- (ii) Forest areas that are identified as wildlife corridors shall be avoided for establishment of zoos.
- (iii) As far as possible, trees already existing in the forest land over which a zoo is sought to be established may not be felled and exotic or non-native flora species should not be planted.
- (iv) Natural drainage patterns and existing water harvesting structures shall not be disturbed in the establishment/operation of a zoo on forest land.
- (v) Given that a zoo on forest land is already in a naturalistic environment as is the general requirement under the Schedule of the Recognition of Zoo Rules, 2009, artificial naturalization may be avoided.
- (vi) There is an only risk for making zoos in the forest land is of spread of zoonotic diseases, for which all possible mitigation measures must be taken and guidelines be strictly adhered to.
- (vii) Exotic species of wild animals should be allowed to be kept in a zoo established in a forest area as per the relevant guidelines of the Central Zoo Authority.
- (viii) Area requirement for various component of zoos such as parking, recreation, water bodies, roads, rest rooms, boating, restaurants, power supply, research center, staff rooms, etc. should not be exaggerated and authority concerned may ensure legitimate forest area requirement for such components.
- (ix) No authority, other than Forest Department/ State Zoo Authorities/Society formed by the State Forest Department, should be permitted to use forest land for establishing zoos in forest area.

**1.18 Strengthening of Integrated Concurrent Monitoring and Evaluation System (i-CCMES) or e-Green Watch:** States/UTs are requested to take the following steps in a concerted manner:

- (i) Strengthen the unit in the State Forest Department that is responsible for uploading data on e-Green Watch portal. An e-Green Watch Cell may be created for collection, digitization and dissemination/hosting of information in an effective manner;
- (ii) Establish a system for robust scrutiny of polygons before these are uploaded on the e-Green Watch portal. This could be done by the GIS Cell at the headquarter or by the cells established in each Forest Working Plan division;
- (iii) Organise training to the field functionaries of the State Forest Department for building their capabilities to generate and analyse the information yielding credible output in public domain; and
- (iv) Review by CEO, State CAMPA of the working of e-Green Watch Cell on a weekly basis, and by the Executive Committee of the State Authority of CAMPA in its each meeting.

**1.19 Fortnightly Regional Coordination Meeting (FRCM) on Linear Project.**

The Heads of Regional Offices of the Ministry of Environment, Forest and Climate Change will hold a Fortnightly Regional Coordination Meeting with the user agencies, officer of the local Forest Department to resolve the issues pertaining to the forest and wildlife clearances in respect of linear projects on 2<sup>nd</sup> and 16<sup>th</sup> dated of each month at 11.00 AM in their respective Regional Office. In case the 2<sup>nd</sup> /16<sup>th</sup> date of a month is a holiday the meeting shall be held on the next working day. In the absence of the Head of RO, the Senior most officer of the same RO of MoEF&CC shall hold the meeting.

All the States and Regional Heads of respective organisation dealing with proposed linear infrastructure under consideration of Regional Office or State Government will attend the FRCM to resolve issues relating to the Van (Sanrakshan Evam Samvardhan) Adhiniyam 1980.

**1.20 Diversion of forest land for non-forest purposes under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 - Revised guidelines for Tusser Cultivation (Vanya Silk Cultivation).**

National Forest Policy, 1988 recognizes that the holders of the customary rights and concessions in forest areas should be motivated to identify themselves with the protection and development of forests from which they derive their livelihood. The rights and concessions from forests should primarily be for the bonafide use of the communities living in and around forest areas, especially tribals.

The Policy also recognizes that the symbiotic relationship between tribal people and forests is essential for sustainable forest management. It emphasizes that the primary task of all agencies responsible for forest management, including the forest development corporations should associate the tribal people closely in the protection, regeneration and development of forests as well as provide gainful employment to them.

Tusser culture is a way of life for many tribal families and forest dwellers particularly in Central and Eastern India. Therefore, silk cultivation in forest areas which can be termed

as “Vanya Silk Cultivation”, with active participation of local communities could be one such area which can benefit for them and help conservation and protection of forests by reducing their dependency on forests.

The issue of cultivation of silk worm in forest areas was examined in detail in the Ministry in consultation with Central Silk Board and Ministry of Textiles, Government of India. After careful consideration, following guidelines for Vanya Silk Cultivation under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are issued:

- (i) The State/UT Forest Departments shall encourage silk cultivation in forest areas by tribals and non-tribals who live in and around the forests and are dependent on such forests for their livelihood. Priority shall be given to the tribals and to those who enjoy traditional rights on such forests.
- (ii) The State/UT Forest Departments shall permit such activities in already identified naturally grown forest areas for silk cultivation and the plantations raised for the purpose thereof in coordination with the State/UT Sericulture Department and Central Silk Board.
- (iii) Central Silk Board and the State/UT Sericulture Departments shall ensure training of the growers involved in silk cultivation prior to taking up such activities in forest areas.
- (iv) Cultivation of trees on which Vanya Silks or Silk Worms of Tusser, Oak Tusser, Eri, Muga and Frithi could be reared by tribals and non-tribal living in and around the forest for their livelihood without undertaking monoculture plantations are considered as forestry activity. Hence, no prior permission of the Central Government under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 is required. The concerned Divisional Forest Officer/Deputy Conservator of Forests shall however, maintain the record of such activities and people involved in it.
- (v) The State/UT Sericulture Department or Central Silk Board shall issue the pass books to each silk worm grower.
- (vi) Vanya silk cultivation in forest areas for which specific plantation of food trees are undertaken for providing host trees to the silk cocoons shall be treated as forestry activity provided such plantation activities do not involve any felling of trees. While undertaking such plantations, at least three species are planted, of which no single species shall cover more than 50% of the planted area. Wherever possible the species like *Morus alba* and *Morus multicaulis* (Mulberry) may be part of mixed forestry crop in such plantations.
- (vii) Vanya silk cultivation shall be allowed on following tree species as host trees:

Sl. No	Scientific Name	Local Name	Name/Common
	<b><i>For Tusser:</i></b>		
(i)	<i>Terminalia arjuna</i>	Arjun	
(ii)	<i>Terminalia tomentosa</i>	Asan	
(iii)	<i>Shorea robusta</i>	Sal	
(iv)	<i>Lagersiroemia indica</i>	Saoni	
(v)	<i>Lagerstroemia parviflora</i>	Sidha	

(vi)	<i>Syzygium cumini</i>	Jamun
(vii)	<i>Zizyphus mauritiana</i>	Ber
(viii)	<i>Lagerstroemia speciosa</i>	Jarul
(xi)	<b>For Oak Tusser (Temperate Tusser):</b>	Phanat
(xii)	<i>Quercus serrata</i>	Phanat
(xiii)	<i>Quercus seniserrata</i>	Uyung
(xiv)	<i>Quercus dealbata</i>	Phanat
(xv)	<i>Quercus semicarpifolia</i>	Phanat
(xvi)	<i>Quercus leucotricophora</i>	Phanat
(xvii)	<i>Quercus glauca</i> <i>Quercus himalayana</i>	Phanat
(xx)	<b>For Muga:</b> <i>Machilus bombycina</i> ( <i>Persea bombycina</i> ),	Som
(xxi)	<i>Litsea polyantha</i> ( <i>L.monoptela</i> ),	Soalu
(xxii)	<i>Litsea salicifolia</i> ,	Dighloti
(xxiii)	<i>Litsea cubeba</i>	Mejankari
(xxvi)	<b>For Eri:</b> <i>Heteropanax fragrans</i>	Kesseru
(xxvii)	<i>Evodia fraxinifolia</i>	Payam
(xxviii)	<i>Ailanthus excelsa</i>	Borkesseru
(xxix)	<i>Ailanthus grandis</i>	Borpat
(xxx)	Other <i>Ailanthus</i> species	Maharukh, bhotera

- (viii) This activity could also be introduced on degraded forest lands under Joint Forest Management, especially in tribal cooperative societies with proper investment from public or private sources for raising a mixture of indigenous species including tree species suitable for silk cultivation as given in list mentioned in para 7 above. For this purpose, a Micro-plan shall be prepared jointly by the State/UT Forest Department, village communities, State/UT Sericulture Department and Central Silk Board for rearing of silk worms.
- (ix) In order to ensure that the silk cultivation is within the carrying capacity of the forests, the concerned Divisional Forest Officer shall issue the permit based on the recommendations, which shall involve technical parameters evolved by the State/UT Sericulture Department and Central Silk Board for rearing of silk worms.
- (x) To preserve the ecology of a particular forest area, no exotic silk worm or any hybrid variety developed by using exotic genome, shall be introduced in forest areas.
- (xi) This activity shall not be permitted in Protected Areas and Tiger Reserves.
- (xii) Binnual monitoring of the forest areas under silk cultivation shall be done by a team comprising of the concerned Divisional Forest Officer, Director (Sericulture department) and the officials of Central Silk Board in order to ensure prevention of any epidemic in forest areas as well as proper handling of trees by growers. The monitoring report shall be submitted to the concerned Integrated Regional Office

of the Ministry of Environment, Forest and Climate Change.

**1.21 Matters related to grant of NOC to Tea Growers in Arunachal Pradesh:** Cultivation of tea on the lands not falling within the ambit of judgement of Hon'ble Supreme Court dated 12.12.1996, will not require NOC from the Ministry. However, prior approval of the Central Government will be required if such activity is proposed on the forest land as defined in the Hon'ble Supreme Court order dated 12.12.1996.

**1.22 Charging of a lump sum amount of the project cost where delay in preparation of the Wildlife Management Plan and Soil and Moisture Conservation Plan is beyond the control of user agency and State/UT**

The State Government should submit Wildlife Management Plan, along with detail cost of its implementation into the account of CAMPA along with the Stage-I compliance. However, in cases where it is not possible for the State to submit the compliance due to delay in preparation of such plan, a lump sum quantum of following amount may be realized from the User agency and submitted along with the Stage-I Compliance:

- (i) 2% of total project cost towards the cost of implementation of the Wildlife Management Plan and/or 0.5% of the project cost towards the cost of implementation of Soil and Moisture Conservation Plan, as the case may be, shall be charged from the user agency and deposited into the account of CAMPA and the same may be intimated to the MoEF&CC for the purpose of obtaining approval under the The Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980;
- (ii) In respect of linear projects, the stipulated norms of 2% and 0.5% towards the cost of Wildlife Management Plan and Soil and Moisture Conservation Plan, as provided in the Ministry's guidelines dated 8.06.2022, will be proportionate to the extent of forest land involved instead of total project cost or actual cost of implementation of such Plans, whichever is more, should be charged from the user agency;
- (iii) The provisions of Wildlife Management Plan or Soil Moisture Conservation Plan shall be approved by the competent authority in the State and accordingly, the deficit amount, if any, from the money already realized from the user agency to the tune of 2% and/or 0.5% of project cost proportionate to the extent of forest land involved, shall be paid by the user agency, and the same shall be deposited in to the CAMPA account.
- (iv) The State Government shall ensure that details of the finalized WLMP, SMC Plan and disposition of monies, payment of deficit amount, etc. shall be approved by the competent authority and concurred by the concerned IRO of the Ministry within a period of one year from the date of deposit of the said amount.
- (v) State Government shall ensure that under no circumstances, implementation of such mitigating measures envisaged in WLMP and SMC or other similar Plans/Schemes should be delayed beyond a period of 2 years from the date of issue of final approval under the Adhiniyam to ensure commencement of rejuvenation of ecosystem services lost from the forest area allowed for non-forestry use of forest land at the earliest possible time.

## CHAPTER 2

## COMPENSATORY AFFORESTATION

**2.1 Compensatory afforestation (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 the purpose of compensatory afforestation (CA) is to compensate the loss of 'land by land' and loss of 'trees by trees'. Any proposal submitted by the State/UT Government seeking prior approval of Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 shall have a comprehensive scheme for compensatory afforestation, duly approved by the competent authority of the concerned State/UT administration.

**2.2 Land for CA:**

- (i) Provisions given under sub-rule (1) rule 13 of the Van (Sanrakshan Evam Samvardhan) Rules, 2023, provides that primarily, the compensatory afforestation, in lieu of forest land proposed for diversion, has to be raised over equivalent non-forest land which is not under the management and administrative control of the Forest Department.
- (ii) The non-forest lands afforested as per the provisions Accredited Compensatory Afforestation scheme i.e. patch of non-forest land involving minimum area of 10 ha with 0.4 vegetation density and minimum five years old afforestation can be used as CA in lieu of diversion of forest land. In case of lands owned by the Government agencies, such lands containing ACA be notified without transferring and mutating their ownership. Revenue, if any, earned from such lands from various operations such as thinning, felling, and selling of carbon credits and other benefits will also accrue to the land owning agency. Existing plantation which meets the criteria of ACA can also be swapped for CA in lieu of diversion of forest land.
- (iii) The State Government/UT Administrations may create a Land Bank of non-forest lands with minimum size of 25 ha under the administrative control of the Department of Forest. In case, the Land Bank is in continuity of a land declared or notified forest land, Protected Area, Tiger Reserve or within a designated tiger corridor or a designated/ identified wildlife corridor, there shall be no restriction on size of the land. The lands covered under accredited compensatory afforestation may be included in the Land Bank.
- (iv) In exceptional circumstances, when the suitable non-forest land for raising compensatory afforestation is not available and a certificate to this effect is given by the State/UT Government, the compensatory afforestation may be considered on degraded forest land, which is twice in extent to the forest area proposed for diversion in favour of Central Public Sector Undertaking and for captive coal blocks of State Public Sector Undertaking on case to case basis. However, this relaxation will not be available in case the project of Central Government undertaking or State Government undertakings involves acquisition of non-forest land by the respective agencies.

- (v) No CA will be charged in respect of re-diversion of forest land within the RoW of roads which have already been diverted for non-forestry purposes and are located outside the Protected Areas. In case, the proposed area falls in the RoW of the road is passing through a Protected Area or Tiger Reserves, requisite permissions shall be obtained from the Standing Committee of the State Board for Wildlife.
- (vi) No CA will be charged in lieu of repair and maintenance or blacktopping of the forest roads constructed prior to 1980 which are located outside the Protected Areas.
- (vii) During the transfer of approval granted under the The Van (Sanrakshan Evam Samvardhan) Adhinyam from erstwhile agency to new lessee by the State/UT Governments, the provisions of CA, if not realized earlier, will be applicable in respect of broken up forest area before the commencement of Act, 1980 which are continued to be under the possession of the user agency, in case the CA has not been raised earlier.
- (viii) In respect of diversion of forest land for safety zone along around a mine, the provisions of the raising compensatory afforestation, as applicable in the entire forest area proposed for diversion, will be applicable in lieu of forest land located in the safety zone as well.
- (ix) Non-forest mined out lands which have been reclaimed technically and restored biologically shall be accepted for raising compensatory afforestation. Once accepted for CA, such lands need to be notified under the Indian Forest Act, 1927, essentially to bring them under the management and administrative control of State Forest Department. An undertaking to this effect shall be submitted by the respective user agency along with their respective diversion proposal, in lieu of which such restored lands will be used for raising CA.
- (x) Compensatory afforestation may be taken up on non-forest lands (NFL) which are under jurisdiction of DDA. Since such areas will support afforestation those need to be declared as protected forest (PF) under relevant provisions of Indian Forest Act, 1927 or state specific Act, if any. However, the ownership of these compensatory afforestation patches need not be transferred/mutated in the name of State Forest Department and ownership of DDA may be allowed.
- (xi) Isolated patches having area less than 5 ha are difficult to manage as forests. Hence, no non-forest land, having area less than 5 ha area shall be accepted for CA purpose. However, land parcels, if contiguous to RF/PF, can be accepted for CA irrespective of their sizes, subject to their suitability for CA. In case of forest area under diversion is less than 5 ha, efforts should be made to identify non-forest land contiguous to some RF/PF. User agency shall fence all such land parcels properly and mutate the same in the name of Forest Department before handing them over to the Forest Department. All such land parcels shall be compact (i.e., without any pockets of habitation or non-forest land) and free from any encumbrances. Land parcels, if contiguous to National Parks/Wildlife Sanctuaries, can be accepted for CA irrespective of their sizes and suitability for CA, subject to condition that the same shall be mutated in the name of Forest Department, notified as RF/PF and thereafter merged with concerned National

Park/Wildlife Sanctuary with suitable declaration, prior to stage-II approval by MoEF&CC.

- (xii) In cases, where land proposed to be utilized for CA is proposed to be acquired by the user agency himself through outright purchase from the individual owners, registered agreement to sell from each of the present owner of the land identified for CA stating their willingness to sell the land to the user agency for its transfer and mutation in favour of the State Forest Department for creation of CA will be submitted along with the proposal seeking prior approval of the Central Government under the Act. Similarly, in cases where non-forest land or the revenue forest land, proposed for CA, is to be provided by the State Government, a letter from the concerned competent authority in the State Government or Union territory Administration stating that land identified for CA will be transferred and mutated in favour of the State Forest Department for creation of CA immediately after receipt of 'in-principle approval shall be submitted along with the proposal.
- (xiii) The authorities in the State should ensure that land proposed for raising CA in lieu of proposed diversion of forestland is of good quality which is able to generate and compensate the Ecosystem Goods and Services (EG&S) lost from non-forestry use and, as far as permissible, such lands should be selected in close proximity of the area being diverted or the existing forest areas to ease their management by the Forest Department and ensure their protection from likely encroachment in future, as under:-
  - (a) Potential areas which can generate and compensate the EG&S foregone from the non-forestry use of forest land to the maximum extent possible should be identified and offered for raising CA.
  - (b) Concerned Regional Office of the Ministry shall certify the suitability of land offered for CA in lieu of forest land proposed for diversion in terms of its vicinity to the area being proposed for diversion and/or contiguity with the existing forest area and will ensure that manageability of such CA land has been taken care of for future.
- (xiv) Provisions for the requirement of land related to compensatory afforestation, as provided in the rule 13 and rule 14 and Schedule-II appended to the Van (Sanrakshan Evam Smvardhan) Rules, 2023 shall be complied with by the various users.

**2.3 Elements of Schemes for Compensatory Afforestation:** The scheme for CA, to be submitted/uploaded at the time of applying for diversion of forest land for non-forest purpose, should be site specific, and include the following details: -

- (i) Details of non-forest or degraded forest land, along with land kism (NF land) forest type, crown density, etc. (degraded forest) identified for raising CA.
- (ii) Geo-referenced (Polygon map with DGPS coordinates).
- (iii) KML file of CA site in polygon shape to be uploaded online.

- (iv) Detailed work schedule including year wise operations including saplings to be planted along with soil & moisture conservation, regeneration cleaning, silvicultural and other activities as prescribed in the working plan, species to be planted (heterogeneous in nature consisting of indigenous species), including maintenance for 10 years and annual total costs in conformity with cost norms of the State/UT and relevant guidelines, issued by the Central Government. In case the applicable land required for raising the compensatory afforestation is more than 10 ha, the NFL should be made available in a single consolidated patch or contiguous to the forest land. In such cases, patches of non-forest land of smaller area, not contiguous to forest land, shall also be accepted, however, for every patch of less than 5 ha, the maintenance of 20 years shall be charged from the user agency.
- (v) Agency responsible for afforestation.
- (vi) Details of proposed monitoring mechanism, including infrastructural facility, if any required by the State/UT Govt.
- (vii) Technical and administrative approvals from the competent authority.
- (viii) The cumulative achievement of the State/UT Governments in respect of compensatory afforestation.
- (ix) Undertaking by the UA to bear the cost of raising and maintenance of compensatory afforestation, Additional CA and/or penal compensatory afforestation as well as cost for protection and regeneration of Safety Zone, etc. as per the scheme (undertaking to be enclosed).
- (x) Updation of changed CA land, KML file, CA land polygon, toposheet, site suitability certificate and related documents which are to be uploaded on Parivesh portal after in-principle approval shall require approval of the Ministry.
- (xi) **Strengthening of Integrated Concurrent Monitoring and Evaluation System (i-CCMES) or e-Green Watch:-** All States and UTs shall ensure that all polygons pertaining to plantations are updated with correct and precise information with respect to their spatial attributes failing which no APOs/diversion proposals under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 will be entertained by the MoEF&CC.

**2.4 Accredited Compensatory Afforestation:** As per the provisions of sub rule (5) of rule 14 of the Van (Sanrakshan Evam Samvardhan) Rules, 2023 a proactive mechanism for ACA shall be established by the Central Government as per guidelines given below:

**(1) Background**

- (i) Compensatory afforestation (CA) is one of the crucial components facilitating the process of decision making under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. It is mandatory that all proposals requiring prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam,

for non- forestry use of forestland be accompanied with a comprehensive scheme of compensatory afforestation.

- (ii) As per existing norms, user agency identifies the land for CA and submits the details of the same, as a part of the diversion proposal, along with undertaking to bear the cost of afforestation. Once the proposal is granted 'In-principle' approval by the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, the CA land is transferred and mutated in favour of the State Forest Department and subsequently it is notified as PF under the Indian Forest Act, 1927 or any other local laws. After 'Final' approval, forest land proposed for non-forestry use is handed over to user agency and thereafter, the Forest Department undertakes CA in non-forest land provided by the user agency. This practice has been in vogue for last four decades.
- (iii) Difficulties observed during the intervening period in the implementation of CA scheme primarily include delayed fund flow, untimely availability of non-forest land, uncertainty of survival percentage, etc.
- (iv) No mechanism exists for incentivising the private landowners and Government/Institutions for raising afforestation over fallow parcels of land. Therefore, it is desirable to have a mechanism in place incentivising such private landowners or Government institutions for raising afforestation to increase trees outside forests (TOF).
- (v) To address the aforementioned difficulties, the rules notified under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 envisage formulation of an Accredited Compensatory Afforestation (ACA) mechanism and raising of proactive afforestation over non-forest land to be used for obtaining prior approval under sub-section (1) of section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.
- (vi) Details of preconditions, mechanism and formulation of proposal are given as under:

**(2) Preconditions of raising ACA:**

- (i) Land on which the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 are not applicable and which is free from all encumbrances should be considered for ACA.
- (ii) Non-forest land, including mined out and biologically reclaimed non-forest land, ownership of which vests with the State PSU or Central PSU, may also be used for raising Accredited Compensatory Afforestation.
- (iii) Land considered for raising such afforestation should be properly demarcated and fenced to ensure its protection from various biotic factors.
- (iv) An afforestation shall be counted towards ACA if such land covers an area of minimum ten hectares. However, lands which are contiguous to the Reserved Forests or Protected Forests will be considered irrespective of their size.
- (v) Afforestation over land of any size situated in the continuity of land declared or notified as forest under any law, Protected Area, Tiger Reserve or within a designated or identified tiger or wildlife corridor, may be considered for ACA.
- (vi) Accredited Compensatory Afforestation shall be earned by developing afforestation of one-hectare area with 0.4 or more canopy density, but there shall

be no Accredited Compensatory Afforestation for developing an area below 0.4 canopy density or below one-hectare land.

- (vii) An afforestation shall be counted towards ACA if such land has vegetation composed predominantly of trees having canopy density of 0.4 or more and the trees are at least five years old; and
- (viii) Afforestation raised should preferably be heterogeneous in nature and shall consist of indigenous species. Afforestation of exotic species shall necessarily be avoided.

**(3) Proposed mechanism for the ACA:** The following procedure shall be adopted for effective implementation of the proposed ACA mechanism:

- (i) A centralized online portal will be developed for submission of online application, evaluation of proposal by the local Forest Department, access to database relating to persons/agencies and ACA availability in a particular State/UT. Online portal shall maintain the State/UT wise record of such persons/agencies who have submitted application on the online portal along with the detail of their ACA;
- (ii) State/UT shall make available in public domain, the model scheme for raising afforestation for different agro-climatic zones for its use by the aspiring persons/agencies to prepare their afforestation scheme for 5 years and schemes for existing afforestation to earn ACAs for the proposed afforestation, as the case may be;
- (iii) Any person or agency keen to register in the ACA Scheme may submit online application along with the details of non-forest land and/or existing afforestation viz. maps, authenticated copies of revenue records, etc. and afforestation scheme and/or composition of existing afforestation, prepared on the basis of model scheme of the concerned State/UT;
- (iv) iv.. The Forest Department shall examine the proposal for its completeness and fulfilment of relevant preconditions/criterion. Proposals qualifying the scrutiny of local Forest department shall be considered for final registration and proposed ACA scheme.
- (v) Persons/agencies registered with local Forest Department may raise afforestation as per the scheme prepared in consonance with the model scheme of the State/UT for the concerned agro-climatic zone.
- (vi) Existing afforestation or afforestation raised afresh shall be eligible for ACA after attaining the age of 5 years, provided such plantation meet the preconditions specified hereinabove including predetermined success/survival criteria. Preconditions and criterion of a particular afforestation/plantation shall be evaluated by the local Forest Department by undertaking a visit to such site.
- (vii) The State Forest Department, based on their on-site evaluation of afforestation and depending upon the extent of area qualifying under the ACA, shall award ACAs to such afforestation. Afforestation raised over 1 ha of land with 0.4 canopy density will be considered equivalent to 1 ACA. Detail of ACAs, awarded by the State Forest Department, shall be updated in the online application by the concerned person/agency.

- (viii) The person or agency may promote or publicise its credentials and ACAs award available with it, for its swapping in lieu of proposal relating to diversion of forest land.
- (ix) The persons or agencies registered with the Forest Department will be free to trade its asset i.e. its ACAs in parcels with the user agency aspiring for non-forestry use of forest land. The User Agency, aspiring for non-forest use of forest land, may pay the amount to the registered agency, as may be agreed between them, and swap such ACAs in lieu of diversion of forest land.
- (x) The persons or agencies from private as well as Govt. sector may register for ACA scheme. ACAs earned by an agency/person will be transferable i.e. can be transferred to any user agency/project proponent under intimation to the local Forest Department. ACAs earned by the Government agencies can be swapped in lieu of diversion proposals for their own use; and
- (xi) The person or agency registered for ACA will be at liberty to de-register its ACAs earned in part or full from the online portal at any point of time, provided the ACA has not been accounted for already in any project, as per provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

**(4) Formulating proposals under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 using ACAs lands:**

- (i) The User Agencies requiring forest land shall negotiate financial details with the person or agency holding ACA and enter into an agreement for required ACA area with the concerned agency.
- ii. ACA area agreed for trading between the person or agency and user agency/project proponent shall be surveyed using DGPS, or like technology and detail of the area along with digital Differential GPS map (KML/shape files) and copy of agreement shall be submitted to the Forest Department along with application for diversion of forest land under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980;
- iii. Afforestation scheme implemented by the agency for a period of 5 years or scheme for maintenance of existing afforestation, as the case may be, shall be assessed by the State Forest Department and if needed term of the scheme may be recommended to be increased to such duration as the Forest Department may deem fit;
- iv. The Forest Department shall give priority to such proposals and on receipt of 'In-principle' approval said land parcel shall be transferred and mutated in favour of the State Forest Department and declared as Protected Forest under Section 29 of the Indian Forest Act, 1927 or any other law; However, in exceptional cases as decided by the Government of India on case to case basis, Government owned lands, where transfer of ownership of land to the Forest Department is not possible due to legal impediments, such lands, without changing their ownership, will be notified as Protected Forest under the Indian Forest Act, 1927 or any other local Act for the management by the Forest Department concerned as per the prescriptions of the Working Plan. Provisions of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, Indian Forest Act, 1927 and relevant local Act(s) shall be applicable on such lands and shall

be brought under the management and administrative Control of the local Forest Department concerned.

- v. In case of established ACAs, no cost of raising compensatory afforestation shall be charged from the user agency by the State Forest Department.
- vi. ACA raised in one State/UT can be swapped in lieu of diversion of forest land in other States/UTs subject to the provisions contained under sub rule (5) of rule 14 of Van (Sanrakshan Evam Samvardhan) Rules, 2023;
- vii. As the afforestation so raised may be utilized in parts, therefore, until a patch of minimum size of 5 ha is transferred in lieu of diversion of forest land, the concerned agency, at the cost of user agency may manage the area till such time as required or till the entire patch is transferred to the Forest Department;
- viii. Revenue to be earned from plantation raised under ACA or from thinning or felling operations carried out in such plantations as per the Working Plan/Management Plan prescriptions, will accrue to the land owning agency after deducting the cost likely to be incurred on gap plantations and/or replantation to be raised subsequently; and
- ix. The carbon credits or any other associated benefit earned from plantation raised under ACA will also accrue to the land-owning agency.
- x. Proposed mechanism for the ACA: The following procedure shall be adopted for effective implementation of the proposed ACA mechanism:

**(5) Benefits likely to be accrued from the ACA scheme:**

- (i) A system of proactive afforestation to be used for obtaining prior approval under section 2 (ii) of the Act by way of raising advance afforestation over a non-forest land free from any encumbrance.
- (ii) The compensatory afforestation would be undertaken in advance which will obviate any delays that could be caused due to fund flow or administrative/technical procedures.
- (iii) Proposed scheme will promote onset of flow of ecosystem goods and services in advance and open a new area for investment in the forest sector.
- (iv) Proposed scheme will encourage afforestation over fallow lands thereby helping in achieving the national targets as envisaged in the National Forest Policy, 1988.
- (v) Alternative non-forest land that may be made available would be in a suitable block thereby facilitating appropriate protection measures; and
- (vi) Proposed scheme will expedite afforestation works which will ultimately increase the total carbon sequestered thereby helping to achieve the NDCs targets.

## 2.5 Identification of land banks for CA

- (i) The States and UTs shall create land bank for CA for speedy disposal of the FC proposals under the provisions of the Van (Sanrakshan Evam Samvardhan) Rules, 2023.
- (ii) In addition to non-forest land, the degraded forest land with crown density up to 40% under the administrative control of forest department may be identified using the Satellite imagery and in consultation with Forest Survey of India and will be made available for CA.
- (iii) The category of lands as specified in para 2.4 are applicable and other waste lands and non-forest lands may also be identified as land bank for the purpose of CA.
- (iv) To expedite creation of land bank in a systematic manner a Committee under Chairmanship of the Principal Chief Conservator of Forests may be constituted with the Chief Wildlife Warden and representatives of revenue department in the State as members of the Committee. The committee may identify the following and other such forest areas on priority for inclusion in the land bank:
  - (a) Areas falling in wildlife corridors to improve connectivity between habitats.
  - (b) Areas falling in and around the Protected Areas (PAs), eco-sensitive zone of PAs, forest areas to ensure consolidation of such areas.
  - (c) Habitat of rare, threatened, and endangered species of flora and fauna to ensure long term conservation of such habitats.
  - (d) Areas falling in catchment areas of important rivers, water supply schemes, irrigation projects, hydro-electric projects etc.
- (v) To monitor the progress of creation of land bank for CA following committee, at each Regional Offices of the MoEF&CC will be constituted:
  - (a) The Head of Regional Office – Chairman
  - (b) Representatives of the National Tiger Conservation Authority (NTCA)- Member,
  - (c) Representatives of the FSI – Member
  - (d) The Nodal Officers of States/UTs under each Regional Offices of MoEF&CC-Members

The committee will review the progress in creation of land bank for CA in the States/UTs falling under jurisdiction of the Regional Offices and submit annual report or as and when required to the MoEF&CC.

## CHAPTER 3

## NET PRESENT VALUE

3.1 In pursuance of the orders dated 29<sup>th</sup> October 2002 of the Supreme Court in Writ Petition (Civil) No. 202/95 in addition to the funds realized for compensatory afforestation, the Net Present Value (NPV) of forest land diverted for non- forest purposes is also to be recovered from the user agencies, for undertaking forest protection, other conservation measures and related activities.

3.2 Hon'ble Supreme Court in its order dated 28.03.2008 in Writ Petition (Civil) No. 202 of 1996 in the matter of T. N. Godavarman Thirumalpad vs. Union of India, based on the outcome scientific assessment of ecosystem goods and services, and Ministry vide its guidelines dated 05.02.2009 have fixed the rates to Net Present Value (NPV) to be realized in lieu of diversion of forest land.

3.3 Hon'ble Supreme Court in its said order dated 28.03.2008 fixed the rates of NPV with directions of their upward revisions after every three years. Accordingly, the rates of NPV were revised by the Central Government w.e.f. 6<sup>th</sup> January, 2022. The revised rates of NPV will be applicable as under:

- (a) New rates will be applicable in all the proposals that have been granted Stage-I/in-principal approval after 06.01.2022.
- (b) The new rates will also be applicable on all the cases that were granted Stage-I/in-principal approval prior to 06.01.2022 and where even after lapse of 5 years, the Stage-II/Final approval is not granted due to non-submission of complete compliance of the conditions stipulated in Stage-I/in-principal approval.

**Table: Revised NPV rates based on fitment factor of 1.53**

(in Rs. per ha)			
<b>Eco-Class</b>	<b>Very Dense</b>	<b>Dense</b>	<b>Open</b>
<b>Class-I</b>	1595790	1436670	1116900
<b>Class-II</b>	1595790	1436670	1116900
<b>Class-III</b>	1357110	1228590	957780
<b>Class-IV</b>	957780	861390	670140
<b>Class-V</b>	1436670	1292850	1005210
<b>Class-VI</b>	1516230	1372410	1069470

Eco-Class-I: Tropical Wet Evergreen Forests,  
Tropical Semi-evergreen Forests and  
Tropical Moist Deciduous Forests

Eco-Class-II: Littoral and Swamp Forests

Eco-Class-III: Tropical Dry Deciduous Forests

Eco-Class-IV: Tropical Torn Forests and  
Tropical Dry Evergreen Forests

Eco-Class-V: Sub-tropical Broad-Leaved Hill Forests,  
Sub-Tropical Pine Forests and  
Sub-Tropical Dry Evergreen Forests

Eco-Class-VI: Montane Wet Temperature Forests,  
Himalayan Moist Temperature Forests,  
Himalayan Dry Temperature Forests,  
Sub Alpine Forest, Moist Alpine Scrub and  
Dry Alpine Scrub

3.4 NPV shall be charged to the extent of ten times of the normal NPV payable in the case of National Parks and five times in the case of Sanctuaries. The use of non-forest land falling within the National Parks and Wildlife Sanctuaries may be permitted on payment of an amount equal to the NPV payable for the adjoining forest area. In respect of non-forest land falling within marine National Parks / Wildlife Sanctuaries, the amount shall be five times the NPV payable for the adjoining forest area;

3.5 The proposals under the following categories are exempted from NPV to the extent as mentioned in the list below:

Category	Conditions
i. Schools	Full exemption up to 1 ha. of forest land, provided: (a) no felling of trees is involved; (b) alternate forest land is not available; (c) the project is of non-commercial nature and is part of the Plan/Non-Plan Scheme of Government; and (d) the area is outside National Park/ Sanctuary
ii. Hospitals	
iii. Children's playground of non-commercial nature.	
iv. Community centres in rural areas.	
v. Over-head tanks	
vi. Village tanks	
vii. Laying of underground drinking water, irrigation and PNG pipeline up to 4 inch diameter	
viii. Electricity distribution line upto 22 KV in rural areas.	
ix. Relocation of villages from the National Parks/ Sanctuary to alternate forest land	Full exemption
x. Collection of boulders/silts from the river belts in the forest area.	Full exemption, provided:- (a) area is outside National Park/ Sanctuary; (b) no mining lease is approved/signed in respect of this area; (c) the works including the sale of boulders/silt are carried out departmentally or through Government undertaking or through the Economic Development Committee or Joint Forest Management Committee; (d) the activity is necessary for conservation and protection of forests; and

	(e) the sale proceeds are used for protection/conservation of forests.	
xi. Laying of underground optical fibercable	Full exemption, provided: (a) No felling of trees is involved and (b) Area falls outside National Park/Sanctuary.	
xii. Pre-1980 regularization of encroachments and conversion of forest villages into revenue villages	Full exemption provided these are strictly in accordance with MoEF&CC's Guidelines dated 18.9.1990.	
xiii. Underground mining	<b>Surface strain predicted by 3-D subsidence prediction model</b>	<b>NPV to be paid</b>
	Up to 5mm/m	NIL
	5mm to 10 mm/m	10% of normal rates
	10mm/m to 15 mm/ m	25% of normal rates
	15 mm/m to 20 mm/m	50% of normal rates
	more than 20 mm/m	At Normal rates
xiv. Wind Power Projects	50% at the minimum NPV rate, provided, minimal tree felling is involved, irrespective of the eco-class in which the project lies.	
xv. Hydroelectric Projects up to 25 MW capacity	50% of the applicable rates of the forest land actually diverted for setting up of such projects, provided, the project involves felling of not more than 5 trees per hectare.	
xvi. Field Firing Range (FFR) of Defence Ministry not involving felling of trees and no likelihood of destruction of forests	At the rate of 20 % of the normal rates of NPV for the forest areas falling within the impact zone. The forest areas falling within safety zone of FFRs shall be fully exempted from the requirement of payment of NPV	
xvii. Underground tunnels of roads and railways	50 per cent of the normal rate applicable to the area.	
xviii. The area of riverbed in a proposed water reservoir, that is to be under permanent submergence throughout the year	50 per cent of the normal rate applicable to the area.	
xix. Repair, maintenance or blacktopping of forest roads constructed prior to 1980 without increase in blacktopped surface area	Full exemption	

3.6 The latest ISFR of FSI may be followed for determination of density for the purpose of NPV rates.

3.7 As per Ministry's letter No. 5-2/2006-FC dated 03.10.2006, as per judgment dated 15.09.2006 in IA No. 1473 & 1620 in WP (C) No. 202 of 1995, the Hon'ble Supreme Court of India has held that "NPV is required to be recovered in all cases approved by the Ministry for change of User Agency under the Forest (Conservation) Act, 1980 after 29<sup>th</sup>/30<sup>th</sup> October 2002, irrespective of the date on which in-principle clearance may have been granted..... The

*Ministry is directed to forthwith take steps to recover from the User Agency the NPV in terms of orders dated 29<sup>th</sup>/30<sup>th</sup> October 2002 and 1<sup>st</sup> August 2003.....”.*

3.8 In all such cases where NPV @ 50% of the total NPV rate has already been paid during the process of obtaining approval under The Van (Sanrakshan Evam Samvardhan) Adhiniyam for underground mining, the user agency has to pay the balance NPV at the rate 50% only, if such underground mining area is proposed to be operated through open cast mining.

### **3.9 Applicability of NPV in respect of special cases:**

- (i) While considering transfer of approvals granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 to mining leases allotted to new lessee, the State Government shall ensure that the amount of Net Present Value, Safety Zone Plantation and Compensatory Afforestation (CA), if not deposited earlier, has been deposited prior to handing over of the forest land to the new allottee.
- (ii) NPV, in respect of prospecting/exploration shall be charged on borehole basis. It is noted that for each borehole an area of approximately 0.1 ha is impacted with various activities that are undertaken during prospecting/exploration. Any variation from 0.1 ha area per borehole shall be informed by the User Agency at the time of submission of the proposal.
- (iii) Prior approval of Central Government under Section 2 (iii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be subject to payment of Net Present Value (NPV) of the forest land allowed to be assigned on mining lease. Similarly, prior approval of Central Government under Section 2 (ii) shall be subject to other usual conditions apart from realization of NPV of the forest land allowed to be utilized for mining and other allied non-forest activities.
- (iv) In case of existing mining leases in respect of minerals specified in sub-section (1) of section 8A of the MMDR Act, 1957, as inserted by the Mines and Mineral (Development and Regulation) Amendment Ordinance, 2015, deemed extension of period of validity of approvals accorded under Section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be extended, and shall be deemed to have been extended upto a period co-terminus with the period of mining lease in accordance with the provisions of the MMDR Act, 1957, will be subject to realization of NPV of the forest land for which period of validity of approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam has been extended within a period of two years in case the same has not already been realized, failing which the approval accorded under the Van (Sanrakshan Evam Samvardhan) Adhiniyam for such forest land shall be kept in abeyance, and shall be deemed to have been kept in abeyance, till such time, the NPV of such forest land is realized by the State Government.
- (v) Full NPV will be charged in respect of forest area approved for assignment of lease for mining or any other purpose under section 2 (iii) of the Act.
- (vi) In cases involving re-diversion of forest land, full amount of NPV, at the applicable rates on the date of re-diversion, shall be realized from the secondary user agency by the State/UT Government concerned, if the same was not paid earlier by the primary agency.

## CHAPTER 4

### GUIDELINES RELATED TO EXEMPTIONS CONSIDERED UNDER THE ADHINIYAM AND GENERAL APPROVAL

**4.1 Guidelines specifying the terms and conditions for considering the exemption under sub-section (3) of section 1A of the Adhiniyam:** As per the provisions of sub-section (2) of section 1A of the Adhiniyam, lands located within 100 km of distance from the international borders, Line of Control (LOC), Line of Actual Control (LA), upto 0.1 ha of forest land providing connectivity to the road/railside amenities, up to 10 ha of forest land proposed for security related infrastructure and upto 5 ha of land proposed for security related infrastructure and public utility projects in the LWE affected districts, have been exempted from the purview of the Adhiniyam subject to terms and conditions specified by the Central Government under the provisions of sub-section (3) of section 1A and section 3C of the Adhiniyam. The terms and conditions notified by the Central Government in this regard are as under:

**S.O.5074 (E).** In exercise of the powers conferred by sub-section (3) of section 1A read with section 3 (C) of the Van (Sankashan Evam Samvardhan) Adhiniyam, 1980 (69 of 1980) (hereinafter referred to as Adhiniyam), the Central Government hereby notifies the guidelines specifying the terms and conditions to be abided by the State Government or Union territory, while considering exemptions provided under sub-section (2) of section 1A of the said Adhiniyam, namely:-

1. Exemption for strategic linear projects of national importance and concerning national security that are located within hundred kilometres of aerial distance from the international borders, Line of Control or Line of Actual Control shall be considered only for such projects which have been notified as strategic and concerning national security by the Central Government in consultation with the respective State Governments or the Union territory Administration.
2. Exemptions for security related and public utility infrastructure shall be considered exclusively for Left Wing Extremism affected Districts, as notified by the Central Government. Such districts that were earlier notified as Left Wing Extremism Districts but subsequently, their Left Wing Extremism District status, on or before the date of handing over the forest land to the user agency, has been withdrawn, shall not be eligible for the exemption.
3. For the purpose of subclause (iii) of clause (c) of sub-section (2) of section 1A of the Adhiniyam, the following twelve categories of public infrastructure works in the Left Wing Extremism (LWE) affected districts, as notified by the Central Government, in the forest areas, shall be considered as public utility projects, namely:-
  - (i) Schools or educational institutes including technical education;
  - (ii) Dispensaries or hospitals;
  - (iii) Electrical and telecommunication lines including underground optical fibres cables;
  - (iv) Drinking water including underground drinking water supply lines;
  - (v) Water or rain water harvesting structures;

- (vi) Minor irrigation canal;
  - (vii) Non-conventional sources of energy;
  - (viii) Skill up gradation or vocational training center;
  - (ix) Power sub-stations;
  - (x) Public roads;
  - (xi) Communication posts including mobile towers; and
  - (xii) Police establishments like Police Stations or outposts or border outposts or watch towers in sensitive area.
4. The State Government and Union territory Administration shall use the existing Forms for submission of proposals, and such proposals shall be processed for approval on the PARIVESH Portal in the light of categories given under sub-section (2) of section 1A of the Adhiniyam.
  5. The projects pertaining to the security related infrastructure and public utility shall be submitted in their entirety. Authorities in the State and Union territory Administration shall ensure strict compliance in this regard.
  6. The exemptions considered under the Adhiniyam only indicates the upper limit of the forest area, therefore, user agencies, State Governments and Union territory Administration shall ensure that only legitimate non-forestry use, involving minimum forest land, is allowed while considering such exemptions.
  7. Proposals, located in the forest lands protected under the provisions of the Wild Life (Protection) Act, 1972 (53 of 1972), shall be considered by the authorities in the State Government or Union territory Administrations only after obtaining the approval of the Standing Committee of the National Board for Wildlife or as per the guidelines issued by the Central Government in this regard.
  8. The State Government or Union territory Administration, as the case may be, may authorise an officer not below the rank of the Deputy Conservator of Forests to receive and accept the proposals and process them through the Nodal Officer, dealing with the matters related to land transfer under the Adhiniyam for obtaining the approval of the Competent Authority in the State Government or the Union territory Administration and accordingly grant 'In-principle' approval.
  9. The State Government may authorise an officer of the level of Deputy Conservator of Forests or above to grant permissions in respect of proposals proposed for providing connectivity to the road and rail side amenities and habitations involving upto 0.1 ha of forest land.
  10. The State Governments or the Union territories Administrations, after receipt of such proposals from the user agency under sub-section (2) of section 1A of the Adhiniyam, shall examine such proposals giving due regard, but not limited to, the following, namely:-
    - (i) the proposed use of the forest land is not for any non-site specific purpose such as agricultural purpose, office or residential purpose or for the rehabilitation of persons displaced for any reason;

- (ii) the user agency has considered all alternatives and that no other alternative in the circumstances is feasible and that the required area is the minimum needed;
  - (iii) the concerned authorities in the State Government or the Union territory Administration before making the recommendation, have considered all issues having direct bearing or indirect impact of the diversion of forest land on the forest, wildlife and environment;
  - (iv) adequate justification has been given and appropriate mitigation measures have been proposed by the user agency to mitigate the impact of the project on the surrounding forests, soil and moisture conservation regimes, catchment area, etc.
  - (v) in case proposed area is located in the Protected Areas, tiger or wildlife corridors or habitat of any endangered or threatened species of flora and fauna, as may be applicable, whether appropriate mitigation measures have been proposed by the user agency; and
  - (vi) the user agency, undertakes to provide the land and cost of compensatory afforestation and Net Present Value, as applicable; and
  - (vii) concerned mandates under the National Forest Policy.
11. To compensate the loss of trees, the State Government or the Union territory Administration shall raise compensatory afforestation and realise Net Present Value of the forest land, being diverted, from the user agency, in accordance with the relevant rules and guideline issued by the Central Government in this regard from time to time for diversion of forest land.
  12. The State Government, if so desire, after granting 'In-principle' approval to the proposal and deposition of compensatory levies such as compensatory afforestation and Net Present Value and cost of mitigation plans such as of the Wildlife Management Plan and Soil and Moisture Conservation Plan, as applicable, notification of the land identified for raising compensatory afforestation as Protected Forest under Indian Forest Act, 1927 (16 of 1927) or local forest Act and compliance of other statutes including the Schedule Tribe and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007), may grant 'working permission' for the commencement of project work before grant of 'Final' approval as specified by the Central Government in the relevant rule and guidelines in respect of such 'working permission'.
  13. The compensatory levies such as cost of raising compensatory afforestation, Net Present Value and cost of mitigation plans, if any prescribed, shall be realised from the user agency and the same shall be deposited into the account of the State Compensatory Afforestation Fund Management and Planning Authority of the concerned State or Union territory, managed by the National Compensatory Afforestation Fund Management and Planning Authority.
  14. The land identified and earmarked for compensatory afforestation shall be treated and afforested by the State Government or Union territory Administration or user agency as per the Compensatory Afforestation plan approved as part of the said forest diversion proposal and the work of Compensatory Afforestation and other mitigation plans, as applicable, shall start within two year of issue of order of diversion order of the corresponding forest land.

15. The State Government or the Union territory Administration shall grant approval in two stages viz. 'In-principle' approval and 'Final' approval. After receipt of satisfactory compliance of conditions stipulated in the 'in-principle' approval from the user agency, the 'Final' approval will be granted by the State Government or the Union territory Administration.
16. The authorities concerned in the State Governments and Union territory Administration shall ensure that only legitimate conditions, purely in the interests of conservation and protection of forest, such as raising of compensatory afforestation, payment of compensatory levies, mitigation measures, as applicable, are stipulated in the approvals.
17. Strategic, security and public utility projects, covered under sub-section (2) of section 1A of the Adhiniyam, but involving violation of the Adhiniyam shall be dealt with in the following manner, namely:-
- (i) Proposals, involving violations of the Adhiniyam will not be covered under the provisions of sub-section (2) of section 1A of the Adhiniyam:  
 Provided that proposals, where approval under sub-section (2) of section 1A is under consideration of the State Government or Union territory Administration and violation is committed by the user agency by commencing the project work, such proposals will be subjected to the penal provisions by the State or Union territory Administration, as per the relevant guidelines issued by the Ministry in this regard;
  - (ii) Proposals, pertaining to such project(s) where work has been commenced without the prior approval of the State or Union territory Administration, will be submitted for ex-post facto approval of the Central Government under the Adhiniyam, ; and
  - (iii) Regional Office or their Sub-Offices, State Governments or the Union territory Administrations, under whose jurisdiction the proposal involving violation of the Adhiniyam falls, shall take legal action against the offenders in accordance with the provisions of Section 3A and 3B of the Adhiniyam and relevant guidelines issued by the Central Government in this regard;
18. The proposals on forest land under litigation or *sub-judice* on account of an issue pertaining to the Indian Forest Act, 1927, Local Forest Act or Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 will be dealt as per the orders of the courts or tribunals passed in such cases and the date of applicability of the Adhiniyam in various types of lands shall be in accordance with the direction, if so passed by the Courts/Tribunals;
19. The State Government shall ensure that detail of approval granted under the provisions of sub-section (2) of section 1A of the Adhiniyam, is updated in the 'Land Schedule' given in the Working Plan of the Division.
20. The legal status of the forest land so diverted shall remain unchanged.
21. Barring defence or strategic projects, the detail of proceedings of the various authorities such as minutes of the meetings, copies of approvals granted, monitoring reports submitted by the user agency, pertaining to public utility and other projects covered under sub-section (2) of section 1A of the Adhiniyam, shall be uploaded on

the PARIVESH portal by the concerned State Governments or the Union territories Administrations.

22. The State Government or Union territory Administration and the user agency shall monitor, at least once every year, the compliance of conditions imposed while allowing the non-forestry use of forest land and a copy of such monitoring report shall be uploaded on PARIVESH for future references. Non-compliances, if any, observed during such monitoring, should be brought to the notice of the concerned authorities for undertaking remedial measures as per the relevant guidelines issued by the Central Government in this regard.
23. The user agency shall commence the work within a period of two years. In case, no commencement or completion of project work is undertaken by the user agency within a period of two years, the approval granted by the State Government or Union territory Administration shall stand rejected and the possession of the forest land will be taken over by the local Forest Department. However, the State Governments or the Union territory Administrations, subject to submission of valid and cogent reasons for delay in commencement or completion of the project beyond two years by the user agency, can extend the period by another year.
24. The State Government and Union territory Administration shall ensure that the user agency shall obtain environment clearance under the provisions of the Environment Impact Assessment Notification, 2006, as applicable, and requisite mitigation measure as suggested in the Environment Management Plan shall be implemented by the user agency in all cases.
25. The State Government or Union territory Administration shall provide a copy of the approvals given under sub-section (2) of section 1A of the Adhiniyam and shall also furnish, the details of proposals and such orders, as and when sought by the Central Government for information, record and monitoring.
26. The Regional Office of the Ministry, based on the available information provided by the State Government or Union territory Administration or as available on PARIVESH, can carry out monitoring of such proposals or works for compliance of relevant provisions of the Adhiniyam and action thereunder.
27. The State Government or Union territory Administration prior to handing over the forest land to the user agency, shall ensure fulfilment and compliance of the provisions of all other Acts and rules made thereunder, as applicable, including ensuring settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (No. 2 of 2007); and
28. The Central Government, under section 3(C) of the Adhiniyam may further clarify or issue directions to the State Government or Union territory Administration or to any organisation as may be necessary with respect to guidelines for the implementation of the Adhiniyam.

#### **4.2 Guidelines for use of forest land within the RoW of roads for laying Optical Fiber Cables (OFCs), drinking water supply pipelines, telephone lines, electricity cables, CNG/PNG, Slurry pipelines and Petroleum and Crude oil pipelines.**

General approval is accorded in the forest land and located in the existing Right of Way (RoW) of roads which have already been allowed for non-forestry use for laying of UG drinking water pipelines, OFC cables (both underground and above ground), telephone lines, electricity cables, CNG/PNG, slurry pipelines and petroleum and crude oil pipelines involving trench size not more than two meter in depth and one meter in width and 2 meter x 2 meter for UG drinking water pipelines and slurry pipelines, subject to following conditions:

- (i) User Agency shall apply, online, in the prescribed Form Appended to the Handbook;
- (ii) In cases where KML files, prepared using DGPS tools are not available, the KML files prepared using GIS tools at the time of initial alignment surveys of OFC cable by the user agencies may be considered in respect of forest land involved in the re-diversion proposal for laying of OFC cable.
- (iii) No tree felling is involved in the proposed work
- (iv) The State Government concerned shall authorize Nodal Officer to consider permissions for re-diversion for laying of OFCs falling within the already diverted RoW of roads located outside the Protected Areas.
- (v) Overhead laying of OFCs will be undertaken over the existing poles within the ROWs provided no damage is caused to any tree or wildlife.
- (vi) The procedure for processing of the applications as stipulated in the Van (Sanrakshan Evam Samvardhan) Rules 2023 as amended up to date will be strictly followed.
- (vii) Forest land to be used shall be restricted to the bare minimum and shall be used only when it is unavoidable.
- (viii) The UA shall pay the applicable NPV in pursuance of the orders of the Hon'ble Supreme Court, if the same was not charged earlier in respect of forest land proposed for re-diversion.
- (ix) In addition to monthly report of diversions of forest land under General Approval accorded by MoEF&CC, each State/UT Government shall submit half yearly reports for the period ending June 30 and December 31 containing details of all forest lands diverted under the General Approval along with the actual status of actual utilization of the forest lands so diverted for the stated purpose, to the MoEF&CC and its concerned Regional Office and their Sub-Offices;
- (x) The diversions and compliance to the conditions will be monitored by the concerned Regional Office of the MoEF&CC and their Sub-Offices.
- (xi) There is no exemption to the projects located in the Protected Areas from payment of NPV, as applicable, in view of Hon'ble Supreme Court's order dated 28.03.2008 read with Order dated 9.05.2008, if the same has not been realized earlier at the time of allowing non-forestry use of road.
- (xii) After completion of the project the area under RoW should be reclaimed suitably.
- (xiii) UA agrees to make good any loss to forest/environment.

- (xiv) The UA will seek permission from the local FD for carrying out any maintenance.
- (xv) In case, the proposed area falls in the RoW of the road passing through National Park, Wildlife Sanctuary or Tiger Reserves, General Approval is subject to requisite permissions from the Standing Committee of the State Board for Wildlife.

#### **4.3 Underground optical fiber cables by the Ministry of Defence along the roads**

- (i) For underground optical fiber cables by the Ministry of Defence along the roads within existing Right of Way not falling in National Parks and Wildlife Sanctuaries, without felling of trees, where maximum size of the trench is not more than 2.0 -meter depth and 1.0 meter wide.
- (ii) The concerned representative of the Ministry of Defence to submit an application in the letter form (in hard copy) along with a duly certified map indicating layout of the OFC, proposed to be laid by them along the roads within existing RoW, directly to the officers authorized by the State Government in this regard. The Government/UT Governments may authorize Officers, not below the rank of Divisional Forest Officer having jurisdiction over the forest land proposed to be utilized for laying of underground optical fiber cables.
- (iii) In view of the fact that proposal of the Ministry of Defence involves secret data of Defence network and is very confidential in nature, details of approval granted by the concerned officer for this optical fiber cable may not be uploaded on web-portal for online submission and monitoring of forest clearance proposals. Details of approvals accorded for laying of this OFC may however, be provided to the MoEF&CC and its concerned Regional Office for information and records.

**CHAPTER- 5**  
**TRANSFER/RE-DIVERSION/ CHANGE IN LAND USE**

Any forest land diverted for non-forest use with prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be used by the User Agency for the purpose for which it has been diverted. However, transfer of a user agency for the same purpose, or re-diversion for another purpose by the same or another user agency may be considered on the following basis:

**5.1 Transfer of approval or change in the User Agency:** The following procedure shall be followed by the user agency seeking transfer of approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 either in full or part of the forest land:

- (i) An application in the prescribed Form from the concerned State/Union Territory Government along with detailed justification for such transfer of User Agency shall be submitted to the Ministry or concerned Regional Office/Sub-Office, as the case may be, along with an undertaking from both primary and new User Agencies shall be submitted;
- (ii) The undertaking shall state that the new user agency will abide by all conditions on which diversion of forest land was approved in favour of the previous user agency and to abide by the any such additional conditions which may be imposed from time to time in the interest of afforestation, conservation and management of flora and fauna in the area and under taking from the primary User Agency stating that no objection for such Transfer of User Agency;
- (iii) Transfer of User Agency can be considered by the Central Government (MoEF&CC/ ROs) for same use and on same conditions.
- (iv) The Central Government shall levy a transfer fee, to discourage middle men from processing applications and then selling it to other, as per detail given below:

S. No.	Area (ha)	Transfer fee
1.	Up to 1 ha	2,00,000/-
2.	More than 1 to 20 ha	5,00,000/-
3.	Above 20 ha	10,00,000/-

- (v) The transfer fee will not be applicable in the proposals pertaining to change of UA due to change in legal heir.
- (vi) When change in the name of user agency due to inheritance (change in legal heirs) becomes necessary, permission of the Central Government will be required. For this purpose, the State Government, within three months from the date of issue of legal heir certificate shall submit the following documents:
  - (a) no-objection certificate for such change by the State Government.
  - (b) A certified copy of fresh certificate of incorporation consequent upon change of name issued by the Registrar of Companies or legal heir certificate issued by competent court of law whichever is applicable.

- (c) An explanatory statement from the user agency for such change.
- (vii) In case the transfer is from a Central Government Department/Central Government Undertaking (CPSU) to a user agency other than Central Government Department /CPSU, then the special concessions given to Central Government Department/CPSU while granting the approval shall not be extended to the new User Agency.

**5.2 Change of the name of UA without any change in shareholding pattern:** when change in the name of user agency without any change in its shareholding pattern becomes necessary, permission of the Central Government will be required. The State / UT Govt., shall, online, submit following documents within three months:

- (i) no-objection certificate for such change by the State Government.
- (ii) A certified copy of fresh certificate of incorporation consequent upon change of name issued by the Registrar of Companies
- (iii) An explanatory statement from the user agency for such change.
- (iv) Transfer fee of Rs. 1,00,000/-

**5.3 Transfer of approval/lease in respect of Wind Energy projects:** for transfer of approval from the developer i.e. the User Agency to investors /power producers, State Government shall, online, submit following details:

- (i) User Agency shall submit duly filled up prescribed Form available online on PARIVESH.
- (ii) The Nodal Officer will examine the particulars furnished by the UA in 45 days of the date of submission of the application and forward it to the State/UT Government.
- (iii) The State/UT Government, or an Officer authorized in this regard will forward its recommendation within 45 days to the Central Government. If decision is not communicated by the State/UT Government on the proposal within the expiry of a period of 90 days i.e. from the date of submission of the proposal, action, as considered appropriate will be initiated by the Central Government.
- (iv) Transfer fee as stipulated under para (iv) above.

**5.4 Cancelled allocation of Coal Blocks:** In respect of 204 coal blocks whose allocation was cancelled by the Hon'ble Supreme Court, two types of situations are possible:

- (i) 'In-Principle' or Final approval for diversion of forest land has already been issued, and
- (ii) Application for in-principle approval of diversion of forest land under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 was in process at either the State or the Central Government, on the day of cancellation of the allocation;

Cases falling under category mentioned under (i) above will be considered by the MoEF&CC or Regional Office, after receipt of an application for such transfer from the Ministry of Coal, Government of India. Transfer application submitted by the Ministry of Coal should be accompanied with details of the new user agency, a vesting

order in favour of new user agency, an undertaking from the new user agency that they shall abide by all the conditions on which the forest land was leased to the original user agency and any other condition which may be stipulated by the Central Government/State Government in future.

Cases falling under category (ii) above will be processed as if they have been submitted by the new user agency decided by the Central Government on completion of the following:

- (i) Duly filled in Part-I of the application in Form-A appended to the Van (Sanrakshan Evam Samvardhan) Adhiniyam 2023 and amendments issued therein along with all necessary undertakings/certificates, including documentary proof in support of allocation of such block in favour of the new user agency and details of non-forest/revenue land identified for creation of compensatory afforestation, wherever required, is submitted by the new user agency to the Nodal Officer concerned;
- (ii) Non-forest /revenue land identified by the new user agency for compensatory afforestation, wherever required, is inspected and found to be suitable for compensatory afforestation and for management point of view by the Divisional Forest Officer(s) having jurisdiction over such land. The concerned jurisdictional Regional Office shall carryout site inspection of such non forest area to ascertain its suitability for plantation and management point of view. All such conditions / provision as envisaged under chapter related to Compensatory Afforestation will applicable as the case may be;
- (iii) A copy of Part-I of the Form A along with all necessary undertakings/certificates submitted by the new User Agency along with a certificate from the Divisional Forest Officer(s) having jurisdiction over the non-forest/revenue land identified for creation of compensatory afforestation, wherever required, stating there in that such land is suitable for creation of compensatory afforestation and from management point of view, is provided the State Government concerned to the authority with whom the proposal submitted by the original user agency is presently pending. Such documents will substitute and replace the corresponding documents available in the proposal submitted by the original user agency.

In case of these 204 coal blocks, reimbursement of amount paid by the original user agency in compliance of conditions stipulated in approval accorded under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for use of forest land for non-forest purpose will be dealt with in the manner, as prescribed in the Coal Mines (Special Provisions) Second Ordinance, 2014 and the rules framed thereunder.

### **5.5 Transfer of approval to successful bidder/new allocattee after the expiry of lease**

After the expiry of validity of mining lease granted under the provisions of the Mines and Minerals (Development and Regulation) Act, 1980, transfer of approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 in favour of successful bidder selected by the State/UTs, after auction of such lease, may be considered subject to the following conditions:

- (i) Complete compliance of such terms and conditions as stipulated in the approval granted previously under the Van (Sanrakshan Evam Samvardhan)

Adhiniyam, 1980, and rules and guidelines framed thereunder in respect of the concerned mining lease has been made. The non-compliance of conditions, if any, stipulated in the approval granted to the erstwhile agency under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, which were required to be complied before handing over the forest land to such agency, shall be transferred as liabilities to the new allocatee, and in such case, complete compliance of such conditions shall be made prior to handing over of forest land to the new allocatee. For the remaining conditions, the new allocatee will make an undertaking to comply with, before handing over of the forest land. It is clarified that in case of violation of any of the conditions which was done during the period of previous allocatee and which constitutes an offence under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, the penal clauses will be invoked against the previous allocatee only and not against the new allocatee.

- (ii) Approval under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 was valid on the date of expiry of previous lease.
- (iii) Mining operations will be restricted to the forest area for which approval under clause (ii) of sub-section (1) of section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 has been obtained by the erstwhile user agency. No non-forest use of such forest lands falling within the lease shall be allowed, for which approval under the aforementioned provisions of the Adhiniyam has not been obtained by the User agency or State Government/UT. Mining in such areas may be allowed only after obtaining prior approval of the Central Government under clause (ii) of sub-section (1) of section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.
- (iv) The State Government shall ensure that the amount of Net Present Value, Safety Zone Plantation and Compensatory Afforestation (CA), if not deposited earlier, has been deposited prior to handing over of the forest land to the new allocatee. Also, in case the CA land has not been made available previously, the forest land shall be handed over to the new allocatee only after the corresponding CA land has been accepted by the competent authority as per the extant procedures for acceptance of CA lands for a new proposal. Further clarified that the provisions of CA will be applicable in respect of broken up forest area before the commencement of Act, 1980 which are continued to be under the possession of the user agency, in case the CA has not been raised earlier.
- (v) Mining operations and other activities shall be carried out as per the land-use allowed in the approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Any change in the land use on account of any valid reason shall be effected with the prior approval of the Central Government.
- (vi) Reclamation of the mined out forest area in the whole lease area as per the approved Mining Plan shall be an obligatory condition for the new allocatee.
- (vii) Transfer fee, as prescribed in the relevant guidelines incorporated in the Handbook of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 shall be realized from the new allocatee and deposited into the account of CAMPA of the State concerned.

- (viii) Transfer of approvals to new agency may be accorded by the concerned State Government/UT Administration subject to fulfilment of conditions/provisions stipulated in the relevant guidelines of the Ministry.
- (ix) The mining operation can continue as per the above provisions, provided the lease has valid approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 on the date of expiry of lease, no violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam is involved, and the lease is not lapsed or terminated by the Central Government or State Government or by any court of law;
- (x) The above provisions are not applicable in case of a lease which has been lapsed or terminated or cancelled by the Central Government or State Government or by any court of law.

**5.6 Re-diversion/Change in land use :** In case of change in land use of forest land becomes necessary for the same project and same purpose by the same user agency and in case the re-diversion of a forest land becomes necessary for a different purpose by the same of different user agency, it may not be prudent for the Ministry to authorize the user agency to undertake such changes in land use changes at their own level as there is the possibility of misuse of such dispensation by the user agency. Such proposals pertaining to change in land use or re-diversion of already diverted forest land shall be examined on merits by the Ministry on case-to-case basis. The user agency shall submit online application for re-diversion or change in land use in the prescribed Form on PARIVESH. The following guidelines needs to be abided while considering the change in the land use or re-diversion proposals:

- (i) Previously, if CA, NPV, etc., were exempted but proposed change in land use or re-diversion is not falling under the category of non-forestry activity which is/are not exempted from such levies or if NPV & CA have not been realized during the earlier approval period, then the User Agency shall make a payment towards all such levies / CA area over non-forest area proportionate to the extent of forest area proposed for re diversion;
- (ii) Railways may require to convert the conventional system to the electrification of railway lines, in such change of land use cases, if no fresh forest area is required and such new component can be taken up within already diverted area without violating any such norms under others acts / rules, in such cases permission from the central government is not required and the UA may seek prior permission of the State Government in letter form and may make necessary changes as required. Details of such approvals accorded by the State / UT may be submitted to the concerned ROs. This relaxation will not applicable to the projects falling in PAs. Similarly, for conversion of overhead transmission line to underground lines, the above procedure shall be applicable.
- (iii) In case of transfer with re-diversion proposals, the proposed use should be compatible with the primary use and should not hinder it. A written consent from the primary user agency should be submitted without insisting any payment or charges from the new agency such written consents.
- (iv) In case the primary user agency refuses to give its consent, and the User

Agency seeking re- diversion feels that the other use is compatible with and does not in any way hinder the primary use, the State / UT Nodal Officer who will after hearing the primary user giving him advance notice, give his agreement for the re-diversion or otherwise giving reasons for his decision in the form of a note while forwarding the proposal to the MoEF& CC / RO as the case may be for decision on re-diversion.

- (v) While permitting re-diversion, Central Government may if considered necessary modify original conditions or impose additional conditions to be fulfilled by the primary user agency and conditions (including rights and responsibilities to be fulfilled by the secondary User Agency along with payment for (i) payment of NPV at the applicable rates; and
- (vi) The State/ UTs Government may consider the acceptance of NoCs issued by State PWD/NHAI or other similar agencies for setting up of retail outlets under RoWs at any level on PARIVESH portal. The undertaking along with acknowledgment of the agencies owning RoW from the user agency stating that they have initiated the process of obtaining NOC may be considered for initial submission of proposal on PARIVESH. It is also to clarify that the process of obtaining NOC and its submission must be completed before the submission' of such proposals to Regional Office, provided that no such proposals in any case give rise to a situation of fate accompli or involved in violations of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 or other related Central or State Acts.
- (vii) Proposals of re-diversion falling in the RoW of roads, already put to non-forestry use, shall be dealt as per the guidelines given under chapter - 4 of the Handbook.

### **5.7 Transfer of approval granted to zudpi jungle lands**

In case of diversion of zudpi Jungle land used for public purpose/public infrastructure, encroachments excluding commercial purposes prior to 12.12.1996, the transfer of approval of diversion of forest land (which is not notified as Reserve or Protected Forest and status is a revenue land) shall under no circumstances be transferred to any other user agency, department or person without the prior approval of the State Government.

## CHAPTER-6.

### SURVEY, INVESTIGATION, PROSPECTING AND EXPLORATION

Survey means any activity to be taken up prior to initiating commissioning of a project or any activity undertaken for the purpose of exploring, locating or proving mineral deposits including coal, petroleum and natural gas before carrying out actual mining in the forest land, that includes survey, investigation, prospecting, exploration, including drilling therefor, etc.

**6.1 Order specifying the terms and conditions for undertaking surveys in forest areas:** As per the provisions of sub-section (2) of section 2 of the Adhiniyam, the surveys on the forest lands are not to be treated as a non-forest purpose subject to terms and conditions specified by order by the Central Government. Terms and conditions for not treating the surveys on the forest land as a non-forest purpose are given as under:

**S.O. 5075 (E).** In exercise of the powers conferred by sub-section (2) of section 2 read with section 3 C of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, (69 of 1980) (hereinafter referred to as said Adhiniyam), the Central Government hereby issues an order specifying the terms and conditions, subject to which any survey, such as, reconnaissance, prospecting, investigation or exploration including seismic survey, shall not be treated as non-forest purpose. These terms and conditions shall be followed by the State Government or Union territory Administration while considering exemptions provided under sub-section (2) of section 2 of the said Adhiniyam, namely:-

1. Surveys, including seismic surveys other than for mining purposes, to be undertaken in the forest lands for developmental projects such as hydro-electric projects, establishment of wind energy farms, transmission lines, railway line, etc. shall not be treated as non-forest purpose as long as these surveys do not involve any breaking of forest or cutting of trees and operations are restricted to clearing of bushes and lopping of trees branches for purpose of sighting, will not be treated as non-forest purpose. However, prior permission of the State Forest Department under the Indian Forest Act, 1927 (16 of 1927) or the State Forest Act will be obtained by the user agency concerned for entry and carrying out such surveys in the forest lands.
2. Surveys in the forest lands for mining purposes which involve breaking of forest land by way of drilling the bore holes and digging the trenches, such as for mining, shall not be treated a non-forest purpose as long as such surveys involve felling of up to hundred trees in the entire areas proposed for survey and drilling of twenty five boreholes of four inch diameter per ten square kilometre or eighty shot holes of six inch diameter per square kilometre in case of seismic surveys. Proposals involving felling of more than hundred trees or drilling of more than twenty five bore holes per ten square or more than eighty shot holes of six inch diameter per square kilometre shall require prior approval of the Central Government under the Adhiniyam.
3. Exploratory drilling of Petroleum Mining Leases, neither resulting into permanent change in the forest land use nor in production of hydrocarbon, shall also be exempted from the provisions of the sub-section (2) of section 2 of the Adhiniyam.
4. The State Government and Union territory Administration shall use the existing Forms developed by the Central Government for submission of proposals, and such proposals shall be processed for approval on the PARIVESH (ProActive and Responsive

facilitation by Interactive and Virtuous Environmental Singlewindow Hub) Portal in the light of sub-section (2) of section 2 of the Adhiniyam.

5. No surveys for mining of minerals shall be undertaken in the protected areas such as National Parks, Wildlife Sanctuaries, Tiger Reserves, Tiger Corridors. Survey in the protected areas for developmental projects other than mining shall be undertaken only after obtaining the approval of the Standing Committee of the National Board for Wildlife or as per the guidelines issued by the Central Government in this regard.
6. The State Government or Union territory Administration may authorise an officer not below the rank of the Deputy Conservator of Forests to receive and accept the proposals and process them through the Nodal Officer, dealing with the matters related to land transfer under the Adhiniyam for obtaining the approval of the Principal Chief Conservator of Forests, Head of Forest Force or an officer as may be authorised by the State Government or the Union territory Administration to grant approval.
7. In case the surveys involve felling of trees, as specified above, the user agency shall pay the cost of afforestation of trees, to the extent of hundred tree per bore hole along with maintenance cost of such plants for ten years. The State Government or the Union territory Administration shall ensure that the plants are planted on abandoned bore-hole areas or in the degraded forest land as per prescriptions given in the working plan.
8. In case of seismic surveys, the user agency shall bear the cost of plantation of two tall plants near the shot hole site along with the maintenance cost of such plants for ten years. The State Government shall ensure that the money charged shall be used to supplement plantation in degraded forest areas as per working plan prescriptions.
9. The Net Present Value, in respect of surveys, involving breaking of forest land, shall be charged and deposited into the account of State Compensatory Afforestation Fund Management and Planning Authority on the basis of impact area of a bore hole which is observed to be 0.1 ha per bore hole. Any variation from 0.1 ha area per borehole shall be informed by the user agency at the time of submission of the proposal.
10. Compensatory levies realised from the user agency shall be deposited into the account of the State Compensatory Afforestation Fund Management and Planning Authority of the State or Union territory Administration, managed by the National Compensatory Afforestation Fund Management and Planning Authority.
11. The amount to be realised towards the cost of Net Present Value shall be non-refundable and the said deposited amount of Net Present Value shall be adjusted against the estimated Net Present Value to be levied, in case approval is obtained for the diversion of the same forest land for mineral extraction, under clause (ii) of sub-section 1 of section 2 of the Adhiniyam.
12. No permanent change in the land use of the forest land shall be allowed. The Survey activities shall be carried out by the user agency temporarily and after completing the survey, the forest land will be reclaimed and restored to its original state.
13. The user agency shall use the existing forest roads for the transportation of machineries and materials and no new or fresh road will be constructed by the user agency in the forest area for undertaking surveys in the forest areas. The user agency shall also ensure the transport of machineries and materials manually in case of non-availability of roads.

14. The user agency shall submit a detailed plan of operation for prospecting or exploration or seismic survey in the entire forest area prior to the start of work to the Nodal officer of the State Government or the Union territory Administration.
15. The user agency shall commence and complete the surveys within a period of two years. In case, no commencement or completion of surveys work is undertaken by the user agency within a period of two years, the approval granted by the State or Union territory Administration shall stand rejected and the possession of the forest land will be taken over by the local Forest Department. However, the State Government or the Union territory Administration subject to submission of valid and cogent reasons for delay in commencement or completion of the project beyond two years by the user agency, can extend the period by another year.
16. Surveys proposals, involving violation of the Adhiniyam shall be dealt with in the following manner, namely:-
  - (i) Surveys in the forest land involving violation of the Adhiniyam shall not be covered under the provisions of sub-section (2) of section 2 of the Adhiniyam and such proposals shall be submitted for ex-post facto approval of the Central Government under the Adhiniyam:
 

Provided that proposals, where approval under sub-section (2) of section 2 of the Adhiniyam is under consideration of the State Government or Union territory Administration and a violation is committed by the user agency by commencing the project work, such proposals shall be subjected to the penal provisions by the State or Union territory Administration, as per the relevant provisions made by the Central Government in this regard;
  - (ii) Regional Office or their Sub-Offices, State Governments or the Union territory Administrations, under whose jurisdiction, the proposal involving violation of the Adhiniyam falls, shall take legal action against the offenders in accordance with the provisions of Section 3A and 3B of the Adhiniyam and the relevant guidelines issued by the Central Government in this regard;
17. The State Government or Union territory Administration prior to considering permission for surveys in the forest areas, shall ensure fulfilment and compliance of the provisions of all other Acts and rules made thereunder, as applicable to such surveys.
18. Detail of proceedings of the various authorities such as minutes of the meetings, copies of approvals granted, monitoring reports submitted by the user agency, pertaining to permissions granted for conducting survey in the forest areas, shall be uploaded on the PARIVESH portal by the State Governments or the Union territory Administration.
19. The State Government or Union territory Administration and the user agency shall monitor, at least once in every year, the compliance of conditions imposed while allowing the non-forestry use of forest land and a copy of such monitoring report shall be uploaded on PARIVESH portal for future references. Non-compliances, if any, observed during such monitoring, should be brought to the notice of the concerned authorities for undertaking remedial measures as per the relevant guidelines issued by the Central Government in this regard.
20. The proposals on forest land under litigation or *sub-judice* on account of an issue pertaining to the Indian Forest Act, 1927 (16 of 1927), Local Forest Act or said Adhiniyam shall be dealt as per the judgements or orders of the Courts or Tribunals in

such cases and the date of applicability of the Adhiniyam in various types of lands shall be in accordance with the direction, if so, passed by the Courts/Tribunals;

21. The legal status of the forest land proposed to be used for survey shall remain unchanged.
22. The State Government or Union territory Administration shall provide a copy of the approvals given under sub-section (2) of section 2 of the said Adhiniyam and shall also furnish, the details of proposals and such orders, as and when sought by the Central Government for information, record and monitoring.
23. The Regional Office of the Ministry, based on the available information provided by the State Government or Union territory Administration or as available on PARIVESH portal, can carry out monitoring of such proposals or works for compliance of relevant provisions of the said Adhiniyam and action taken thereunder;
24. The Central Government under section 3C of the said Adhiniyam may further clarify or issue directions to the State Government or Union territory Administration or to any organisation, as may be necessary with respect to these guidelines, for the implementation of the provisions of the said Adhiniyam.

**6.2 : Proposal not covered under the exemptions mentioned in para 6.1 above will be dealt in the manner, as prescribed below:**

- (i) Any investigation or survey operation, that involves the breaking of forest area or felling of trees, prior permission of the Central Government shall be obtained. For prospecting/exploration activity in the forest area which requires drilling of more than 25 boreholes of 4-inch dia per 10 sq km / 80 shot holes of 6.5-inch dia per sq km or felling of trees, the following guidelines will be followed:
  - a. The user agency shall apply for the diversion of forest area for seismic/prospecting/exploration surveys in the prescribed Form.
  - b. In case of seismic/prospecting/exploration surveys in forest land having vegetation density up to 0.7, the State Government shall forward the online application to the concerned Regional Office of the Ministry for approval. The REC will consider such proposals and grant or reject approval on the merits to such proposals. Proposals in respect of forest land involving vegetation density more than 0.7 shall be submitted to the MoEF&CC, New Delhi for prior approval under the Adhiniyam.
  - c. NPV, in respect of prospecting/exploration shall be charged on a borehole basis. It is noted that for each borehole an area of approximately 0.1 ha is impacted by various activities that are undertaken during prospecting/exploration. Any variation from 0.1 ha area per borehole shall be informed by the User Agency at the time of submission of the proposal.
  - d. The amount of NPV and/or payments towards planting of trees, shall be deposited online in the account of State CAMPA, managed by the National Authority (CAMPA), as per the instructions issued by MoEF&CC from time to time.
  - e. Amount of NPV deposited in the stipulated Government account is non-refundable. However, the NPV deposited for prospecting in the area will be

adjusted against the estimated NPV to be levied, in case approval is obtained for the diversion of the same forest land for mineral extraction, under section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

- f. Permission for carrying out prospecting/ exploration/seismic survey or any payment of NPV deposited for such operations will not confer any right with the user agency to get forest clearance of that particular land under Section 2(ii) of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. All decisions will be taken on merit as per the procedure prescribed in Van (Sanraksha Evam Samvardhan) Rules, 2023, as amended up to date.
  - g. User agency shall submit a complete plan of operation for prospecting/exploration/Seismic survey in the entire forest area prior to the start of work to the Nodal officer of the State.
  - h. User agency, as the case may be, shall prepare a plan to plant 110 tall trees per borehole (each borehole estimated to have an impact area of 0.1 ha), only if the number of boreholes proposed to be drilled is beyond the specified limit i.e. 25 boreholes per 10 sq km. The cost of preparation of the plan and plantation shall be borne by the user agency. The state government shall ensure that the plants are planted on abandoned bore-hole areas or degraded forest land as per prescriptions of a working plan.
- (ii) Any permission given to survey, exploration or prospecting will not *ipso facto* imply any commitment on the part of the Central Government for the diversion of forest land.

### **6.3: Guidelines specific to the hydrocarbon sector for undertaking seismic surveys and exploratory drilling in the forest:**

- (i) Vehicle/tractor-mounted drilling rig equipment can be allowed only for the drilling of shot holes in the grids which falls in an open area and which are adjoining to existing forest paths after due permission of the local forest officer. In other areas, manual drilling through Dekhi/ tripod structure with a jet flesh unit or portable mechanical (rig) drilling machine may be allowed. The vehicle carrying the compressor and observation trucks shall be parked in open areas.
- (ii) No tree felling and construction of new roads will be allowed. However, the user agency can use the existing forest roads/paths with the permission of a local forest officer.
- (iii) User agency shall plant at least two tall plants near the shot hole site before leaving the site. In case it is not possible to do the same then the user agency shall deposit cost of two tall plants along with 10 years maintenance cost per shot hole with concern DFO. State Government shall ensure that the money charged shall be used to supplement plantation in degraded forest areas as per working plan prescriptions.
- (iv) *Prima facie* the activity does not cause any permanent damage. The user agency shall take all precautions so that the contractor and labour engaged by them do not cause any damage to the flora and fauna of the area. Any incidence of damage by the staff/ labour/contractors of user agency shall be treated as negligence on the part of the user agency and shall be dealt as per law.
- (v) Permission granted for conducting a seismic survey over forest land shall in no

manner be construed as surety for getting actual diversion of forest land under clause (ii) of sub-section (1) of section 2 of Van (Sanrakshan Evam Samvardhan) Adhiniyam 1980. Such cases shall be considered independently on merits on case-to-case basis.

- (vi) The process of exploration drilling for hydrocarbon in a 130 m x130 m area causes total damage to vegetation (both flora and faunal elements) in the area and cannot be considered as temporary vegetation change. It is a case of proper diversion for the purpose of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and must be considered for processing with application in Form A and not under Form C. This will enable the user agency to use the area fully and can change the land use "within the diverted area if the change in the land use plan is approved by any Government agency.
- (vii) The approach road to the exploratory site shall be part of the total proposal.
- (viii) No prior approval is required for the assignment of a Petroleum Exploration license or Petroleum Mining Lease where neither physical possession nor breaking of forest land is involved. Except exploratory drilling neither resulting into permanent change in the forest land use nor in production of hydrocarbon, for all activities such as the establishment of exploration or developmental wells and connected activities on the forest land, approval under clause (ii) of subsection (1) of section 2 of the Adhiniyam shall be obtained for the actual impact area as per the procedure specified under the Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued by the Central Government.
- (i) In respect of proposals which have been diverted under clause (ii) of sub-section (1) of section 2 for non-forestry use and where drilling and development/explorations/extraction has been proposed in the existing and diverted well sites, subsequent change in the use from exploratory drilling to extraction (exploitation) can be undertaken subject to the approval of the change in land use by a concerned Government agency of the State. Pursuant to the approval of the change in the land use by a competent authority of the State Government, the change in land use in the already diverted area can be undertaken by the user agency.

**Note:**

Guidelines specific to the hydrocarbon sector for undertaking seismic surveys and exploratory drilling in forests shall also be applicable to seismic surveys for the purpose of prospecting for different minerals including coal also.

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## CHAPTER 7

### MINING PROJECTS

**7.1** Extraction of minerals from/beneath the Earth's surface is an important site-specific activity regulated under various acts viz. Mines and Mineral (Development and Regulation) Act through grant of mining leases, or allocation of areas acquired under Coal Bearing Area Act, Petroleum & Natural Gas Rules under the Oil Field (Regulation and Development) Act 1954. Mining, including open cast and underground mining as also for removal of boulders, bajri, stones, sand etc. from/in the river beds, is a non-forestry activity and if any mining lease/project involves forest land as defined by the Apex court in its order of 12.12.1996, prior approval of the Central Government is required under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and rules made there under.

**7.2 Order specifying the terms and conditions for assignment of forest land on lease:**

**S.O. 5076 (E).** In exercise of the powers conferred by clause (iii) of sub-section (1) of section 2 read with section 3C of the Van (Sanrakshan Evam Samvardhan), Adhiniyam, 1980 (69 of 1980) (hereinafter referred to as the said Adhiniyam), the Central Government hereby issues an order specifying the terms and conditions, to be abided by the State Government or Union territory Administration while considering the proposals pertaining to assignment of forest land on lease to Government as well as the private entities under the aforementioned provisions of the said Adhiniyam, namely:-

1. The user agency shall make an online application in the prescribed Form on PARIVESH portal for the prior approval of the Central Government under the said Adhiniyam.
2. No forest land shall be assigned on lease without the prior approval of the Central Government under clause (iii) of sub-section (1) of section 2 of the said Adhiniyam.
3. In case of assignment of forest land on lease for mining, no breaking of forest land shall be allowed, however, breaking of forest land to a limited extent such as plantation of trees, and temporary or non-permanent construction may be allowed in case of assignment of forest land on lease for a purpose other than mining;
4. Mining operations in the forest land located within the mining lease can be undertaken only after obtaining the approval for diversion of the forest area under clause (ii) of sub-section (1) of section 2 of the said Adhiniyam following the procedure prescribed under the rules made thereunder.
5. The user agency seeking assignment of forest land for mining shall submit Mining Plan, approved by the competent authority, indicating the detailed pre-mining and post mining land use plan, mine Closure Plan and for activities other than mining a Detailed Project Report or Plan indicating the activities proposed on the forest land shall be submitted by the user agency along with the proposal.
6. Grant of approval under clause (iii) of sub-section (1) of section 2 of the said Adhiniyam does not, in any manner, create any right or equity in favour of the user agency for grant of approval under clause (ii) of sub-section (1) of section 2 of the said Adhiniyam and decision on the proposals under clause (ii) of sub-section (1) of section 2 shall be taken on the merit or the facts reported in the site inspection reports on case to case basis.

7. In case of existing mining leases having forest land in part or in full, for which mining lease has already been executed at least once before 1<sup>st</sup> April, 2015 without prior approval of the Central Government under the said Adhiniyam, no mining shall be allowed till approval under clause (ii) of sub-section (1) of section 2 of the said Adhiniyam for the entire forest land falling in such mining lease is obtained, Net Present Value of forest land falling in such mining leases as stipulated in such approval is realised from the user agency and provisions of other applicable statutes are complied with by the user agency.
8. Compensatory levies realised from the user agency shall be deposited into the account of the State Compensatory Afforestation Fund Management and Planning Authority of the State or Union territory Administration, managed by the National Compensatory Afforestation Fund Management and Planning Authority.
9. The validity of approval granted for the assignment of forest land on lease shall be valid for a period co-terminus with the period of mining lease granted under the relevant statute or for the period as may be specified by the Central Government.
10. The approval granted for the assignment of forest land on lease for mining shall become null and void in case no proposal seeking approval under clause (ii) of sub-section (2) of section 2 of the said Adhiniyam is submitted by the user agency within a period of two years from the date of issue of order of assignment of corresponding forest land on lease.
11. In case of assignment of forest land on lease for a purpose other than mining, a draft Memorandum of Understanding or draft lease deed to be signed between the user agency and the State Government shall be prepared and submitted along with the details of lease rent, if applicable.
12. The activities proposed to be undertaken by the Forest Department as per the prescriptions made in the working plan shall be continue to be implemented in the area to be considered for the assignment of lease.
13. Raising of plantations by the Government Department on the land recorded as forest in the Government records shall be considered as forestry activity and accordingly, provisions of the compensatory afforestation and Net Present Value shall not be applicable for such plantation activities.
14. Raising of commercial plantations of low rotation, including plantation of medicinal plants in the forest land shall be considered as non-forestry activities and in such cases prior approval of the Central Government under clause (iii) of sub-section (1) of section 2 shall be obtained and decision on such proposals will be undertaken by the Central Government on the merits of each case. Provisions of compensatory afforestation and Net Present Value shall be applicable in such cases.
15. Approval granted under clause (iii) of sub-section (1) of section 2 of the said Adhiniyam does not in any manner exonerate the authorities in the State Government or any other authority from the proceedings under section 3A and 3B of the said Adhiniyam liable to be initiated for violation, if any, committed by them by assigning such forest land for mining lease without obtaining prior approval of the Central Government under sub-section (1) of section 2 of the said Adhiniyam.
16. The proposals on forest land under litigation or *sub-judice* on account of an issue pertaining to the Indian Forest Act, 1927 (16 of 1927), Local Forest Act, or said

Adhiniyam shall be dealt as per the orders, Judgements passed by the Courts or Tribunals in such cases and the date of applicability of the Adhiniyam in various types of lands shall be in accordance with the direction, if so, passed by the Courts/Tribunals.

17. The State Government or Union territory Administration and the user agency shall monitor, at least once in every year, the compliance of conditions imposed while allowing the non-forestry use of forest land and a copy of such monitoring report shall be uploaded on PARIVESH portal for future references. Non-compliances, if any, observed during such monitoring, should be brought to the notice of the concerned authorities for undertaking remedial measures as per the relevant guidelines issued by the Central Government in this regard.
  18. The Regional Office of the Ministry, based on the available information in Ministry or on PARIVESH portal, can carry out the monitoring of approvals accorded under clause (iii) of sub-section (1) of section 2 of the said Adhiniyam and action taken thereunder.
  19. The provisions of the all other Acts, including the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 ( 2 of 2007) shall be complied with before the assignment of forest area on lease by the State Government or Union territory Administration.
  20. The legal status of the forest land to assigned on such lease shall remain unchanged.
  21. The Central Government under section 3C of the said Adhiniyam may further clarify or issue directions to the State Government or Union territory Administration or to any organisation, as may be necessary with respect to these guidelines, for the implementation of the said Adhiniyam.
- 7.3** The Supreme Court of India in its order of 6<sup>th</sup> July 2011 issued guidelines so as to not create *fait accompli* situation in the matter of diversion of forest land under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Therefore, in the case of new mining leases/projects having forest land in part or in full, approval under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of entire forest land located within the mining lease/project is to be obtained before execution/renewal of mining lease/project.

**7.4** Mining in respect of minerals (other than coal, lignite, and atomic minerals) regulated under MMDR Act:

- (i) **Validity of approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980:-** In case of existing mining leases, where approval under section 2 (ii) of the Van (Sanrakshan Evam Samvardhan) Adhiniyam for the entire forest land in the mining lease has been obtained before 1.4.2015, the validity of approval granted under the Adhiniyam is deemed to have been extended for a period co-terminus with the validity of mining lease granted in accordance of the provision of the MMDR Act. The State Governments concerned may extend the validity of approvals granted under the Adhiniyam to the Government companies for mining under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 to make it co-terminus with validity of the lease granted under the MMDR Act, 1957. But, in case the user agency changes during the on-going term of validity of the lease, the State Government concerned shall obtain prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

- (ii) In case of mining leases having forest land in part or in full, the concerned user agency may execute a single mining lease in accordance with the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 and the Rules framed there under, for the entire area falling in the mining lease after obtaining the 'Final' approval under clause (ii) of subsection (1) of section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for the entire forest land falling in such mining lease is obtained. However, the State Government, if so desires, may execute a separate mining lease for a whole or part of non-forest land falling in such mining lease, once "in-principle" approval under subsection (1) of section 2 of the Adhiniyam for the entire forest land falling in such mining lease is obtained. The Government, in such cases, shall take all measures to ensure that no violations of the Adhiniyam occurs on the forest land.
- (iii) The existing period of validity of forest clearance granted for diversion of forest land under clause (ii) of subsection (1) of section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for mining of minor mineral in the State regulated under Rules made under section 15 of MM (DR) Act, 1957 shall be for a period co-terminus with the period of mining lease as deemed extended under the Rules made under section 15 of MMDR Act, 1957 subject to the following conditions:
- (a) The State Government shall, realize from the user agency the Net Present Value (NPV) of the forest land so diverted, if not realized so far, within two years w.e.f 1.04.2015 in two equal instalments from the date such Rules became enforceable.
  - (b) In case of NPV of forest land for which a period of approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 has been extended has not been realized and the State Government fails to realize the same within the period of two years as per the clause (a) above, approval under the Adhiniyam for such forest land shall be deemed to have been kept in abeyance, till such time, the NPV of such forest land is realized by the State Government and all mining operations shall be suspended during the period for which approval granted under the Adhiniyam has been kept in abeyance.
  - (c) In case where diversion of forest land has been accorded in single proposal to a State agency for cluster of mines assigned to more than one lease holder, the entire NPV as applicable shall be deposited within two years in two equal instalments by the State agency in whose favour the FC has been granted.
  - (d) The Regional Office of the Ministry shall regularly monitor status of compliance to conditions stipulated in approvals accorded under the Adhiniyam for diversion of forest land falling in mining leases so as to ensure that the user agencies comply with all the conditions before the land falling in such leases is surrendered to the concerned State Government/Union Territories on expiry of the mining lease.
  - (e) 'Provisions' provided hereinabove, notwithstanding anything contained therein, shall not apply to forest land falling in a mining lease for which renewal has been rejected, or which has been determined or lapsed before 30.11.2017.
- (iv) In light of the provisions provided under Section 8B of the Mines and Minerals (Development and Regulation) Amendment Act, 2021, related to the validity of the approvals granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and with a view to align the provisions under the two Acts, transfer of approval under the Adhiniyam granted to erstwhile lessee in respect of mining leases, which have been

allotted to successful bidder through auction after expiry of their validity under the MMDR Act, may be considered subject to the following conditions:

- (a) Complete compliance of such terms and conditions as stipulated in the approval granted previously under the Adhiniyam, and rules and guidelines framed thereunder in respect of the concerned mining lease has been made.
  - (b) The non-compliance of conditions, if any, stipulated in the approval granted to the erstwhile agency under the Adhiniyam, which were required to be complied before handing over the forest land to such agency, shall be transferred as liabilities to the new allottee, and in such case, complete compliance of such conditions shall be made prior to handing over of forest land to the new allottee. For the remaining conditions, the new allottee will make an undertaking to comply with, before handing over of the forest land. It is clarified that in case of violation of any of the conditions which was done during the period of previous allottee and which constitutes an offence under the Adhiniyam, the penal clauses will be invoked against the previous allottee only and not against the new allottee.
  - (c) Approval under the Adhiniyam was valid on the date of expiry of previous lease.
  - (d) Mining operations will be restricted to the forest area for which approval under clause (ii) of subsection (1) of section 2 of the Adhiniyam has been obtained by the erstwhile user agency. No non-forest use of such forest lands falling within the lease shall be allowed, for which approval under aforementioned clause of the Adhiniyam has not been obtained by the State Government. Mining in such areas may be allowed only after obtaining prior approval of the Central Government under the aforementioned clause of the Adhiniyam.
  - (e) The State Government shall ensure that the amount of Net Present Value, Safety Zone Plantation and Compensatory Afforestation (CA), if not deposited earlier, has been deposited prior to handing over of the forest land to the new allottee. Also, in case the CA land has not been made available previously, the forest land shall be handed over to the new allottee only after the corresponding CA land has been accepted by the competent authority as per the extant procedures for acceptance of CA lands for a new proposal.
  - (f) Mining operations and other activities shall be carried out as per the land-use allowed in the approval under the Adhiniyam. Any change in the land use on account of any valid reason shall be effected with the prior approval of the Central Government.
  - (g) Reclamation of the mined out forest area in the whole lease area as per the approved Mining Plan shall be an obligatory condition for the new allottee.
  - (h) Transfer fee, as prescribed in the relevant guidelines incorporated in the Handbook of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 shall be realized from the new allottee and deposited into the account of CAMPA of the State concerned.
  - (i) Transfer of approvals to new agency may be accorded by the concerned State Government/UT Administration subject to fulfilment of conditions/provisions stipulated in the relevant guidelines of the Ministry.
- (v) Provision of above guidelines will be applicable in the case of a Category 'A' and 'B' mining leases of Karnataka provided such leases have valid approval granted under the Adhiniyam on the date of expiry of the lease.

(vi) The mining operations in Category C mines were stopped by the Hon'ble Supreme Court and subsequently after their auction to successful bidders, the Hon'ble Supreme Court issued directions containing procedures to resume mining operations in these leases. After a holistic review of the situation, the Central Government hereby issues the following guidelines:

- a) Approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 to erstwhile user agency may be transferred by the Ministry in favour of the successful bidder in MoEF&CC, New Delhi on case to case basis in accordance with the provisions of the MoEF&CC's guidelines dated 7.07.2021. The State Government while submitting such proposals for transfer of approval to the Ministry shall submit the updated status and detail of compensatory afforestation, status of payment of NPV, implementation of Reclamation and Rehabilitation Plan, funds utilization by the Special Purpose Vehicle for the conservation and protection of forests, action taken report on the violations of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 committed by the erstwhile agency and status of approval of the forest land located in the safety zone.
- b) In respect of mining leases where application of transfer of approval was made in time and the Ministry considered the transfer request but the validity of FC approval was assessed from the date of original period of grant of lease while the successful bidder has been issued fresh LoI for a period of 50 years. In such cases, the ex-post facto approval will be granted by the MoEF&CC for extending the validity of approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 to make it co-terminus with the validity of lease granted under the MMDR Act, 1957 provided compliance of all conditions stipulated in the FC approval granted to erstwhile agency including raising of CA and payment of NPV are complied with by the State and the user agency. In case of non-compliances, if any, the working permission with conditions for a period not exceeding one year will be granted by the Central Government to enable the State/user agency to comply with the conditions of approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as per the extant guidelines issued by the Ministry.
- c) In case the State Government/user agency fails to submit the complete compliance of conditions stipulated in the approval granted to erstwhile agency within a period of one year, the approval of the Central Government granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be deemed to be cancelled.

**7.5 Mining in respect of atomic minerals regulated under MM(DR) Act, 1957:** In case of existing mining leases in respect of Atomic Minerals specified in Part B of the First Schedule of the Mines and Minerals (Development and Regulation) Act, 1957, period of validity of approvals, Mineral Concessions Rules 2016 accorded under the Section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be extended and shall be deemed to have been extended up to a period co-terminus with the period of mining lease or a period of 50 years, whichever is earlier from the date of notification of the Atomic Mineral Concessions Rules, 2016 i.e. 11<sup>th</sup> July 2016, subject to the following conditions:

- (i) Realization of NPV by the State Government, if not already realized, within the period specified by the MoEF&CC i.e., on/before 25.02.2018.
- (ii) In case NPV has not been already realized and the State Government fails to realize NPV as mentioned in (i) above, approval accorded under Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be kept in abeyance till such time NPV is realized.
- (iii) These provisions notwithstanding anything contained therein, shall not apply to forest land falling in a mining lease for which renewal has been rejected, or which has been determined or lapsed.
- (iv) In the cases, where the forest Clearance has expired and has not been renewed, fresh forest clearance under Van (Sanrakshan Evam Samvardhan) Adhiniyam would be mandatory required before renewal of the mining lease.

### **7.6 Mining of minor minerals**

- (i) Extraction of minor minerals like boulders, bajri, stone, shell, etc. from the riverbeds shall not be permitted if the river bed is in a national park or a wildlife sanctuary unless such extraction is for the benefit of the forest or wildlife. Extraction of minor minerals when permitted shall be from the middle of the riverbed after leaving one fourth of the river bed on each bank untouched.
- (ii) There shall be no labour camp in the forest area for the labour involved in the extraction work.
- (iii) The State Government and Union territory Administration shall ensure that besides procedures prescribed in the extant Handbook, proposals for mining of minor minerals are formulated in accordance with the Sustainable Sand Management Guidelines, 2016 and Enforcement and Monitoring Guidelines for Sand mining, 2020 issued by the MoEF&CC.

### **7.7 Coal mining**

- (i) User Agency shall apply for diversion of forest land for coal mining under the relevant provisions of the Adhiniyam, in respect of entire forest land within a coal mine project in the case of coal mines in/over an area vested in a Government Company under the Coal Bearing Area (Acquisition and Development) Act 1957, or a coal mine vested in a Government under the Coal Nationalization Act 1973, or a coal block allotted under the Coal Blocks Allocation Rules, 2017 notified under the MMDR Act 1957, including at the time of renewal of mining leases.
- (ii) The validity of clearance granted under the Adhiniyam shall be coterminous with the life of the mine as per the approved mine plan subject to a maximum of 30 years as provided in the MMDR Act, 1957 as amended up to Mines and Minerals (Development and Regulation) Amendment Act, 2015.
- (iii) In case of existing coal mining leases, period of validity of approvals accorded under clause (ii) of subsection (1) of section-2 of the Adhiniyam, 1980 shall be extended and shall be deemed to have been extended up to a period co-terminus with the period of mining lease granted under the provisions Mineral Concession (Amendment) Rules, 2021:
  - a) Realization of NPV by the State Government, if not already realized, within the period specified by the MoEF&CC.
  - b) In case NPV has not been already realized and the State Government fails to realize NPV as mentioned in (i) above, approval accorded under The Van

(Sanrakshan Evam Samvardhan) Adhiniyam shall be kept in abeyance till such time NPV is realized.

- c) These provisions notwithstanding anything contained therein, shall not apply to forest land falling in a mining lease for which renewal has been rejected, or which has been determined or lapsed.
- d) In the cases, where the forest Clearance has expired and has not been renewed, fresh forest clearance under The Van (Sanrakshan Evam Samvardhan) Adhiniyam would be mandatory required before renewal of the mining lease.

(iv) **Commencement of mining operations in non-forest land after ‘in-principle’ approval :** In case of coal mining leases involving forest as well as non-forest land, the mining operations in non-forest land can be commenced by the User agency subject to compliance of conditions, as mentioned in para 1.9 of Chapter-1 of the Handbook.

### 7.8 General guidelines for mining proposals:

- (i) It has been observed by the Central Government that a large number of proposals relating to mining are submitted which are located deep inside the forest areas. Locating such proposals inside makes entire forest area vulnerable due to ancillary activities like construction of approach road, movement of vehicles and coming up of colonies for the workers. Therefore, Ministry has decided that whenever a proposal for fresh mining is submitted, a brief profile of the lessee/company should be submitted giving details of their existing mining leases in the State with their capacity of production, the present level of average annual production, location of these pits and the status of reclamation of forest land that are exhausted minerals. Along with this, the State Government should also submit details of all other mining leases for that particular mineral with their capacity and average annual production and projected future requirements. They should fully justify the necessity of opening new mining leases for that particular mineral. Mining proposals in forest areas in respect of coal and other major minerals should be accompanied with the following documents: -
  - a) **In respect of underground mining in stratified deposits in forest areas :** The mining plan in stratified deposits in forest areas should include the predicted subsidence, slope and strain values and their impact on forests and surface and their mitigation. The maximum tensile strain of 20 mm per meter and thereby the surface cracks of width of about 200-300 mm is to be permitted in forest areas. Accordingly, the mining plans should be made to restrict the subsidence movement within these limits along with mitigation measures. All mining plans in respect of coal and other major minerals should be accompanied with numerical modelling in 3-Dimension for subsidence prediction through an expert mining engineer/organization to assess long term damage on surface vegetation due to underground mining preferably from Banaras Hindu University, or Indian School of Mines, Dhanbad, or any of the IITs or M/s CMRI along with the mitigation measures suggested by them should be submitted along with the proposal. The surface layout of mining area should be designed so as to use minimum possible land; and wherever feasible, the surface facilities should be planned over non-forest areas.
  - b) In case of proposals pertaining to the underground mining, the user agency shall submit an undertaking along with proposal for the diversion forest land that under no circumstances the underground mining operations will be converted to opencast mining operations on the said forest land at a later date.

- c) **Open cast mining in forest areas:** In respect of open cast mining in forest areas, a comprehensive study of solid waste management and land reclamation with post mining land use plan and decommissioning should be made and the plan should envisage the minimum possible overburden dumping outside the mine. In place where the non-forest land is available, the external dumping of the overburden should be planned on non-forest land. Special attention should be given to top-soil and sub –soil handling and management.
- d) Installation of temporary Crushing and screening Plants in mining lease area already approved by the Central Government shall be subject to following guidelines:
1. To suppress the fugitive dust at the crushing screen mobile plant, special water jets with mist spray should be provided at dumper platform crusher, screens, transfer points and unloading points. At all transfer points sprinkling of water with the help of spray nozzles will be done to suppress fugitive dust.
  2. In sensitive areas, mobile crusher screening unit(s) should adopt wet dust suppression measures augmented by foam injection to control dust from the material handling and processing operations, if found necessary.
  3. As an administrative control, any movement of these mobile plants should be informed to the State Pollution Control Board or the Regional Office of the MoEF&CC to keep a track of their location and monitor/check pollution control measures taken by the operator.
  4. As far as possible, no such unit should be located within 02 kilometers from the Forest/Colony/NH or SH without effective wet suppressing measures at the crusher, screening, transfer and uploading points.
  5. There should be sufficient safeguards against noise pollution and safe noise level should be maintained.
  6. If found necessary for better control in such location, prior permission to operate, shall be taken from the State Forest Department and the State Pollution Control Board.
  7. Since all these are mobile operations, the local administration and forest official should be kept posted with the change of location and possible time period of its operations within leasehold.
- e) Any proposal for diversion of forest for mining involving any forest land in respect of which diversion has been approved earlier will invariably be submitted along with the present status of compliance of the conditions of all previous FCs duly certified by the concerned Regional Officer of the MoEF&CC.
- f) Approach road/conveyor belt and other ancillary activities related to mining shall be considered as part of the mining project and should therefore be processed accordingly. However, supplementary linear projects linked to mining that are conceived after the start of the original mining, should be considered as a standalone linear project and decisions on according approval for those shall be made at the REC/IRO concerned as per provisions provided in the Van (Sanrakshan Evam Samvardhan) Rules, 2023. However, to ensure that the sanctity of such delegation is maintained, the following may be complied with by the all concerned:
1. All forthcoming forest clearance proposals (both for green field mining as well as brown field expansion) shall have an additional column for the project proponent to certify that they have critically examined the mineral extraction pathways and have found them to be adequate, and that no new extraction path outside mining area shall be proposed in the next five years.

2. As far as possible, existing roads/ rails/ belts should be strengthened to minimise forest / tree cover loss.
3. In case of later-stage supplementary proposal for extraction path (linear projects such as road/ rail/ **conveyer** belt project **including the loading/unloading point**), the concerned Regional Officer shall ensure that cogent and convincing reasons/justifications of not including such linear infrastructure at the inception stage are provided by the State Government/UT Administration.
4. The State Government/User agency shall ensure that dispensation considered by the Ministry is not misused in any way and likely tendencies to detach linear projects from main proposal of mining should not be encouraged. To the extent possible, linear infrastructure such as roads/railways/conveyor belts, etc. ancillary to mining should be included in the main proposal and under inevitable circumstance only, such proposals submitted by the user agency should be considered as standalone project.

**(iii) Guidelines for preparation of Cluster Mining Proposals:**

- a) Cluster proposal may be prepared for such leases, which have all contiguous boundaries.
- b) All the existing mining proposals/fresh proposals in pipeline be included in that forest lands, if within.
- c) States will take individual proposals from different lessees in the proforma with relevant documents.
- d) However, with covering letter, a comparative statement of all mines with area and other details be given and all leases with boundaries be shown on one map.
- e) Even existing approved leases be included in the proposal so that they can be brought to the same time frame in term of their validity.
- f) The condition of compensatory afforestation will apply on the basis of each individual lease rather than on pro-rata basis.
- g) The safety zone shall be at the outer boundary of the cluster and condition of safety zone will apply on pro-rata basis.

**7.9 Management of Safety Zone of mining lease:**

- (i) All mining projects, including cluster-mines, except underground mining leases, are required to have a 7.5-meter-wide peripheral safety zone (**along the inner boundary**) within the Mining Lease area, properly demarcated with boundary pillars with DGPS coordinates inscribed on them and to be maintained as effective green belt.
- (ii) The minimum width of 10m and 50 m strip on either side of public road and natural stream respectively located inside the mining lease shall be protected but will not be considered as a part of safety zone. Actual width of the strip to be maintained will be decided by the AC subject to the minimum width as mentioned above.
- (iii) Unlike conventional mining leases granted under the MMDR Act, 1957 the petroleum mining leases involve large areas which runs in hundred of square kilometres. Therefore, it may not be prudent to maintain a safety zone around the entire PML. In such leases, the safety zone of 7.5 meter wide strip along the inner boundary of impact areas of a drilling bore hole(s) or oil well pad shall be maintained by the user agency as green belt by undertaking plantations or allowing the natural regeneration to come up.

In addition, the hazardous zone around the bore well, oil pads or pipelines or other ancillary infrastructure should be maintained by the various user agencies engaged in the mining or transportation of mineral oil as per the norms stipulated in the Oilfields (Regulation and Development) Act, 1948, and rules framed thereunder.

- (iv) All mining projects for which diversion of forest land have been approved before 27<sup>th</sup> May 2015, the UA should have obtained approval of forest land in the safety zone. However, to enable various user agencies to obtain approval of safety zone, an opportunity was given by the Ministry for the user agencies to deposit NPV (for forest area located in the safety zone) by 31.03.2023 along with simple interest of 12% w.e.f. 1.04.2018 onwards till the deposit is made and to obtain approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of forest area located in the safety zone by 30.09.2023.
- (v) Such cases where the proposal for the diversion of forest areas within the safety zone has been submitted by 30.09.2023, the time period for obtaining approval under Adhiniyam has been extended further till 30.09.2024. In cases where the proposal for the diversion of forest land within the safety zone has not been submitted by 30.09.2023, the User agency shall deposit one-time penal NPV + Normal NPV (with interest if applicable w.e.f. 31.03.2023) and obtain the approval under the Adhiniyam for the forest areas within the safety zone latest by 30.09.2024. Further, in case the required compliance is not done even till 30.09.2024, approval under the Adhiniyam in such case shall be considered deemed to be in abeyance and possession of forest land located in the safety zone would be considered as violation of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and appropriate penalties to be imposed on defaulting user agencies as per the relevant penal provisions provided in Chapter-1 of the extant Handbook. The IROs concerned will monitor the compliance in the matter and submit six monthly report to the Ministry.
- (vi) Provisions of the raising compensatory afforestation, as applicable in the entire forest area proposed for diversion, will be applicable in lieu of forest land located in the safety zone as well.
- (vii) Any forest land within the safety zone if proposed for any other non-forest use shall require prior approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 along with other forest land in the ML for execution of ML under MMDR Act, 1957 as amended from time to time.

#### **7.10 Extended Reach Drilling Technology**

Based on the report on Extended Reach Drilling (ERD) technology submitted by the Directorate General of Hydrocarbon on the assessment of ERD on the surrounding flora and fauna and general Standard Operating Procedure (SOP) suggested by the Wildlife Institute of India containing the precautionary measures to be followed while carrying out drilling beneath the forest area using the ERD technology, the Central Government, hereby, accept the report submitted by the Directorate General of Hydrocarbon recommending to exempt the Extended Reach Drilling Technology from the purview of the Van (Sanrakshan Evam Samvardhan)

Adhiniyam, 1980 to undertake drilling in the forest areas, located outside the Protected Areas and Eco-sensitive Zones, subject to fulfilment of the following conditions:

- (i) The station for ERD will be setup outside the forest area at a minimum distance of 500 meters and which should be atleast 1 Km from the Protected Areas /corridors/wildlife sensitive areas.
- (ii) The State Government shall ensure that the recommendations made in the General Standard Operating Procedures, annexed as **Annexure-III**, submitted by the Wildlife Institute of India will be complied with strictly by the User Agency.
- (iii) The DGH will facilitate the formulation of detailed regional-specific guidelines by the Wildlife Institute of India. The necessary financial support, as will be required by the WII, will be arranged by the DGH.
- (iv) The Region-Specific guidelines, as may be prescribed by the WII, will be complied with by the User Agency and DGH. An undertaking in this regard, wherever applicable, will be obtained by the State Government while allowing drilling through ERD technology.
- (v) The exemption considered for the ERD technology will not be applicable if the drilling area falls inside the Protected Areas notified under the Wild Life (Protection) Act, 1972 and Eco-Sensitive zone of Protected Areas.

#### 7.11 Miscellaneous:

**(i) Forest Conservation issues emanating from the inclusion of new mineral to be mined out from the already approved area without changing land use of forest land:**

- (a) Since there is no change in the land use and forest area involved in the proposal, revised Stage-I approval need not be obtained in such cases.
- (b) Addition of minerals may have incremental but substantial impact on the surrounding vegetation, by way of increased pollution loads; therefore, such a proposal needs to be examined on case-to-case basis for modification of terms and conditions stipulated in the Stage-II approval by the Ministry.
- (c) The user agency should accordingly approach the Ministry for modification in Stage-II approval in such cases subject to Environmental Clearance, in case required.

**(ii) Guidelines related to re-grassing of mining leases after ceasing mining activities:**

Hon'ble Supreme Court vide its order dated 8.01.2020 passed in Writ Petition (Civil) No. 114/2014 - Common Cause Vs. Union of India wherein Hon'ble Supreme Court, taking cognizance of the deleterious effect of mining on vegetation, has observed that *mined out areas results in complete elimination of grass which in tum denies fodder for the herbivores*. In compliances of the order from Hon'ble Supreme Court regarding imposing a suitable condition in this regard in addition to existing conditions already imposed in the relevant statutory approvals, following condition is hereby stipulated, in addition to standard conditions imposed in the approvals accorded by the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980:

*The mining lease holder shall, after ceasing mining operations, undertake re-grassing the mining area, and any other areas which may have been disturbed due their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna, etc.*

**(iii) Law Department advice / Court orders about mining leases.**

In respect of the mining operations being carried out on forest lands leases before the commencement of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 during the continuance of the lease period, the approval of the Central Government under Section 2 of the said Act is not required.

A renewal of a lease is really the grant of a fresh lease. (See Delhi Development Authority Vs. Durga Chand Kausish, AIR 1973 SC 2609). The prior approval of the Central Government in terms of Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 would be required when a mining lease granted before the commencement of the said Act is renewed after its coming into force.

As held by the Supreme Court in State of Bihar Vs. Banshi Ram Modi (supra), prior approval of the Central Government in terms of Section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 would not be required for mining and winning any new mineral from a forest land leased for mining before the commencement of the said Act during the leased period originally granted, if the said land is already broken up or cleared before the commencement of the Act. Otherwise, the prior approval of the Central Government under Section 2 of the said Act would be required.

Further clarified that the provisions of CA will be applicable in respect of broken up forest area before the commencement of Act, 1980 or which came under the ambit of Adhiniyam post 12.12.1996 and which are continued to be under the possession of the user agency, in case the CA has not been raised earlier. However, in such cases temporary working permission may be granted for a maximum period of one year after deposit of all statutory dues, in order to enable complying with other conditions. It is clarified that final approval will be granted by State Government only after compliance of all conditions is submitted.

- (iv) In such cases wherein in 2 or more than 2 mining leases are been amalgamated and made into single mine, the State Govt. shall submit an amalgamated Mining Plan.
- (v) Further in such cases wherein a single mine have been segregated into different smaller mines and vice-versa, the State Government shall submit a revised Mining Plan corresponding to newly carved or consolidated mining lease. Such Mining Plan may also include the impact and progress of the Mine Closure Plan envisaged in the earlier Mining Plan(s).

## CHAPTER-8

### WIND ENERGY

**8.1** Any proposal for establishment of wind energy farms/wind mills shall include requirement of forest land inclusive of transmission lines, corridors between successive wind mills, statutory buildings, earthing pits and roads including provision for repose, breast walls, drains, curvature etc. The proposal shall also have full details of alternative explored on non-forest land, benefit cost analysis as per extant guidelines, and other details such as employment generation, economic viability of the project etc.

**8.2.** Reconnaissance surveys in forest lands for planning establishment of wind energy farms shall not require prior approval under the Abhiniyam, if the surveys do not involve any clearing of forest or cutting of trees and the operations are restricted to clearing of bushes and lopping of tree branches for purpose of sighting. If wind data are not available, erection of one wind mast per 500 ha of forest land can be permitted on payment of Rs. 1.00 lakh per wind mast. The wind masts will have to be removed within two years.

**8.3.** General guidelines for establishment of wind mills/farms requiring forest land:

(i) State/Union Territory Governments should decide the ratio of the wind energy vis-à-vis other sources of energy i.e. thermal, nuclear, hydel, etc. consistent with the national policy in the matter.

(ii) Areas in National Parks and Sanctuaries, Areas of Outstanding Natural Beauty (AONBs), sites of natural heritage, archaeological importance, special scientific interests and important landscapes should not be considered for establishment of wind energy farms. Wind energy farms shall be located at a safe distance from such sites.

(iii) The State Government shall take sufficient precaution while considering the location of the wind mills so as not to cause any disturbance to the migratory birds, as the turbine of the wind mills produces a humming sound, which may cause disturbance to the avian habitat.

(iv) The wind mills should be located at a safe distance, normally more than 300 meters from the highways and villages.

(v) A large number of small wind turbines, together with their access paths, constitute higher disturbances to the forest area compared to a small number of large wind turbines. Large size wind turbines up to 4.5 MW capacity are being now utilised in most of the countries which are not only cost effective and but also have low impact area. Therefore, in forest areas wind mills of power generating capacity less than 500 KW shall not be allowed except in the periphery of wind farms having higher capacity turbines, for optimization of production of wind energy, and stand-alone (not requiring transmission grid) off grid wind mills up to 10 KW.

(vi) Above parameters relating to establishment of wind mills/farms shall be reviewed after 5 years with a view to promote/facilitate adoption of latest technology at par in the world.

**(vii)** The forest land will be leased in favour of the developers for a period as per para 2 (hh) of the Central Electricity Regulatory Commission Renewable Energy Tariff Regulations 2020 without payment of any lease rent. Within a period of 5 years of Stage-II approval, the developer shall apply for transfer the approval/lease in the name of investors/power producers, for prior permission of the Central Government following the procedure for transfer of User Agency. Transfer fee will be regulated as per provisions given in Chapter 5 of the Handbook.

**(viii)** Compensatory Afforestation (CA) and Net Present Value (NPV) will be regulated as per the relevant provisions of Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued by the Central Government from time to time.

## CHAPTER-9

### IRRIGATION AND HYDRO-ELECTRIC PROJECTS, INCLUDING CATCHMENT AREA TREATMENT (CAT) PLAN

**9.1.** Proposals for diversion of forest lands falling within an irrigation / hydroelectric project need to be processed in their entirety to avoid creation of *fait accompli* situations. However, keeping in view the long gestation period for such projects, user agency may split such projects into different phases for valid and cogent reasons. State Govt. while submitting proposals to obtain "in principle" approval of Central Government under the Act for diversion of the entire forest land required for the project, may intimate the extent of forest land required and time schedule for execution of its each phase as may be specified by them, and may request the Central Government to consider grant of 'final' approval under the Act in phased manner. In such cases, at the time of submission of the proposal, scheme for compensatory afforestation for the forest land required for execution of initial phases, consisting of *inter-alia* the dam, reservoir and main canals originating from the reservoir as indicated by the State Government may only insisted upon. The Regional Empowered Committee while examining such proposals shall stipulate time schedule for transfer and mutation of non-forest land and funds for creation of Compensatory Afforestation in lieu of the forest land required for execution of remaining phases in favour of the State Forest Department so as to ensure that expenditure incurred on initial phases of the project does not become infructuous.

**9.2. Catchment Area Treatment (CAT) plans:** 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), which are either canal head or run-of the river projects and do not involve impounding of water/submergence of forest land.

The 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. Among other provisions, the measures should focus on arresting soil erosion, improving effective drainage in the area, and rejuvenation of the degraded eco system in the catchment. Following general principals should be kept in view while formulating CAT plans.

- (i) In the dense forest areas major concentration should be on soil & water conservation including water harvesting for which various water harvesting structures like check dams, gully plugging, gabion dams, contour trenches and vegetative structures should be made.
- (ii) In the open forest areas besides taking up soil & water conservation measures, plantation of local indigenous tree and shrub species, including rare medicinal plants, should be done. In higher altitudes plantation of chir pine should be avoided.
- (iii) The CAT plan should include a component of fodder development on the civil soyam forest or on revenue/private lands in order to meet the requirement of fodder/small timber/fire wood for the local population with a view to reduce pressure on the forests.

(iv) The CAT Plan should have a socio-economic component including supply of CNG connections to the project affected families to be implemented through Joint Forest Management Committees (the nomenclature may vary among the States/UTs).

(v) The infrastructure component like construction of buildings, vehicles, salaries of staff etc. may be provided based on a careful analysis of the need for the same with detailed justification and should constitute a very small percentage (say up to 5%) of the total cost of the CAT plan.

(vi) All works and structures created under CAT plan shall be geotagged for monitoring purpose. The KML files for the area treated under CAT Plan shall be uploaded in e-green watch portal.

(vii) CAT plan shall be approved by the Principal CCF & HoFF or any other officer authorized by him for the purpose.

(viii) Regular monitoring is essential for effective implementation of the CAT Plan. The Chief Project Officer of the User Agency must be associated in implementation as well as monitoring of the progress of CAT plan. For this, a committee with following composition may be constituted at State level for quarterly review of progress of implementation of various CAT plans and take immediate steps to ensure the same:

- |    |  |                    |
|----|--|--------------------|
| 1. | PCCF & HoFF  | - Chairman         |
| 2. | Secretary (Agriculture) or his representative      | - Member           |
| 3. | Secretary (Animal Husbandry) or his representative | - Member           |
| 4. | Project Officer-User Agency                        | - Member           |
| 5. | Concerned Conservator of Forests                   | - Member           |
| 6. | Nodal Officer (FC) 0/0 PCCF                        | - Member Secretary |

The Monitoring Committee shall submit an annual report to the concerned Regional Office under whose jurisdiction the project is situated.

### 9.3 Carrying Capacity and Cumulative Impact Assessment Study of river basin

- (i) **Cumulative Impact Study:** Cumulative Impact study of a basin would reflect the cumulative impact of commissioned/up-coming hydro-power projects in the basin on environmental flow, bio-diversity, muck disposal sites, traffic flow in the region, R&R issues, etc. While, the first project in a basin could come up without insisting on cumulative study for all subsequent hydro-power projects in the basin, it should be incumbent on the developer of the second/other project(s) to incorporate all possible and potential impact of other project(s) in the basin to get a cumulative impact assessment done. This condition shall be stipulated at the ToRs stage itself during the EC process. Once such a cumulative impact study has been done, the same could be shared by Expert Appraisal Committee with AC. The Cumulative impact study in respect of bio-diversity component may be separately got done by one of the specialized institutes. While making recommendation on EC/FC for such projects, the EAC/FAC will take into account the results of such cumulative studies.
- (ii) **Carrying Capacity Study:** The carrying capacity study of a river basin is important to plan optimal number of power projects in a basin. All State Governments will be required to get such studies done for river basins in their State. The process may be initiated in the next three months and completed within a period of two years, after which the carrying capacity study report would be made a pre-requisite for considering

EC/FC cases of projects of any basin. All State Governments will send the details of river basins where such studies are to be done and confirm Initiation of studies to MoEF within 3 months of issuance of this OM. The institutes for such studies may be settled by the State Government in consultation with the EAC.

- (iii) Studies, as mentioned under para (i) and (ii) above, shall be a prerequisite for grant of 'in-principle' approval under the Adhinyam and environment clearance under the Environment Impact Assessment Notification, 2006

**9.4** Compensatory Afforestation (CA) and Net Present Value (NPV) will be regulated as per the relevant provisions of Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued by the Central Government from time to time.

## CHAPTER -10

## TRANSMISSION LINES

## (BARE CONDUCTORS AND UNDERGROUND /INSULATED CABLE)

**10.1. Transmission through bare conductor(s):** (i) As a general principle, where routing of transmission line through the forest area is unavoidable, these should be aligned in such a way that it involves the least number of trees cutting, and as far as possible, the route the width of Right of Way (RoW), clearance below each conductor, and minimum clearance between conductors for laying transmission of different voltages.

Transmission Voltage	Width of Right of Way (meter)	Width clearance below each conductor or conductor bundle for stringing purpose (meter)	Minimum clearance between conductor and Trees (meters)
11KV	7	3	2.6
33 KV	15	3	2.8
66 KV	18	3	3.4
110 KV	22	3	3.7
132 KV	27	3	4.0
220 KV	35	3	4.6
400 KV S/C Vertical delta configuration	46	3 twin bundle, 5 triple bundle	5.5
400 KV DC	46	7 quadruple bundle	7
+/- 500 KV HVDC	52		
765 KV S/C (With delta configuration)	64	7 quadruple bundle 10 hexagonal bundle	9
765 KV D/C	67		
1200 KV	89	To be decided	13

- (ii) In case of the demand for reduction in the width of Right of Way (RoW) of transmission lines in forest areas in the cases where Aerial Bunched Cable (ABC) are used in place of overhead lines, it is clarified that as per definitions in Measures relating to Safety and Electric Supply, Regulations, 2010 conductor is defined as bare or insulated and as such the vertical & horizontal clearance specified in Regulation 61 have to be maintained for both bare and insulated conductors like ABC etc.
- (iii) To prevent death of animals like elephants due to electrocutions the distribution companies shall preferably use ABC or underground cables in forest areas. In case of the overhead lines, the clearance above ground of the lower conductor of 11 KV and 33 KV overhead lines should be as per the CEA regulation 58(3) and 58(4) or above maximum trunk height of the elephant, whichever higher.
- (iv) In areas where there are presence of primates like Hillock Gibbon, golden langur etc. and other arboreal animals, a mechanism may be put in place to prevent the primates from

climbing the tower through barbed wire fencing of the tower area, special tower design having soft material anti-climbing guards and anti-climbing canopy using the available technology and on case to case basis.

- (v) As far as possible the user agency should submit a consolidated proposal for the complete section of the transmission line falling in the State or union territory without breaking the proposals into sub-sections.

**10.2. Transmission through insulated cable:** The norms/standards for laying underground insulated cable through forest areas shall be as below:

Lines Voltage	Trench Width	Trench depth
33 KV	600 mm	1200 mm
11	300 mm	900 mm

However, for laying double circuit (D/C) underground cables through forest areas trench width shall be twice the afore-mentioned width stipulated for the single circuit cable.

**10.3 Repair and maintenance of Transmission line constructed prior to enactment of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980:** Repair and maintenance of Transmission line constructed prior to 25.10.1980 may be carried out, with prior permission of the State Forest Department Subject to fulfilment of following conditions:

- i. The transmission lines were constructed on forest land prior to 25.10.1980 (date of enactment of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980);
- ii. These lines fall outside the Protected Areas;
- iii. No breaking up of forest land or felling of trees shall be allowed;
- iv. While carrying out repair and immanence of transmission lines, adequate precautions should be undertaken by the user agency to avoid any damage to flora and fauna;
- v. No crushing/breaking of stones shall be allowed inside forest areas. Readymade materials shall be used for up-gradation of such lines and no new roads shall be constructed for the purpose of maintenance. However, user agency may be allowed to use the existing forest roads and paths for the work;
- vi. No labour camp shall be allowed on the forest land;
- vii. No widening of the existing roads/paths in the forest area is allowed. The vegetation within the ROW shall not be disturbed;
- viii. Any other condition the Divisional Forest Officer may impose from time to time in the interest of forest conservation and protection.

**10.4 NoC in right of way (RoW) of transmission lines passing through linear protected forests owned by multiple authorities:** Whenever RoW of transmission line passes through various linear protected forests owned by National Highway Authority of India, State PWD, State Irrigation Departments and Indian Railways, etc. in order to expedite the proposals related to transmission line projects, NoC from various land owning agencies, whose land falls in the alignment of the proposed project, may not be insisted at the field level and the same can be

submitted to the State Government prior to the submission of proposal to Government of India for in-principle approval.

**10.5. Plantation of Dwarf Species in RoW under Transmission Lines:** Taking up plantation of dwarf species (preferably medicinal plants) over small areas (below 0.1 ha.) within the RoW under transmission line is neither cost effective nor suitable from forest management point of view. Therefore, in such cases the user agency in consultation with State Forest Department shall identify degraded forest areas of not less than one ha for carrying out plantation of dwarf species (preferably medicinal plants).

**10.6.** Compensatory Afforestation (CA) and Net Present Value (NPV) will be regulated as per the relevant provisions of Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued by the Central Government from time to time.

## CHAPTER -11

**INFRASTRUCTURAL PROJECTS INCL. ROADS, RAILWAY LINES, BORDER  
ROADS, CRITICAL UTILITY INFRASTRUCTURE DEVELOPMENT/  
RESIDENTIAL / BUILDING CONSTRUCTION**

- 11.1** Any proposal for linear projects such as roads, railway line, transmission lines, etc. need to be processed in their entirety for comprehensive assessment of requirement of forest land and consequences if approval for any forest land is not granted. Project proponents should not align such projects towards forest land for sake of logistic convenience. No work on forest land shall be taken up unless diversion of forest land is ordered by the concerned State /UT Government after obtaining approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980:

Provided that consequent to grant of Stage I approval in respect of linear projects such as laying of new roads, widening of existing highways, transmission lines, water supply lines, optic fiber cabling, railway lines etc. by the Central Government under Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980 the State Government or a Senior Officer not below the Rank of a Divisional Forest Officer, having jurisdiction over the forest land proposed to be diverted, duly authorized in this behalf by the State Government can pass an order for tree cutting and commencement of work not involving black topping, concretization, laying of railway tracks, charging of transmission lines, or as specified in the 'in-principle' approval granted to a linear project in forest land for a period of one year:

Provided that no other proposal of the user agency for which 'in-principle' approval under the Adhinyam has been granted before a period of two years or more and is still pending for final approval for want of submission of compliance or complete compliance of 'in-principle' approval. An undertaking to this effect shall be submitted by the user agency.

The special provisions allowing the State Governments/Union territory Administrations for tree cutting and commencement of work of linear projects after payment of compensatory levies, can be extended for a further period of one more year, if the Advisory Committee or the Regional Empowered Committee, as the case may be, is satisfied that user agency had made serious efforts to comply with the compliance in "In-Principle" approval and the user agency has submitted an undertaking to obtain 'Final' approval within the period of 2 years from the date of issue of 'in-principle' approval.

Such orders shall be passed only after full realization of funds for compensatory afforestation, Net Present Value (NPV), wildlife conservation plan, plantation of dwarf species of medicinal plants, and all such other compensatory levies, specified in the Stage I (in-principle) approval from the UA, and where ever applicable, transfer and mutation of non-forest/ revenue forest land in favour of State Forest Department.

- 11.2** Linear project may involve more than one Forest Division or State. To avoid *fait accompli* situations and for holistic evaluation of the project, PARVIESH 2.0 provides the facility for the user agency to file single application for projects involving multiple Forest Divisions. Project proponents may make the application Section/Package-wise as per their Administrative and Technical sanctions but in that case also they should submit along with the proposal salient feature of the entire project and details of status of approvals sought under the Act for other Sections/Packages of the project.

To facilitate phased preparation and processing, the proposals for such projects may be prepared Forest Division/ State-wise subject to submission of a map indicating alignment of the entire project, highlighting the portions passing through forest land, along with salient features of the entire project and details of approvals already obtained and/or sought under the Act for other sections of the project.

Moreover, in case of linear projects involving both forest as well as non-forest land, work on non-forest land may be executed subject to submission of details of all stretches involving forest lands along with alternate alignments identified to bypass the forest land. To prevent occurrence of *fait accompli* situations, User Agency needs to undertake that in case diversion of forest land is denied, project shall be executed along alternate alignment and work on non- forest land shall not be cited as a reason for grant of approval of diversion of forest land under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Work on non-forest land will not confer any right on the User Agency with regard to grant of approval under the Act. Further, in case approval under the Act is declined for widening of road, width of the portion of road falling in the forest land will be maintained at its existing level.

The above facilitation is not applicable to the roads falling in the Protected Areas and the Eco-sensitive zones around the Protected Areas where impact on wildlife is to be considered.

- 11.3 Roads/Railways/Canals:** Non-forest lands which were acquired by the concerned Government departments for construction of roads/railways/canals and the vacant areas in the Right of Way (RoW) were subsequently planted and notified as Protected Forests for management purposes will attract the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Similarly, breaking of any land, recorded as forest, for conversion of meter gauge railway line to broad gauge railway line or road widening even if such forest land falls within the existing RoW will require prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. But if the RoW, which essentially is the area falling within the limits of Road/Railway/Canal's concerned department owned land for executing or maintaining the same, has no land as 'Forest' as per Government records and as per Hon. Supreme Court's order dated 12.12.1996 in WP no. 202/1995 and the same land is under non-forest use since before 25<sup>th</sup> October 1980 then the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 would not apply and Tree felling on such land shall be governed by relevant local Acts. As far as ownership of the land is concerned, the same shall be decided by the State Government.
- 11.4** Railway projects passing through the notified ESZ or located within 10 km radius of PAs (Protected Areas) or Tiger Reserves(TR) are not required to obtain Wildlife Clearance from the NBWL as these projects do not need Environment Clearance but advice of the concerned Wildlife Authorities in the State Government shall be obtained to incorporate mitigation measures in the project such as crossings or pathways to be used by wild animals. However, railway projects passing through the areas linking one TR with another PA or TR diversion cannot be allowed for ecologically unsustainable use, except in public interest with the approval of NBWL on the advice of NTCA as provided under section 38 (O) (1) (g) of WLPA 1972

**11.5 Repair and maintenance as well as upgradation/widening of roads constructed in forest lands:**

The up-gradation of roads, without widening, constructed in forest areas prior to 25<sup>th</sup> October 1980, from 'Kutchha to Pucca' is permissible without attracting the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and black topping and bituminous work of forest roads (management works) which have been brought under Pradhan Mantri Gramin Sadak Yojana (PMGSY) is permitted subject to fulfillment of the following conditions:

- (a) No breaking up of forest land or felling of tree shall be allowed;
- (b) While black topping, adequate precautions should be undertaken by the User Agency to avoid any damage to flora and fauna. Fire for melting of coal tar and mixing shall be lit at a safe distance from the trees/vegetation and avoiding dry/hot seasons. Fuelwood, if required, shall be purchased in advance from the Depot of Forest Development Corporations;
- (c) No crushing/breaking of stones shall be allowed inside forest areas. Readymade materials shall be used for up-gradation of such roads. No labour camp shall be allowed on the forest land.
- (d) Bitumen cold mix for black topping should be prepared outside the forest or at a site approved by the Divisional Forest Officer.
- (e) The user agency shall maintain the curves of the roads, inside the forest, and will not straighten the same.
- (f) The user agency shall install speed breakers and speed control signage at regular intervals to avoid accident with wild animals.
- (g) The user agency shall try to maintain the road surface as rough as possible to act as regular speed governor, even if it means going below the standards prescribed for the particular class of roads, the intention being only to make it an all-weather road.
- (h) The user agency shall provide side drains for proper drainage
- (i) No widening of road should be undertaken without prior approval of the Central Government under the Adhiniyam. Both sides of sides of the upgraded road shall be reinforced with brick/stone works, and vegetative measures to check soil erosion at the project cost in consultation with the Divisional Forest Officer. Further in case of widening of such roads, while seeking prior approval under the Adhiniyam for use of additional forest land required for widening/upgradation/strengthening, the detail of existing forest land involved in the carriageway of road constructed prior to 1980 should also be included in the application for diversion of forest land without insisting for corresponding NPV and CA provisions.
- (j) Any other condition the Divisional Forest Officer may impose from time to time in the interest of forest conservation and protection.

**11.6 Pipeline/OFC/ Electrical cable laying and their maintenance:** Any fresh proposal for laying of pipeline/OFC/Electrical cable in forest areas shall attract the provisions Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. Even for pipelines/ Cables laid in forest areas prior to 1980, it has been noticed that with the passage of time, natural vegetation grows over the land covering the pipelines and the vegetation/ tree growth becomes similar to that of surrounding forests. The repair and maintenance of such lines

may not be possible without breaking of forest land and, accordingly, during the repair and maintenance of such pipelines, disturbance would be caused to the surrounding vegetation and fauna due to breaking of forest land and clearing of vegetation/trees. Therefore, such works should be undertaken with the prior approval of the central government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

To deal with emergency situations, which may arise due to leakages, damage due to accident or other such reasons, quick action and remedial measures for repairing the damaged pipelines may be undertaken, where no felling of trees is involved and with the prior permission of the DCF concerned subject to following:

1. The permission shall be granted for a short period only which will not exceed the period of three months.
2. The damage caused to flora, fauna of the surrounding forest will be compensated by the user agency, and the forest land will be restored to its original state at the cost of user agency.
3. To ensure minimum disturbance to the wildlife, the repair work shall be done during the day time only.
4. All infrastructural facilities, including setting up of labour camps, shall be established out the forest area.
5. Relevant rules, regulations, standards and guidelines issued by OISD (Oil Industry Safety Directorate) and PNGRB (Petroleum and Natural Gas Regulatory Board) under Ministry of Petroleum & Natural Gas; and PESO (Petroleum and Explosive Safety Organisation) under DPIIT shall be strictly followed and monitored at the appropriate level.
6. Any other condition, which the local Forest Department may stipulate in the interest of conservation and protection of flora and fauna of the area.

#### **11.7 Approach/Exit Roads to Fuel stations for distribution of petrol, diesel, LPG, CNG etc.:**

- (i) Fuel stations should generally be part of rest area complex having other amenities like place for parking, toilets, restaurants, rest rooms, shops, etc. Proper planning should be done by the User Agencies, in advance, for construction of such complexes along the highways so that destruction of road side forests is minimized.
- (ii) In such cases where the forest area proposed for providing access is more than 0.1 ha i.e. not covered under the exemptions, provided under sub section (2) of section 1A of the Adhiniyam, the prior approval of the Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam shall be obtained by the State Government or the Union territory Administrations.
- (iii) Requirement for diversion of forest land for construction of acceleration/de-acceleration lane and exit/entry opening shall be based on the approved layout plan provided in the extant guidelines issued by the Ministry of Road Transport and Highways in this regard.
- (iv) However, if approach/exit road for a fuel station involves forest land already diverted for construction/widening of a road, fresh approval for re-diversion of such forest land for construction of approach/exit for fuel station will be required only if it involves clearing of or felling of any tree.

- (v) If two or more fuel station are to be constructed in close proximity or adjacent to each other for some reasons, diversion of forest land for a common access/exit shall only be approved.
- (vi) Further, for process of examination of such proposals, NOC issued by State PWD/NHAI or other similar agencies for setting up of retail outlets under RoWs should not be insisted as prerequisite at the beginning of the submission of the application and the same may be considered at any level on PARIVESH 2.0 portal. The undertaking along with acknowledgment of the agencies owning RoW from the User Agency stating that they have initiated the process of obtaining NOC may be considered for initial submission of proposal on PARIVESH. It is also clarified that the process of obtaining NOC and its submission must be completed before the submission of such proposals to Integrated Regional Office, provided that no such proposals in any case give rise to a situation of fate accompli or involved in violations of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 or other related Central or State Acts.

**11.8 Infrastructure ancillary to Forest Management:** According to the explanation in the Act, any work relating or ancillary to conservation, development and management of forests and wildlife, namely, the establishment of check- posts, fire lines, wireless communications and construction of fencing, bridges and culverts, dams, waterholes, trench marks, boundary marks, pipelines or other like purposes, is not a non-forest use and therefore, taking up such work in the forest land does not require diversion under the Van (Sanrakshan Evam Samvardhan) Adhiniyam. As such all State Governments should ensure that the basic spirit and essence or the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 is not to divert forest land for construction of residential buildings, Bungalows, quarters etc. Bare minimum (operational) buildings, which are essential for management of forest by forest personnel and conservation of bio-wealth such as forest guard hut, check posts, range offices, small inspection bungalow (2-3 room), un-tarred single lane roads etc., can be taken up in selected areas without causing damage/destruction to the forests thereon. But if the structures are large and would impact on conservation, prior permission under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 would be required.

**11.9 Residential Projects:** The Central Government will not entertain any proposal for diversion of forest land for construction of residential or dwelling houses. However, the Central Government has accorded permission for construction of residential houses in their private forests land for construction of residential or dwelling houses in the Mussoorie Dehradun Development Authority (MDDA) areas of Uttarakhand as well as Private area (Deemed Forest) of Goa subject to fulfilment of following conditions:

- (i) Construction activity for residential purpose in private forest shall be allowed only for domestic purpose and shall not be extended to any institutional buildings or commercial development.
- (ii) The construction activities shall be restricted to a maximum of 250 square meter of built-up area in each case.
- (iii) The construction of residential building in private forest is permitted in MDDA areas and other parts of Uttarakhand State and Goa only in order to alleviate hardship of homestead owners for constructing/completing their bonafide residential buildings.

- (iv) For deciding the status of the homestead, the cut of date shall be 11.02.2011 and the limit of 250 square meter as in (ii) above will be applicable to such owner. In case of any sub division of ownership of the forest land post 11.02.2011, the construction activities shall be restricted in such a way that the total of all construction activities in such subdivided portions post 11.02.2011 should not exceed a maximum of 250 square meter of built-up area.
- (v) The permission will be subject to:
  - a) Tree felling should be minimum.
  - b) Sufficient soil conservation measures should be taken.
  - c) Permission of MDDA and other regulatory bodies for construction in hill areas shall be obtained.
- (vi) All other standard conditions required for such projects including planting of tree species and NPV.
- (vii) Above stipulation is strictly restricted to construction of residential or dwelling houses in private forest land in MDDA areas of Uttarakhand and Goa, where non-forest land is not available.

**11.10 Construction of schools in hilly areas:** The Central Government has conveyed approval for construction of Government schools in hilly areas, over an area of 4 acres or 1.62 ha, where non-forests land is not available with the following conditions:

- (i) A certificate from the district Magistrate that non-forest land is not available for the school building/other building construction in the area.
- (ii) Reserve forest land with density more than 0.4 shall not be allowed.
- (iii) Felling more than 75 trees per hectare shall not be considered in any kind of forest.
- (iv) Besides Compensatory Afforestation as per the Guidelines, the concerned authority should ensure plantation in vacant areas, wherever available within the school premises.

**11.11 Compensatory Afforestation (CA) and Net Present Value (NPV)** will be regulated as per the relevant provisions of Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued by the Central Government from time to time.

**CHAPTER – 12****DIVERSION PROPOSALS PROPOSED IN AND AROUND THE PROTECTED AREAS**

- 12.1** Protected areas – National Parks, Wildlife Sanctuaries or Tiger Reserves, etc. are notified and managed under the provisions of the Wildlife (Protection) Act, 1972 and may comprise of RFs and other areas of ecological, faunal, floral, geomorphological, or zoological association or importance.
- 12.2** In pursuance of order dated 13.11.2000 in Writ Petition (C) No. 337 of 1995 of the Supreme Court, there shall be no de-reservation / de-notification of forests, National Parks and Sanctuaries without approval of the Supreme Court. Further, in pursuance of the orders of the Hon'ble Supreme Court all mining operations in National Parks and Sanctuaries shall continue to remain suspended, and no mining activity is permissible within 1 km of the boundary of a PA.
- 12.3** Any proposal for taking up non-forest activity in Protected Areas is required to be cleared by the Standing Committee of National Board for Wildlife (NBWL) under the provisions of Wildlife (Protection) Act, 1972, apart from prior approval of Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980. The proforma for such proposals seeking clearance for Standing Committee of NBWL for non-forestry activities within Protected Areas are enclosed in Annexure-I. Such proposals for non-forest use of PA areas may be processed concurrently for prior approval of diversion of forest land under the Adhiniyam and seeking prior recommendation of the standing Committee on NBWL. However, clearance in one aspect will not confer any right upon the UA and complete clearance is obtained when all requisite clearances have been obtained by the UA (User Agency).
- 12.4** In case the entire forest land involved in the proposal, is located within one or more PAs, the Central Government shall refer such proposals, complete in all respects, along with site inspection reports, wherever necessary, to the Advisory Committee (AC) or Regional Empowered Committee, as the case may be, only after use of such forest land for non-forestry purpose has been recommended by the Standing Committee of NBWL.
- 12.5** In case the forest land involved in the proposal, is located both within or outside the Protected Areas, processing of such proposals and grant of approval under the Adhiniyam for the forest land falling outside the PA will not be linked to the prior recommendation of the Standing Committee of the NBWL. Central Government may consider grant of 'in-principle' approval, in respect of forest land falling outside the PAs, as per the Van (Sanrakshan Evam Samvardhan) Rules, 2023 and guidelines issued thereunder while the procedure mentioned under para 12.4 above, shall be followed in respect of forest land falling inside the PA.
- 12.6** Prior recommendation of Standing Committee of NBWL under the provisions of Wildlife (Protection) Act, 1972 shall be obtained, if required, for taking developmental activities in/over an area falling within eco sensitive zones (10 km if ESZ is not notified and listed) around notified PAs in addition to prior approval of diversion of forest land for non-forest purposes if such area involved is forest land.

**12.7** Provisions provided in the guidelines given under para “Activities required to be done in a Zoo” as per the approved Management Plan will not attract the provisions of Van (Sanrakshan Evam Samvardhan) Adhiniyam provided such activities are necessary for management of animals and imparting education & have the prior approval of CZA.

**12.8 Relocation of villages from Protected Areas:** Diversion of forest land under the Adhiniyam relocation/rehabilitation of the villages from the core/critical Tiger reserves and core of the Protected Areas (National Park and WL Sanctuaries) to the periphery of Reserved forests/Sanctuaries/National Parks shall subject to following conditions:

- (a) resettlement / relocation within the boundaries of the notified forest land can be considered only if suitable non-forest land is not available within the vicinity of the protected area from where the relocation is proposed;
- (b) the District Collector concerned shall furnish to the NTCA a certificate of non-availability of land suitable for relocation of the villages located within the Protected Areas and Tiger Reserves before any proposal of relocation within the forest is approved;
- (c) the land identified for relocation/rehabilitation should not result in fragmentation of the forest/wildlife habitat;
- (d) the relocation activity shall be undertaken solely as a process of consolidation of the wildlife habitat;
- (e) the relocation shall be undertaken only along the fringes of the forest such that all facilities to the resettled families can be provided without recourse to further diversion of forest land for providing infrastructure;
- (f) the land / villages within the forest which have been vacated shall be brought under the Protected Area Network (PAN) through enabling notification under the Wildlife (Protection) Act after extinguishing all the existing rights over the vacated land;
- (g) the extent of land de-reserved / de-notified for resettlement shall not be more than the extent of land being vacated by the settlers in the core area; and
- (h) the payment of NPV and cost of CA may be exempted in all such cases of voluntary relocation/rehabilitation of families from the protected areas undertaken within the forest land.

**12.9** The legal status of forest land, diverted under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for relocation/rehabilitation of villages from National Parks/Wildlife Sanctuaries/Tiger Reserves will cease to be a forest land in accordance with Hon’ble Supreme Court order dated 28<sup>th</sup> January, 2019.

**12.10 Eco-Sensitive Zone:** In accordance with the extant guideline, permission for tree felling in non-forest land in eco-sensitive zone of protected area for widening of a highway which involve forest and non-forest land may be accorded only after in-principle approval under the Adhiniyam for diversion of forest land required for widening of such highway is obtained. Felling of trees in the Eco Sensitive Zone of the Protected Areas, is subject to following:

- (a) There shall be no felling of trees on the forest, non-forest land or government or revenue or private lands falling within the Eco Sensitive Zone of Protected Areas without prior permission of the competent authority duly notified by the State Government.
- (b) In case there is no Competent Authority notified by the State Government in such interim period, the Principal Chief Conservator of Forests in-charge of the territorial

forests shall be the competent authority for this purpose and will grant permission for tree felling on the recommendation of the Divisional Forest Officer in whose jurisdiction the ESZ falls who will recommend in accordance with the existing provisions of the Central or State Act and rules made thereunder by the State Government for protection of trees in the State.

- 12.11** In case of transmission lines passing through National Parks, Wildlife Sanctuaries and Wildlife Corridors, insulated conductors shall only be used to prevent electrocution of animals. In case of transmission lines passing through elephant reserves/corridors, additional clearances of at least 6 m shall be provided over and above minimum clearance [as stipulated under Central Electricity Authority (Measures relating to safety & Electricity Supply) Regulations, 2010] above the ground from the lowest conductor of the transmission lines”.
- 12.12 Roads Passing through Protected Areas:** The Standing Committee of NBWL has clarified regarding consideration of proposals for roads within PA as follows.
- (a) The principles provided in the report of the sub-committee (*Refer F.No 6-62/2013WL dated 22 December 2014*) have been adopted as generic principle.
  - (b) New roads shall not be proposed inside National Parks and Wildlife Sanctuaries.
  - (c) The cases of resurfacing and strengthening of existing roads, not involving widening within protected area will be possible without reference to Standing Committee of National Board for Wildlife.
  - (d) The cases of widening of existing roads, if unavoidable due to reasons of purpose and alignment, could be placed before the Standing Committee, which shall consider such cases keeping in view the feasibility of mitigation measures irrespective of cost.
- 12.13** CA and NPV will be regulated as per the guidelines related to CA, NPV and Supreme Court orders.
- 12.14** Pursuant to recommendation made by the Standing Committee of the NBWL for diversion of forest land for non-forestry purposes, located in the Protected Areas including ESZ and tiger/elephant corridors, the monies, if any, realized from the user agency towards the cost of implementation of Wildlife Management shall be deposited in to the account of State CAMPA, managed by the National Authority (CAMPA). Authorities concerned in the State Govt./UT Administrations shall ensure compliance in this regard and also the provisions of the CAF Act, 2016 and rules made thereunder.

## ANNEXURE I

**CONDUCTING COST-BENEFIT ANALYSIS FOR PROJECTS INVOLVING  
FOREST DIVERSION**

- (i) While considering proposal for diversion of forest land for non-forestry use, it is essential that ecological and environmental losses and eco-economic distress caused to the people who are displaced are weighted against economic and social gains.
- (ii) Whenever the forest land is involved in the development projects, the cost of ecosystem services and fragmentation of habitat of wildlife and economic distress caused to people dependent on forests and the cost of settlement of people dependent on forest should also be added as the cost of forest diversion in addition to the standard project cost which would have been incurred by the user agencies without involvement of forest land while conducting the cost benefit analysis of the project. Similarly, the benefits from the project accruing due to diversion of forest land and used in the project should also be accounted for in the benefits component in addition to the standard benefits of the project which would have been accrued without involvement of forest land while conducting the cost benefit analysis and determining the benefit and cost ratio (BC ratio).
- (iii) The cost of compensatory afforestation and its maintenance in future and soil & moisture conservation at present discounted value and future benefits from such Compensatory Afforestation accruing over next 50 years monetized and discounted to the present value should be included as cost and benefits respectively of compensatory afforestation while conducting the cost benefit analysis and determining the benefit and cost ratio (BC ratio).
- (iv) **Table-A** lists the details the types of projects involving forest land for which cost-benefit analysis will be required. **Table-B** lists the parameters according to which the cost aspect of forest land diverted for the development projects will be determined, while **Table-C** lists the parameters for assessing the benefits accruing to the project using of forest land.
- (v) A cost-benefit analysis as above should accompany the proposals sent to the Central Government for forest clearance under the Van (Sanrakshan Evam Samvardhan) Adhiniyam.

**Table-A: Cases under which a cost-benefit analysis for forest diversion are required**

S. No.	Nature of proposal	Applicable/ not applicable	Remarks
1	All categories of proposals involving forest land upto 20 hectares in plains and upto 5 hectare in hills.	Not applicable	These proposals may be considered on a case-to-case basis and value judgment.

2	Proposal for defence installation purposes and oil prospecting (prospecting only).	Not applicable	In view of national Priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non-forest use.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such proposals would be rarely entertained.
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centres, TV towers etc.	Applicable	These are cases where a cost-benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

**Table-B: Estimation of cost of forest diversion**

S. No.	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	Economic value of loss of eco-system services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF&CC).  <i>Note: In case of National Parks the NPV shall be ten (10) times the normal NPV and in case of Wildlife Sanctuary the NPV shall be five (5) times the normal NPV or otherwise prescribed by the ministry or any other competent authority.</i>
2	Loss of animal husbandry productivity, including loss of fodder.	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever is maximum.
3	Cost of human resettlement.	To be quantified and expressed in monetary terms as per approved R&R plan.

4	Loss of public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project.	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion.
5	Possession value of forest land diverted.	30% of environmental costs (NPV) due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum.
6	Cost of suffering to oustees.	The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not been shifted.
7	Habitat Fragmentation Cost.	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.
8	Compensatory Afforestation and soil & moisture conservation cost.	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value.

**Table-C–Existing guidelines for estimating benefits of forest-diversion in CBA**

Sr. No.	Parameters	Remarks
1	Increase in productively attribute to the specific project.	To be quantified & expressed in monetary terms avoiding double counting.
2	Benefits to economy due to the specific project.	The incremental economic benefit in monetary terms due to the activities attributed to the specific project.
3	No. of population benefited due to specific project.	As per the Detailed project report.
4	Economic benefits due to of direct and indirect	As per the Detailed project report.

	employment due to the project.	
5	Economic benefits due to Compensatory afforestation.	Benefits from such Compensatory Afforestation accruing over next 50 years monetized and discounted to the present value should be included as benefits of Compensatory Afforestation.  *For benefits of CA the guideline of the Ministry for NPV estimation may be consulted.

**Note-1: Net Present value (NPV) of environment and ecosystem services loss:**

The concept of Net Present Value of the forest land diverted is a scientific method of calculating the environmental cost and other losses caused due to diversion of forest land for non-forestry purposes. The NPV represents the net value of various ecosystem services and other environmental services in monetary terms which the forest would have provided if the forest would not have been diverted.

**Note-2: Possession value of forest land diverted:**

The forest land diverted for the project such as irrigation, hydropower, railways, roads, wind, and transmission lines and mining etc. are unlikely to be returned and remains in possession of the user agencies. Therefore 30% of the net present value (NPV) of forest land diverted or market rate of adjoining area in the district should be added as a cost component as "possession value of forest land" in addition to the environmental costs due to loss of forests.

## ANNEXURE II – FORMS

## COMMON APPLICATION FORM (CAF)

1. Details of Project
2. Details of the Company/Organization/User Agency
3. Details of the person making application
4. Location of the Project or Activity (KML files and other details)
5. Land Requirement (in Ha) of the project or activity
6. Project/Activity Cost
7. Employment likely to be generate
8. Whether Rehabilitation and Resettlement (R&R) involved? [Yes/No]
9. If Yes, please provide details?
10. Whether project area involves shifting of watercourse/road/rail / Transmission line/water pipeline, etc. required? [Yes/No] If Yes, please provide details?
11. Whether any alternative site(s) examined or part thereof for the non-site-specific component? [Yes/No/ Not applicable as the project or activity is site specific]
12. Whether there is any Government Order or Policy / Court order relevant or restricting to the site? [Yes/No] If Yes, please provide details.
13. Whether there is any litigation pending against the project and/or land in which the project is proposed to be set up? (Yes/No) If Yes, please provide details.
14. Whether the proposal involves violation of Act / Rule / Regulation / Notification of Central / State Government? [Yes/No] If Yes, please provide details.

**Form-A Part-I**

(Form for seeking prior approval of Central Govt. under section-2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of fresh Forest Area)

1. Category of the project :
2. Whether any proposal seeking prior approval of Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of forest land required for this project has been submitted in the past? If Yes, please provide details:
3. Details of Forestland proposed to be diverted
  - (a) (Village / Forest Division / District Wise Breakup)
  - (b) Project component wise breakup of the forest land proposed for diversion
  - (c) Forest area, non-forest land area, legal status of forest land, period of diversion, number of patches, etc.
  - (d) KML files
4. Whether Cost-Benefit analysis for the Project has been made? [Yes/No] :
5. Cost-Benefit Ratio:
6. Whether the Project requires Clearance under the Environment (Protection) Act 1986 (Environmental clearance)?[Yes/No: if yes please provide details;
7. Whether the Project or a part thereof is located in any Protected Area or their Eco-sensitive zone? [Yes/No]: if yes please provide details
8. Whether Cost-Benefit analysis for the Project has been made? [Yes/No]
9. Whether the Project requires Clearance under the Environment (Protection) Act 1986 (Environmental clearance)?[Yes/No] if yes please provide details
10. Whether the Project or a part thereof is located in any Protected Area or their Eco sensitive zone? [Yes/No] if yes please provide details
11. Details of land identified for Compensatory Afforestation

- (a) KML files and details
- (b) Patch wise details
- 12. Sector Specific Details
  - (a) In case of Mining proposal
  - (b) Details of Mining Plan
- 13. Details of Prospecting
- 14. Details of Mineral-Oil Licence/Lease
  - (a) Details of Exploration
- 15. Details of Hydel / Irrigation proposal
- 16. Details of Airport Proposals
- 17. Copy of undertaking to abide by the applicable guidelines to the proposal
- 18. Copy of Additional information, if any

### **Form-A Part-II (DFO)**

- 1. District-wise area to be diverted**
2. Legal Status of forest land proposed for diversion
3. Density of vegetation
4. Whether the requirement of forest land as proposed by the user agency is unavoidable and the bare minimum for the project [Yes/No] If **No**, then
5. Whether the proposal involves the felling of trees? [Yes/No] Provide the details
6. Working plan prescription for the forest land proposed for diversion
7. Brief note on the vulnerability of forest areas to erosion
8. Approximate distance of proposed Site for diversion from the boundary of forest\* (km)
9. Significance of the forest land proposed for diversion from a wildlife point of view
10. Details of violation(s), if any, committed
11. Whether CA land is applicable or not [Yes/No] If yes, then
  - (a) Nature of Land [Degraded Forest Land/ Non-Forest Land/ Compensatory Trees]
  - (b) KML File
  - (c) No. of Patches
12. Whether the provision of additional CA land is proposed [Yes/No] If yes then
  - (a) Category of CA Land [ACA (Additional CA)/ PCA (Penal CA)/ Enrichment/ Safety Zone/Road Side Plantation]
  - (b) KML File
  - (c) No. of Patches
13. District Profile
14. Additional information if any

### **Form-A Part-III (Nodal Officer)**

1. Total Forest area applied (ha)
2. Whether the proposal has been deliberated at PSC [Yes/No]
3. Recommendation
  - (a) Recommendation [Recommended/ Not Recommended] If recommended, then
  - (b) Recommended Area\* (ha)
  - (c) Forest area come under LWE /LAC? [Yes/ No]
4. Justification

**Checklist for State Nodal Officer**

Check the project for its completeness and verify that all relevant documents are attached and correct as per the requirement in the online application process

1. Whether the Geo-referenced map is provided [Yes/No]
2. KML file of the proposed area:
3. Justification notes of the project provided by User Agency

**Compensatory Afforestation**

4. Whether the Geo-referenced map is provided [Yes/No]
5. Legal Status of User Agency
6. Whether PCCF approval obtained [Yes/ No]
7. Type of CA land [DFL/ NFL/ Combined (DFL & NFL)/ Not applicable]
8. Whether violation is reported in proposed area [Yes/ No]
9. Whether land use plan is attached [Yes/ No]
10. Whether the proposal is site specific [Yes/ No]
11. Is there any court case/judgement pertaining to the project proposal or related to diversion of forest land [Yes/ No]
12. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]

**Form-A Part-IV (State Government)**

1. Recommendation Status [Recommended/ Not Recommended] If recommended, then details of recommendations
2. Justification

**Form-B Part-I**

(Form for seeking prior approval under Section-2 of the proposals by the State Governments and other authorities in respect of renewal of leases, which have been earlier granted clearance under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980)

1. State
2. Category of the project
3. Details of approvals under the Van (Sanrakshan Evam Samvardhan) Adhiniyam , 1980 accorded in the past
  - (a) Proposal No.
  - (b) MoEF File No.
  - (c) Area of forest land diverted (ha)
  - (d) Period of diversion (Years)
  - (e) Date of approval
4. Status of compliance to conditions stipulated in the previous approvals
  - (a) Proposal No.
  - (b) MoEF File No.
  - (c) Conditions stipulated by the MoEF
  - (d) Details of the compliance
  - (e) Conditions stipulated
  - (f) Status of condition
5. Details of payments made in respect of the approval under the Van (Sanrakshan Evam Samvardhan) Adhiniyam , 1980 accorded in the past
6. Details of the forest land returned back to the State Forest Department or any other Authority from the forest land diverted in favour of the user agency
  - (a) No. of patches of the forest land returned /surrendered
  - (b) Area of the forest land returned/surrendered (ha)
  - (c) Upload single KML of all the patches
  - (d) Patch wise details
7. Details of Transfer of Lease, if any
8. Details of Forest land proposed to be renewed (Village / Division / District Wise Breakup)
  - (a) The total area of forest land proposed for renewal (ha.)
  - (b) Total area of non-forest land proposed for renewal (ha.)
  - (c) Legal status of Forest Land
9. the cost-benefit analysis for the Project has been made? [Yes/No]
10. Whether the Project requires Clearance under the Environment (Protection) Act 1986 (Environmental clearance)?[Yes/No]
11. Whether the Project or a part thereof is located in any Protected Area or their Eco sensitive zone? [Yes/No]
12. Details of Compensatory Afforestation
13. Sector Specific Details (Non mandatory)
14. Copy of Additional information, if any

**Form-B Part-II (DFO)**

1. District-wise area to be diverted in the division (Auto Fetch details from Part-1 if available else user has to fill it and can edit the auto fetched details)
2. Legal Status of forest land proposed for renewal
3. Density of vegetation
4. Species-wise local/scientific names and girth-wise enumeration of trees
5. Working plan prescription for the forest land proposed for renewal
6. Brief note on the vulnerability of forest areas to erosion
7. Approximate distance of proposed Site for renewal from the boundary of forest (km)
8. Significance of the forest land proposed for renewal from wildlife point of view
9. Details of violation(s), if any, committed
10. Whether CA land is applicable or not [Yes/No] If Yes, then
  - (d) Nature of Land [ Degraded Forest Land/ Non-Forest Land/ Compensatory Trees]
  - (e) Upload single KML
  - (f) No. of Patches
11. Reclamation measures undertaken by UA
12. Area if any handed over back to Forest Department (ha.)
13. Area if any likely to be handed over to Forest Division in near future (ha.)
14. District Profile
15. Additional information, if any

**Form-B Part-III (Nodal Officer)**

1. Total Forest area applied (ha)
2. Whether proposal has been deliberated in PSC meeting [Yes/No]
3. Recommendation of PSC
4. Justification

**Checklist for State Nodal Officer**

1. Whether the Geo-referenced KML is provided [Yes/No]
2. KML file of the proposed area:
  - (a) Whether the area of KML files matches to the area figure recommended by you [Yes/No] Justification note of the project provided by User Agency

**Compensatory Afforestation) If applicable**

1. Whether the Geo-referenced map is provided [Yes/No]
2. Legal Status of User Agency
3. Whether PCCF approval obtained [Yes/ No]
4. Type of CA land [DFL/ NFL/ Combined (DFL & NFL)/ Not applicable]
5. Whether violation is reported in proposed area [Yes/ No]
6. Whether land use plan is attached [Yes/ No]
7. Whether the proposal is site specific [Yes/ No]
8. Is there any court case/judgement pertaining to the project proposal or related to diversion of forest land [Yes/ No]
9. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]

**Form-B Part-IV (State Government)**

1. Recommendation Status\* [Recommended/ Not Recommended] If recommended, then
    - (a) Recommended Area (ha)
    - (b) State File No.
    - (c) Letter of recommendation
    - (d) Signing Authority [State Govt. Officer/ Others] Note: In case of Scenario-1 only
  - If not recommended, then
    - (a) State File No.
    - (b) Letter of non-recommendation
    - (c) Signing Authority [State Govt. Officer/ Others] Note: In case of Scenario-1 only
  - Proposal Status
2. Justification

**Form-C Part-I**

(Form for seeking prior approval under section 2 of the proposals by the State Governments and other authorities for Prospecting of Minerals in Forest Land)

1. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]
2. State
3. Details of Mineral Concessions
  - (a) Total area of the prospecting lease (In Hectares)
  - (b) Area proposed for exploration/ survey
  - (c) Date of issue of the License/ Letter of Intent (LOI) for grant of prospecting lease
  - (d) Upload a copy of the License/ Letter of Intent (LOI) (pdf only)
4. Details of Forestland proposed to be explored/ surveyed (Village / Division / District Wise Breakup)
  - (a) Legal Status of the Forest land
  - (b) Total period for which the forestland is proposed to be explored/ surveyed (No. of years)
  - (c) Details of forestland proposed for exploration/ survey
    - In case of non-linear projects, provide details
    - In case of Linear project (non-Mandatory), provide details
    - In case of Hybrid projects (Non mandatory), provide details
5. Whether any proposal seeking prior approval of Central Government under the Van (Sanrakshan Evam Samvardhan) Adhiniyam for diversion of forest land required for this project has been submitted in the past? [Yes/No], If Yes, please provide details
6. Whether the Project requires Clearance under the Environment (Protection) Act 1986 (Environmental clearance)?[Yes/No], If Yes, please provide details
7. Details of activities proposed to be undertaken in forest land
  - (a) Surface sampling
  - (b) Pitting or trenching
  - (c) Drilling of Boreholes
  - (d) Construction of roads or paths involving temporary change in land use (1 hectare=10,000 m<sup>2</sup>) Non mandatory
  - (e) Construction of roads or paths involving permanent change in land use (1 hectare=10,000 m<sup>2</sup>) Non mandatory
  - (f) Any other activity involving temporary change in land use
  - (g) Any other activity involving permanent change in land use
8. Area of forest land likely to experience temporary change in land use (In Hectares)
  - (a) Surface sampling
  - (b) Pitting or trenching
  - (c) Drilling of bore holes
  - (d) Construction of roads or paths
  - (e) Other activity (pl. Specify)
  - (f) Total
9. Area of forest land likely to experience Permanent change in land use (In Hectares)
  - (a) Drilling of bore holes (In hectares)
  - (b) Construction of roads/paths
  - (c) Other activity (pl. Specify)
  - (d) Total
10. Details of machinery or equipment to be deployed for prospecting

- (a) Name of equipment or machinery
  - (b) Mode of traction
  - (c) Size (L x B x H) (Cubic Meters)
  - (d) Estimated deployment (machine hours)
  - (e) Maximum noise level(decibel)
11. Details of existing paths/roads in the proposed to be utilized for transport of the equipment or machines in the forest land
  12. Number and duration of stay in the forest land of the persons proposed to be deployed for exploration/ survey
  13. Summary of the estimated quantity of ore and other samples proposed to be collected during the exploration/ survey
  14. Estimated accuracy and confidence level for mineral reserve assessment
  15. Estimated accuracy and confidence level in case number of bore holes proposed to be drilled is reduced by
  16. In case the proposal is for extension of the period of the permission granted for prospecting, or for drilling of additional boreholes, please provide following additional information
  17. Details of land identified for Compensatory Afforestation
    - (a) Whether CA land is applicable or not [Yes/No] If Yes, then
    - (b) Type of Compensatory Afforestation [Non-forestland / Only Compensatory Trees]
    - (c) In case of Non-forestland proposed to provide for CA,
    - (d) Upload single KML of all the patches for the CA land
    - (e) Patch wise details
  18. Details of Additional information if any

### **Form-C Part-II (DFO)**

1. District wise area to be utilized for prospecting
2. Legal Status of forest land proposed for exploration/survey
3. Density of vegetation
4. Species-wise local/scientific names and girth-wise enumeration of trees
5. Working plan prescription for the forest land proposed for exploration/ survey
6. Brief note on topography and vulnerability of forest area to erosion
7. Approximate distance of proposed Site for prospecting from boundary of the forest land \* (km)
8. Significance of the forest land proposed utilized for exploration/ survey from wildlife point of view
9. Details of violation(s), if any, committed
10. Whether CA land is applicable or not [Yes/No] If Yes, then
  - (a) Nature of land [ Degraded Forest Land/ Non-Forest Land/ Compensatory Trees]
    - Upload single KML of all the patches/ segments for the division
    - No. of Patches
    - Scanned copy of the Geo-referenced map of the forest land proposed for C.A. prepared by using DGPS or Total Station
    - Total Financial outlay incurred for C.A. scheme (Crore)
    - Certificates from the concerned Deputy Conservator of Forests regarding suitability of area identified for compensatory afforestation and from management point of view enclosed? [Yes/No]

- Copy of CA scheme details
- 11. Additional information, if any
- 12. Site Inspection Report
- 13. Recommendation
- 14. Justification

**Form-C Part-III (Nodal Officer)**

1. Site Inspection Report, if applicable
2. Total Forest area applied (ha)
3. Whether proposal has been deliberated in PSC meeting [Yes/No]
4. Recommendation of PSC
5. Justification

**Checklist for State Nodal Officer**

1. Whether the Geo-referenced KML is provided [Yes/No]
2. KML file of the proposed area:
  - (a) Whether the area of KML files matches to the area figure recommended by you [Yes/No]
3. Justification note of the project provided by User Agency

**Compensatory Afforestation, If applicable**

1. Whether the Geo-referenced map is provided [Yes/No]
2. Legal Status of User Agency [Central Govt., State Govt., Central PSU, State PSU, Joint Venture (Pvt.+Govt), Joint Venture (Govt. + Govt.), Joint Venture (Pvt+Pvt), Private, Limited, LLP, Individual]
3. Whether PCCF approval obtained [Yes/ No]
  - (a) Type of CA land [DFL/ NFL/ Combined (DFL & NFL)/ Not applicable]
  - (b) CA on Degraded Forest land
  - (c) CA on Non-Forest Land
4. Whether violation is reported in proposed area [Yes/ No]
5. Whether land use plan is attached [Yes/ No]
6. Whether the proposal is site specific [Yes/ No]
7. Is there any court case/judgement pertaining to the project proposal or related to diversion of forest land [Yes/ No]
8. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]

**Form-C Part-IV (State Govt.)**

1. Recommendation Status [Recommended/ Not Recommended] If recommended, then
  - (a) Recommended Area (ha)
  - (b) State File No.
  - (c) Letter of recommendation
  - (d) Signing Authority
- If not recommended, then
  - (a) Letter of non-recommendation
  - (b) Signing Authority [State Govt. Officer/ Others]

- (c) Proposal Status\* [1. Withdrawn 2. Rejected 3. Closed]
2. Justification

**Form-D Part-I**

**(Application for approval under clause (iii) of sub-section (1) section 2 of the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for signing of lease agreement)**

1. State
2. Category [Mining/Non-Mining]
3. Justification of proposal
4. Details of Forestland proposed to be assigned on lease (Village / Division / District Wise Breakup)
  - (a) Total area of forestland proposed for assignment of lease (ha.)
  - (b) Legal Status of the Forest land
  - (c) Total period for which the forestland is proposed to be leased (No. of years)
  - (d) Details of forestland proposed for lease
  - In case of non-linear projects (mandatory), provide details
  - In case of Linear project (non-mandatory)
  - In case of Hybrid projects (non-mandatory)
    - (e) If the shape of project land proposed to be diverted is Non-Linear/ Linear
5. Distance from the boundary of nearest Protected area/ Eco-sensitive zone(km)
6. Letter of Intent (non-mandatory)
7. Details of Mining Plan (in case of Mining only)
8. Details of DPR (in case of non-Mining only)
9. Additional Information
10. Undertaking

**Form-D Part-II (DFO)**

1. District-wise forest area proposed to be assigned on lease
2. Legal Status of forest land proposed to be assigned on lease
3. Density of vegetation
  - (a) Area (ha.)
  - (b) Canopy density
  - (c) Eco-Class [Eco 1/ Eco 2/ Eco 3/ Eco 4/ Eco 5/ Eco 6]
4. Species-wise local/scientific names and girth-wise enumeration of trees
5. Working plan prescription for the forest land proposed to be assigned on lease
6. Brief note on vulnerability of forest area to erosion
7. Approximate distance of proposed Site to be assigned on lease from boundary of forest (km)
8. Significance of the forest land proposed to be assigned on lease from wildlife point of view, provide details
  - (a) Details of wildlife present in and around the forest land proposed to be assigned on lease
  - (b) Whether forms part of national park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant corridor, wildlife migration corridor etc [Yes/No] If Yes, Then
  - (c) Whether any national park, wildlife sanctuary, biosphere reserve, tiger reserve, elephant corridor, wildlife migration corridor, etc., is located near the boundary of the forest land proposed to be assigned on lease [Yes/ No]

- (d) Whether any rare/endangered/unique species of flora and fauna found in the area [Yes/No]
- (e) Whether any protected archaeological/heritage site/defence establishment or any other important monument is located in the area [Yes/No]
- (f) Whether the requirement of forest land as proposed by the user agency is unavoidable and bare minimum for the project [Yes/No]
- 9. Details of violation(s), if any, committed
- 10. District Profile
- 11. Details of Mining Plan (Auto Fetch data if available)
- 12. Additional information if any
- 13. Site Inspection Report
- 14. Recommendation
- 15. Justification

**Form-D Part-III (Nodal Officer)**

- 1. Site Inspection Report
- 2. Total Forest area applied (ha)
- 3. Whether proposal has been deliberated at PSC [Yes/No]
- 4. Recommendation
- 5. Justification

**Checklist for State Nodal Officer**

- 1. Whether the Geo-referenced map is provided [Yes/No]
- 2. KML file of the proposed area:
- 3. Justification note of the project provided by User Agency
- 4. Whether the Geo-referenced map is provided [Yes/No]
- 5. Legal Status of User Agency
- 6. Whether PCCF approval obtained [Yes/ No]
- 7. Whether violation is reported in proposed area [Yes/ No]
- 8. Whether land use plan is attached [Yes/ No]
- 9. Whether the project is site specific [Yes/ No]
- 10. Whether is there any court case/judgement pertaining to the project proposal or related to diversion of forest land [Yes/ No]
- 11. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]
- 12. I hereby undertake that the above information is accurate and duly verified.

**Form-D Part-IV (State Govt.)**

1. Recommendation Status [Recommended/ Not Recommended] If recommended, then
  - (e) Recommended Area (ha)
  - (f) State File No.
  - (g) Letter of recommendation
  - (h) Signing Authority
- If not recommended, then
  - (d) Letter of non-recommendation
  - (e) Signing Authority [State Govt. Officer/ Others]
  - (f) Proposal Status [1. Withdrawn 2. Rejected 3. Closed]
2. Justification

**Form-E**

(Re-Diversion i) Land Use Change/Change in alignment ii) Laying of OFC/ UG drinking water pipeline/ slurry pipeline/ electric cable/ CNG/PNG/ Petroleum and Crude Oil within RoW)

1. Name of the State
2. Application for [1. Land Use Change 2. Re-Diversion] If Re-Diversion is selected, then
  - (a) Category of Re-Diversion [1. Laying of UG OFC 2. Laying of above ground OFC 3. UG drinking water pipeline 4. UG Slurry pipeline 5. UG Electric cable 6. UGCNG/PNG 7. UG Petroleum and Crude Oil]
3. Re-diversion/ Change in land use is sought by [Primary Agency/ Secondary Agency]
4. Purpose of Re-diversion/ Change in land use
  - (a) Whether the re-diversion/ Change in land use is proposed within the Right of Way of road [Yes/ No]
  - (b) Justification
  - (c) Division
  - (d) Upload single KML of all the patches/ segments for the selected division (KML of area propose for re-diversion should be clearly shown)
  - (e) Area for which re-diversion/ Change in land use is applied, detail of approval obtained under the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980
5. Project affected trees to be felled [Yes/No] If Yes then
  - (a) No. of trees proposed to be felled
6. Details of approvals under the Van (Sanrakshan Evam Samvardhan) Adhinyam , 1980 accorded in the past
7. Upload NOC from primary agency (applicable for secondary agency only)
8. Status of compliance to conditions stipulated in the previous approvals
9. Details of the forest land returned back to the State Forest Department or any other Authority from the forest land diverted in favour of the user agency (Auto Fetch in Approved case)
10. Whether the Project or a part thereof is located in any Protected Area or their Eco sensitive zone? [Yes/No] (Auto Fetch if available else user need to feed it)
11. An undertaking to abide by the conditions stipulated in the approval granted under the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980
12. Undertaking

**Form-E Part-II (DFO)**

1. District-wise area to be diverted
2. Legal Status of forest land proposed for re-diversion/ change in land use
3. Area for which re-diversion/ Change in land use is applied, detail of approval obtained under the Van (Sanrakshan Evam Samvardhan) Adhinyam, 1980
4. Project affected trees to be felled [Yes/No] If Yes then
5. Density of vegetation
  - (a) Area (ha.)
  - (b) Canopy density
  - (c) Eco-Class [Eco 1/ Eco 2/ Eco 3/ Eco 4/ Eco 5/ Eco 6]
6. Species-wise local/scientific names and girth-wise enumeration of trees

7. Working plan prescription for the forest land proposed to be utilized for re-diversion/ change in land use
  - (a) Copy of working plan prescription for the forest land proposed to be utilized for re-diversion/ change in land use
8. Significance of the forest land proposed for re-diversion/ change in land use from wildlife point of view
9. Details of violation(s), if any, committed
10. Whether CA land is applicable or not [Yes/No] If Yes, then
  - (a) Nature of land [Degraded Forest Land/ Non-Forest Land/ Compensatory Trees]
  - (b) Upload single KML of all the patches/ segments for the division
  - (c) No. of Patches
  - (d) Scanned copy of the Geo-referenced map of the forest land proposed for C.A. prepared by using DGPS or Total Station
  - (e) Certificates from competent authority regarding suitability of area identified for compensatory afforestation and from management point of view
  - (f) Total Financial outlay incurred for C.A. scheme (Crore)
  - (g) Copy of CA scheme details
11. District Profile
12. Additional information, if any
13. Site Inspection Report
14. Recommendation
  - (a) Total forest land to be diverted (ha.)
  - (b) Recommended Area (ha.)
  - (c) Recommendation of DFO/DCF [Recommended/ Not Recommended]
15. Justification

#### **Form-E Part-III (Nodal Officer)**

1. Site Inspection Report
2. Total Forest area applied (ha)
3. Whether proposal has been deliberated at PSC [Yes/No]
4. Recommendation
  - Recommendation [Recommended/ Not Recommended] If recommended, then
    - (a) Recommended Area (ha)
    - (b) Forest area comes under LWE/OFC/LAC? [Yes/ No]
5. Whether Right of Way is applicable [Yes/No], if Yes provide details
6. Justification

#### **Checklist for State Nodal Officer**

7. Whether the Geo-referenced map is provided [Yes/No]
8. KML file of the proposed area:
  - (a) Whether the area of KML files matches to the area figure recommended by you [Yes/No]
  - (b) Justification note of the project provided by User Agency

#### **Compensatory Afforestation**

1. Whether the Geo-referenced map is provided [Yes/No]
2. Legal Status of User Agency
3. Whether PCCF approval obtained [Yes/ No]
4. Whether CA land is applicable or not [Yes/No] If Yes, then

- (a) Type of CA land [DFL/ NFL/ Combined (DFL & NFL)/ Not applicable]
- (b) Whether CA is selected in the same state [Yes/ No]
- 5. Whether violation is reported in proposed area [Yes/ No]
- 6. Whether land use plan is attached [Yes/ No]
- 7. Whether the project is site specific [Yes/ No]
- 8. Whether is there any court case/judgement pertaining to the project proposal or related to diversion of forest land [Yes/ No]
- 9. Whether the project area falls within protected area or within 1 km of distance from the boundary of PA in the Eco sensitive zone [Yes/ No]
- 10. I hereby undertake that the above information is accurate and duly verified.

**Form-E Part-IV (State Govt.)**

- 3. Recommendation Status [Recommended/ Not Recommended] If recommended, then
  - (a) Recommended Area (ha)
  - (b) State File No.
  - (c) Letter of recommendation
  - (d) Signing Authority
- If not recommended, then
  - (a) Letter of non-recommendation
  - (b) Signing Authority [State Govt. Officer/ Others]
  - (c) Proposal Status [1. Withdrawn 2. Rejected 3. Closed]
- 4. Justification

**Form-F**

(Application for Transfer of lease / Change in the user agency name)

- 1. Details of Project
- 2. Nature of transfer [Due to change in the name of user agency/Due to transfer to other user agency/Due to succession by legal heir]
- 3. Details of the Company/Organization/User Agency
  - (a) Transferor (Holder of original approval)
  - (b) Transferee (Transfer of approval is being sought)
- 4. Details of the person making application
  - (a) Name of the applicant (First Name; Middle Name; Last Name)
  - (b) Designation
  - (c) Correspondence Address
- 5. Details of approval obtained under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 of area proposed for re-diversion/ change in land use
  - (a) File No.
  - (b) Stage of approval for which transfer is applied [Final/In-principle/In-process]
- 6. Location of the Project or Activity
- 7. Details of the transfer of approvals sought
  - (a) Forest area applied for transfer [Partial/Full] If Partial is selected, then
  - (b) Upload KML file of area

8. No objection of the original User Agency (transferor) to the proposed transfer (Certificate to be enclosed)- non-mandatory
9. Whether change in the name involves change in shareholding pattern of the user agency? [Yes/No]
10. (only when Nature of transfer is Due to change in name of user agency) If Yes, then
11. Undertaking from the transferee (new user agency) to abide by the conditions stipulated in the approval granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam

**Form-F Part-II (DFO)**

1. Transfer of lease area
  - (a) District Name
  - (b) Forest Area proposed for transfer (ha.)
  - (c) Division Name
 Are you in agreement with the detail filed by User agency in part 1 [Yes/No]
2. Transfer Details
  - (a) Name of Transferer
  - (b) Name of Transferee
3. Whether proposed transfer is between [Govt agency to Govt agency/Private agency to Private agency/Private agency to Govt agency/Govt agency to Private agency] If proposed transfer is from Govt agency to Private agency, then
  - (a) In case of nature of transfer is 'Government' to 'Private', then
  - (b) Compensatory Afforestation
4. Whether CA land is applicable or not [Yes/No] If Yes, then  
Nature of Land [Degraded Forest Land/ Non-Forest Land/ Compensatory Trees]
5. Whether the provision of additional CA land is proposed [Yes/No]  
If yes then
  - (a) Category of CA Land [ACA(Additional CA)/ PCA(Penal CA)/ Enrichment/ Safety Zone/Road Side Plantation]
  - (b) Upload single KML of all the patches/ segments for the division
  - (c) No. of Patches
  - In case of compensatory trees only
    - (a) Scanned copy of the Geo-referenced map of the forest land proposed for C.A. prepared by using DGPS or Total Station
    - (b) Certificates from competent authority regarding suitability of area identified for compensatory afforestation and from management point of view
    - (c) Total Financial outlay incurred for C.A. scheme (Crore)
    - (d) Copy of CA scheme details
6. Details of the transfer of approvals sought
7. Additional information, if any
8. Recommendation
9. Justification

**Form-F Part-III (Nodal Officer)**

1. Total Forest area applied for transfer (ha.)
2. Transfer Details:
  - (a) Name of Transferer
  - (b) Name of Transferee

3. Whether proposed transfer is between [Govt agency to Govt agency/Private agency to Private agency/Private agency to Govt agency/Govt agency to Private agency]
4. (In case proposed transfer is from Govt. to Pvt.)
5. Whether CA as applicable as per the entitlement of transferee has been provided [Yes/No]  
(a) Recommendation [Recommended/ Not Recommended]
6. Justification

**Form-F Part-IV (State Govt.)**

1. Recommendation Status [Recommended/ Not Recommended] If recommended, then
  - (a) Recommended Area (ha)
  - (b) State File No.
2. Transfer Details
  - (a) Name of Transferer
  - (b) Name of Transferee
3. Justification

**Form-G**  
(Working Plan)

1. Name of Forest Division
2. Details of proposed working plan
  - (a) Period of proposed working plan
  - (b) New Area (ha.)
  - (c) Upload Map/KML
3. Details of previous working plan
  - (a) Period of previous working plan
  - (b) Old area (ha.)
  - (c) Whether the processed for new working plan has been initiated in time [Yes/ No]
4. Whether targets prescribed with working plan were achieved during the plan period [Yes/No] If yes then
5. Name of working plan officer
6. Whether as per New Code (the upcoming one) or Old Code (2014 or 2004)? [New Code/Old Code]
7. Details of PWPR Meeting
  - (a) Date of PWPR Meeting
  - (b) Minutes of PWPR meeting (pdf only)
8. Details of DWPR/SLC Meeting
  - (a) DWPR/ SLC meeting date
  - (b) Minutes of DWPR/ SLC meeting (pdf only)
  - (c) Whether observation made in DWPR meeting have been addressed or incorporated [Yes/No]
  - (d) Compliance report on points raised in DWPR
  - (e) Upload a copy of functional DWPR
9. Details of Flora and Fauna of Division (numbers of species)
10. Area of forests under different legal classes [RF/PF/UF/Others (Pl. specify)]
11. Working Circle wise distribution of area
12. Harvestable Girth of Different species
  - (a) No. of species group
13. Details of prescribed yield under different Working Circles (pdf only)
14. Details of annual felling series (pdf only)

**Form H**

(Application seeking amendment in the approval already granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980)

Form H (Application seeking amendment in the approval already granted under the Van (Sanrakshan Evam Samvardhan) Adhiniyam) is the Amendment of all the Forest Clearance Forms as mentioned below:

- Amendment of Form-A (Diversion of Forest Land)
- Amendment of Form-B (Renewal of Lease on Forest Land)
- Amendment of Form-C (For seeking prior approval for Exploration & Survey)
- Amendment of Form-D (Signing of Lease (Section 2(iii)) on Forest Land)
- Amendment of Form-E (Re-Diversion (RoW))
- Amendment of Form-F (Transfer of Lease)

**Annexure-III****General Standard Operating Procedure (SOP) for Extended Reach Drilling (ERD) Projects in India**

Based on the site visit by the WII team, there is a need to understand the impact of ERD on the above-ground biodiversity of forest areas and associated wildlife species. Once a detailed study on animal distribution, activity, behaviour, and response to anthropogenic disturbance is carried out, we shall be able to submit detailed and site-specific recommendations to mitigate the adverse effect of drilling and exploration on wildlife species. Drillings sites in different biogeographic zones and habitat types will be selected to monitor the impact of anthropogenic disturbance on wildlife activity and their responses. The study outcomes will incorporate the relevant environmental protection measures and provide essential mitigation measures to reduce the adverse impacts of drilling on wildlife and surrounding forest areas. Since most of the disturbance is during the drilling process, mitigation measures must be implemented along with the ERD activities. The measures across different drilling sites in India will be based on a comprehensive study proposed by WII based on credible primary data concerning wildlife species in our country. Given the above, following are the general recommendations to be considered while considering ERD near wildlife-sensitive areas to be considered as general SOP until site region-specific mitigation plans are proposed.

1. The drilling sites should be located at the base of the catchment areas or downstream to avoid spill-over directly into the water.
2. The drilling should be avoided in corridor areas, especially in areas known to have landscape-dependent species such as Elephants, Tigers, etc.
3. The distance of the drilling site from the PA/corridors/Wildlife sensitive areas should not be less than 1 km. This distance is only based on the precautionary principle. The exact distance should be recommended based on the detailed study.
4. The drilling site should be installed with an active noise-proof solution to avoid impacting local habitats and wildlife.
5. There should be a comprehensive plan to mitigate the effects of light pollution around the drilling site.
6. The approach roads built towards the drilling site should be mitigated if passing through sensitive wildlife areas/protected areas or corridors.
7. The operations should only be limited to drilling at the drilling site, whereas all other subsidiary infrastructure should be far away from critical wildlife habitats.
8. As the drilling activity can't be stopped in between because of technical reasons, the drilling activity may continue across the sites. For sites, close to important Wildlife habitats the ancillary activities should be minimized during peak wildlife activity, such as early morning and late evening hours. All vehicular movement to and from the drilling site during the peak wildlife activity should be minimized and a comprehensive mitigation plan for sound, light, and other ancillary pollution should be in place.

9. A boundary wall should enclose all the drilling points/wells. They should have a 10 m wide road running across the periphery to form a barrier against fire and allow easy movement of fire tenders during fire incidence.

10. The contingency plan /team/ protocol should be active for the drilling zone/sites to meet any contingencies during emergencies without time loss. Wildlife should be an integral part of this plan.

**Annexure-IV****General and Standard conditions to be stipulated while granting approval under the Van (Sanrakshan Evam Samvardjham) Adhiniyam, 1980**

The following general and standard conditions pertaining to different categories of project shall be incorporated in all cases along with different specific conditions recommended by the MoEF&CC/Regional Office/advisory Committee/Regional Empowered Committee/State Government/UT Administrations)

**1. General Conditions:**

- (i) Legal status of the diverted forest land shall remain unchanged;
- (ii) The Compensatory afforestation, over non-forest land, equal in extent to the forest land being diverted, shall be raised by the State Forest Department at the project cost;  
Or  
The Compensatory afforestation, over revenue forest land, double in extent to the forest land being diverted, shall be raised by the State Forest Department at the project cost;
- (iii) Penal Compensatory Afforestation,..... (if stipulated);
- (iv) The non-forest land identified for raising compensatory afforestation shall be transferred and mutated in favour of the State Forest Department before issue of the 'Final' approval under the Adhiniyam;
- (v) The non-forest land transferred and mutated in favour of the State Forest Department or the revenue forest land, as the case may be, shall be notified by the State Government as Protected Forests under section 29 of the Indian Forest Act, 1927 or under the relevant section(s) of the local Forest Act, before issue of the 'Final' approval under the Adhiniyam. The Nodal Officer shall report compliance in this regard along with a copy of the original notification declaring the non-forest land as PF, along with compliance of 'in-principle' approval;
- (vi) The User Agency shall transfer the cost of raising and maintaining the compensatory afforestation, at the current wage rate, to the State Forest Department. The CA scheme may include afforestation of indigenous species with appropriate provision for anticipated cost increase for works scheduled for subsequent years;
- (vii) The compensatory afforestation scheme, as approved, shall be implemented by the State Forest Department at the project cost within a period of three years from the date of grant of 'Final' approval;
- (viii) The State Government shall realize the Net Present Value (NPV) of the forest land being diverted under this proposal from the User Agency as per the guidelines given in Chapter – 3 of the Consolidated Guidelines and Clarification issued by the Ministry in accordance with the Hon'ble Supreme Court of India's order dated 28.03.2008, 24.04.2008 and 09.05.2008 in Writ Petition (Civil) No. 202/1995 in the matter of T. N. Godavarman Thirumalpad vs. Union of India;
- (ix) Penal NPV, .....(if stipulated);
- (x) The User Agency shall furnish an undertaking to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India;
- (xi) Compensatory levies, to be realized from the User Agency, in lieu of diversion of forest land, shall be transferred/ deposited, through e-payment module (<https://parivesh.nic.in/>) of PARIVESH, into the concerned account of State/UT CAMPA, managed by the National Authority (CAMPA);

- (xii) The User Agency, if required, shall obtain the environment clearance under the Environment Impact Assessment Notification, 2006 issued under the Environmental (Protection) Act; 1986;
- (xiii) No labour camp shall be established on the forest land and the User Agency shall provide firewood preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;
- (xiv) The boundary of the diverted forest land shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, forward and back bearing and distance from pillar to pillar;
- (xv) The forest land shall not be used for any purpose other than that specified in the proposal;
- (xvi) The User Agency shall ensure that because of this project, no damage is caused to the wildlife available in the area;
- (xvii) The user agency shall explore the possibility of translocation of maximum number of trees identified to be felled and shall ensure that any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;
- (xviii) The cost of felling of trees shall be deposited by the User Agency with the State Forest Department;
- (xix) The layout plan of the proposal shall not be changed without the prior approval of the Central Government;
- (xx) The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;
- (xxi) The user agency in consultation with the State Government shall create and maintain alternate habitat/home for the avifauna, whose nesting trees are to be cleared in this project. Bird's nests artificially made out of eco-friendly material shall be used in the area, including forest area and human settlements, adjoining the forest area being diverted for the project;
- (xxii) The User Agency shall implement the R & R Plan, if applicable, as per the R & R Policy of State Government in consonance with National R&R Policy, Government of India before the commencement of the project work and implementation. The said R & R Plan will be monitored by the State Government/Regional Office of MoEF&CC;
- (xxiii) The User Agency shall submit the annual self -compliance report in respect of the above stated conditions to the State Government, concerned Regional Office and to this Ministry by the end of March every year regularly;
- (xxiv) Any other condition that the concerned Regional Office of this Ministry may stipulate with the approval of competent authority in the interest of conservation, protection and development of forests & wildlife;
- (xxv) The State Government, before issuing the final diversion order, shall ensure that the user agency has complied with all the provisions of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order (s) and NGT Order (s), including compliance of Forest Rights Act, 2006, pertaining to this project, for the time being in force, as applicable to the project; and
- (xxvi) Violation of any of these conditions will amount to violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and action would be taken as prescribed in para 1.21 of Chapter 1 of the Handbook of Comprehensive Guidelines of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 as issued by this Ministry's letter No. 5-2/2017-FC dated 28.03.2019.

## 2. Standard Conditions

### 2.1 Mining:

- (i) The User Agency shall undertake mining in a phased manner after taking due care for reclamation of the mined over area. The concurrent Reclamation Plan as per the approved Mining Plan shall be executed by the User Agency from the very first year, and an annual report on implementation thereof shall be submitted to the Nodal Officer, Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, in the concerned State Government and the concerned Regional Office of the Ministry. If it is found from the annual report that the activities indicated in the concurrent reclamation plan are not being executed by the User Agency, the Nodal Officer or the Chief Conservator of Forests (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities are satisfactorily executed.
- (ii) The user agency shall prepare a schedule for surrender of the mined out and reclaimed forest land in accordance with existing mining plan and submit the same along with an undertaking to surrender the mined out and reclaimed forest land as per such schedule to the MoEF&CC before grant of 'Final' approval under the Adhiniyam for diversion of the said forest land;
- (iii) The rehabilitated forest area after closure of mining operations shall be handed over to the State Forest Department for sustainable forest management in the future;
- (iv) **Safety Zone Management:** Following activities, at project cost, shall be undertaken by the user agency for the management of safety zone as per relevant guidelines issued by the Ministry's guidelines:
  - (a) User agency shall ensure demarcation of safety zone (7.5 meter strip all along the inner boundary of the mining lease area), and its fencing, protection and regeneration by erecting adequate number of 6 feet high RCC boundary pillars inscribed with DGPS coordinates with barbed wire fencing and deploying adequate number of watchers under the supervision of the. State Forest Department;
  - (b) Boundary of the safety zone of the mining lease, adjacent to habitation/roads, should be properly fenced by the user agency;
  - (c) Safety zone shall be maintained as green belt around mining lease and to ensure dense canopy in the area, regeneration shall be taken up in this area by the user agency at project cost under the supervision of the State Forest Department; and
  - (d) The State Government and the user agency shall ensure that safety zone is maintained as per the prescribed norms;
- (v) Following activities, as per approved plan / schemes, shall be undertaken in the lease area by the User Agency under the supervision of the State Forest Department:
  - (a) Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three year with effect from the issue of 'Final' approval in accordance with the approved Plan/Scheme in consultation with the State Forest Department;
  - (b) Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved Plan/scheme;
  - (c) Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved Plan/Scheme;

- (d) Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28°; and
- (e) No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.
- (vi) The validity of approval granted under the Adhiniyam shall be for a period co-terminus with the validity of the mining lease proposed to be granted under the Mines and Minerals (Development and Regulation) Act, 1957, as amended from time to time or Rules framed there under, or for such period as may be specified by the Central Government;
- (vii) The User Agency either himself or through the State Forest Department shall undertake gap planting and soil and moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), if any, located within the periphery of 100 m from outer perimeter of the mining lease as per approved plan for plantation and SMC activities submitted along with compliance of 'in-principle' approval;
- (viii) The User Agency shall regularly undertake desilting of village tanks and other water bodies, located within five km from the mine lease boundary, as per approved plan, to mitigate the impact of project on such tanks/water bodies.
- (ix) The User Agency shall comply with the Hon'ble Supreme Court order on re-grassing, and re-grass the mining area and any other areas which may have been disturbed due to mining to restore them to a condition which is fit for growth of fodder, flora, fauna, etc. in a timely manner;
- (x) Adequate care shall be taken to check any rolling of overburden/dumps beyond the designated area and to check soil erosion caused due to mining activities;
- (xi) The user agency shall undertake de-silting of the village tanks and other water bodies located within five km from the mine lease boundary so as to mitigate the impact of siltation of such tanks/water bodies, whenever required;
- (xii) The User agency will undertake comprehensive soil conservation measures at the project cost in consultation with the State Forest Department. A scheme of the same shall be submitted to the Regional Office along with the 'in-principle' approval; and
- (xiii) Under no circumstances, approval granted for the use of forest land for underground mining, shall subsequently be converted to opencast mining operations.

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

## **2.2: Hydro Electric and Irrigation proposals:**

- (i) The minimum water flow of ...cusec will be maintained in the downstream of ..... river as per the conditions stipulated in the approval accorded by the Water Resource Department, Government of Chhattisgarh.
- (ii) The user agency shall undertake afforestation along the periphery of the reservoir and canals bank and maintain plantations with the State Forest Department (as applicable).
- (iii) A Catchment Area Treatment Plan shall be prepared, and implemented by/or under the supervision of State Forest Department at the project cost, if applicable;
- (iv) The user agency shall carry out muck disposal at pre-designated sites in such a manner so as to avoid its rolling down.

- (v) The dumping area for muck disposal shall be stabilized and reclaimed by planting suitable species by the user agency at the cost of project under the supervision of State Forest Department. Retaining walls and terracing shall be carried out to hold the dumping material in place. Stabilization and reclamation of such dumping sites shall be completed before handing over the same to the State Forest Department in a time bound manner as per Plan.
- (vi) The User agency shall consult organization(s) having experience in construction of roads in hilly areas to avoid frequent road blockade due to landslides etc. and shall provide breast walls and retaining walls wherever necessary.
- (vii) The State Government and the user agency shall ensure that the tress available between full reservoir level (FRL) and FRL - 4 meters are not felled;
- (viii) The user agency shall provide free water for the forestry related projects;
- (ix) Other standard conditions as applicable to proposals relating to Hydro Electric Projects/Irrigation will be applicable in this case also.

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

### **2.3: Thermal Power Projects**

- (i) The User Agency shall ensure that ash disposal is carried out as per the detailed plan prepared for the purpose, and is in accordance with all environmental safeguards.
- (ii) Following activities, as per approved plan / schemes, shall be undertaken by the User Agency in their area under the supervision of the State Forest Department:
  - (a) Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of three year with effect from the issue of 'Final' approval in accordance with the approved Plan/Scheme in consultation with the State Forest Department;
  - (b) Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion in accordance with the approved Plan/scheme;
  - (c) Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved Plan/Scheme;
  - (d) Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure that angles of repose at any given place is less than 28<sup>0</sup>; and
  - (e) Wherever possible and technically feasible, the User Agency shall undertake by involving local community, the afforestation measures in the blanks within the project area being diverted under this approval, in consultation with the State Forest Department at the project cost.
- (iii) The user agency should give an undertaking that it shall take all measures to prevent pollution by effluents, particulate matters etc at the project cost.
- (iv) The user agency will develop a green belt along the power station and also along the water pipe line/channel.
- (v) The State Government will submit the proposal for water supply to the plant at the earliest.
- (vi) The approval granted under the Adhinyam shall not confer any rights or any guarantee to the user agency of coal linkages.
- (vii) No labour camp shall be established on the forest land;

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

**2.4: Wind Power Projects:**

- (i) That cost of developing medicinal plants garden wherever feasible in 65-70% of leased out area, as the State Government/UT Administration shall charge, shall be borne by the User Agency;
- (ii) The user Agency shall demarcate the project area by creating Cairns (60 cm high) with available stones and indicated the marking of forward and backward bearings on these cairns;
- (iii) After the construction of the approach road as per the Project Plan, these Cairns shall be substituted by four feet high RCC pillars at the project cost indicating on each pillar the forward and back bearing as well as distance between the adjacent pillars.;
- (iv) The vane tips of the wind turbine shall be painted with orange colour to avoid bird hits;
- (v) The lease period shall be for a period of 30 years;
- (vi) The wind turbines/wind mills to be used on forest land shall be approved for use in the country by the Ministry of Non-Conventional Energy Sources, Government of India;
- (vii) Soil and Moisture conservation measures like contour trenching shall be taken up on the hillocks supporting the wind mill by the State Forest Department at the cost of user agency;
- (viii) The free movement of the villagers, if any within and surrounding area shall be ensured;
- (ix) The State Government and the user agency shall undertake the mitigation measures, suggested in the study of BNHS to assess impact of wind mills of different capacity on avifauna and bats and the recommendations made by the Committee constituted by this Ministry under Chairmanship of the Additional Principal Chief Conservator of Forests (Central), Southern Regional Office, Bangalore to assess and define the impact zone of wind energy define the impact zone of wind energy projects in forest areas for the purpose of assigning NPV.

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

**2.5: Road Projects:**

- (i) The user agency shall arrange to raise strip plantation on either side of the road and central verge at project cost, as per IRC specification, with maintenance of 7-10 years. The user agency shall also submit design of providing at least 2-3 rows of long rotation indigenous trees, as per provision of IRC-SP-21-2009 (Guidelines on landscaping & tree plantation), on either side of the road before final clearance.
- (ii) The reclamation of quarry should be done under the supervision of the State Forest Department. The quarry shall be reclaimed and afforested completely before the project is closed.

- (iii) Overburden shall not be dumped outside the width of the road. The muck generated in the earth cuttings will be disposed of at the designated dumping sites and in no case the muck/debris will be allowed to roll down the hill slopes.
- (iv) The user agency will provide retaining walls, breast walls and drainage as per requirement to make the slope stable.
- (v) The User agency will undertake comprehensive soil conservation measures at the project cost in consultation with the State Forest Department. A scheme of the same shall be submitted to the Regional Office along with the Stage-I compliance report;
- (vi) Wherever possible and technically feasible, the User Agency shall undertake afforestation measures along the roads within the area diverted under this approval, in consultation with the State Forest Department at the project cost.
- (vii) The designing of culverts/bridges, if any, over the natural streams/rivers/canals should be done in such a manner that it does not hamper the natural course of water, does not give rise to water-logging, and also does not hamper movement of wild animals.

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

## 2.6: Transmission Lines

- (i) Width of right of way for the transmission line shall be limited to ...m;
- (ii) The user agency shall install circuit breakers at suitable places besides maintain necessary ground clearance to prevent electrocution of wild animals;
- (iii) No approach road shall be constructed in the forest area for transportation of steel and other material required for the transmission line. As far as possible the User Agency shall use the existing road and the proposed RoW for the transportation of the material and in the event of non-availability of such facilities, the User Agency shall transport material manually without construction of any path.
- (iv) To minimize the felling for construction of transmission line, user agency shall comply with the following guidelines:
  - (a) Below each conductor, width clearance of ... mts. would be permitted for carrying the tension stringing equipment. The trees on such strips may be felled but after stringing work is completed, the natural regeneration will be allowed to come up.
  - (b) One outer strip may be left clear to permit maintenance of the transmission line;
  - (c) In the remaining width the right of way felling/pollarding/pruning of trees will be done with the permission of the local forest officer whenever necessary to maintain the electrical clearance, trees shall be allowed to be felled or lopped to the extent required, for preventing electrical hazards by maintaining the minimum .... meter clearance between conductors and trees. The sag and swing of the conductors are to be kept in view while working out the minimum clearance mentioned as above;
  - (d) User agency in consultation with the State Forest Department prepare a detailed scheme for creation and maintenance of plantation of dwarf species (preferably medicinal plants) in right of way under the transmission line, and provide funds for execution of the said scheme to the State Forest Department; and
  - (e) In case a portion of the transmission lines to be constructed is located in hilly areas, where adequate clearance is already available, trees shall not be cut;

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

### 2.7: Railway Projects

- (i) The State Government shall ensure controlled speed limit if the trains passing through the forest portion to enable the trains drivers to react to the sudden appearance of the wild animals on the track. As and when required speed of train shall be regulated in consultation with Chief Wildlife Warden of the State Government.
- (ii) The designing of culverts/bridges, if any, over the natural streams/rivers/canals should be done in such a manner that it does not hamper the natural course of water, does not give rise to water-logging, and also does not hamper movement of wild animals;
- (iii) The reclamation of quarry, if any, should be done under the supervision of the State Forest Department. The quarry shall be reclaimed and afforested completely before the project is closed;
- (iv) The user agency will provide retaining walls, breast walls and drainage as per requirement to make the slope stable;
- (v) The User agency, if required, will undertake comprehensive soil conservation measures in the area being diverted at the project cost in consultation with the State Forest Department. A scheme of the same may be submitted along with the compliance report;
- (vi) If required, provision for construction of sufficient underpasses for safe crossing of animal shall be made in consultation with Chief Wildlife Warden;

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

### 2.8: Infrastructure Projects:

- (i) Felling shall be done only in built up area and bare minimum felling shall be permitted in other non-built up areas. Felling of trees before the start of construction should be verified by the concerned DFO.
- (ii) In case of blank areas along the roads planting of trees should be done in at least 5 meter wide strip.
- (iii) Only built up area should be fenced so that other areas are available for free movement of animals.
- (iv) Along the arterial roads, natural forests should be maintained;
- (v) The user agency shall assist the State Government in conservation and preservation of the flora and fauna of the area in accordance with the plan prepared by the Chief Wildlife Warden of the State;

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

### 2.9: Resettlement and Rehabilitation of villages:

- (i) The area of ....Tiger Reserve/Wildlife Sanctuary/National Park, proposed to be vacated, shall be mutated in the name of State Forest Department and notified as RF/PF;
- (ii) The State Government shall ensure that the area under the villages which is proposed to be shifted outside the ....Tiger Reserve/Wildlife Sanctuary/National Park will become inviolate after the shifting and no families are left within these villages for further relocation;

- (iii) The State Government shall take effective steps to ensure that the villagers being relocated from the core area do not return to the area. The rights of the relocated persons over the vacated land shall be legally extinguished using the due procedure as prescribed in the the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- (iv) The approval will be subject to the condition that after relocation of villagers, the non-forest land proposed to be vacated by the villagers shall be transferred and mutated in favour of the Forest Department and shall be declared Protected forest/Reserve forest under Indian Forest Act, 1927.
- (v) Area proposed for rehabilitation should be fenced properly to check encroachment in the adjoining forest area. Boundary of the forest block should be demarcated properly by erecting pillars with forward and backward bearings of their GPS readings.
- (vi) In case the number of families' increases in the future, the State Government will adjust their land requirement from the contingency land and no additional forest land shall be used for their rehabilitation.
- (vii) The land identified for relocation/rehabilitation should not result in fragmentation of the forest/wildlife habitat;
- (viii) the relocation activity shall be undertaken solely as a process of consolidation of the wildlife habitat;
- (ix) the relocation shall be undertaken only along the fringes of the forest such that all facilities to the resettled families can be provided without recourse to further diversion of forest land for providing infrastructure;
- (x) the land / villages within the forest which have been vacated shall be brought under the Protected Area Network (PAN) through enabling notification under the Wildlife (Protection) Act after extinguishing all the existing rights over the vacated land;
- (xi) the extent of land de-reserved / de-notified for resettlement shall not be more than the extent of land being vacated by the settlers in the core area; and

**Specific conditions:** as per recommendation made by the Advisory Committee or Regional Empowered Committee or suggested by the competent authority

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## Annexure-V

**Checklist for assessing the completeness of the proposal before its submission to the Advisory Committee or Regional Empowered Committee**

S. No.	Particulars of information	Abstract Details	Page No.	Whether in line with the relevant Rules or Guidelines
	<b>Common Application Form and Part-I</b>			
1.	Name of the user agency			
2.	Nature/ legal status of the user agency			
3.	Location (i) State (ii) District			
4.	Category of the project			
5.	Total area involved in the project (i) Forest area (notified) (ii) Revenue forest land (iii) Non-forest area			
6.	Particulars of Forests: (i) Name of Forest Division and Forest area involved. (ii) Legal status (iii) Area calculation statement (iv) Purpose wise Break up of forest land (v) KML files			
7.	Approvals in respect of the project, if any, obtained in the past			
8.	Total cost of the project			
9.	Details of Cost Benefit analysis indicating the BC ration			
10.	Detail of employment generation (Skilled, semiskilled and unskilled on permanent and temporary basis)			
11.	Detail of court cases, if any, pending against the project or forest land whose diversion is proposed			
12.	Is there any restrictive order or policy of the Government restricting the activity in the proposed site			
13.	Violations of Act/Rules/Guidelines of the Central/State, if any			
14.	Mining Proposals			
	<b>A. Mining Lease</b>			
	(i) Letter of Intent			
	(ii) Period of mining lease proposed			
	(iii) Detail of lease granted in the past			
	(iv) If any lease is contiguous to the proposed mining lease			
	(v) Status of approval under the Adhinyam, if any, obtained in the past			
	(vi) Status of reclamation done in the past			

	(vii) Detail of reclaimed forest land, if any, handed over back to the Forest Department			
	<b>B. Mining Plan</b>			
	(i) Status of approval of Mining Plan by the competent authority			
	(ii) Total estimated proven reserves			
	(iii) Annual Production Capacity			
	(iv) Total area approved			
	(v) Forest area involved in the Mining plan			
	(vi) Pre mining and post mining land use			
	(vii) Mine Closure Plan (Progressive Mine Closure Plan)			
	(viii) Cost of reclamation, if any			
15.	<b>Details of alternative examined</b>			
	i. Number of alternative alignment explored			
	ii. Justification for selecting the proposed alternative (linear projects)			
	iii. Reasons for discarding other alternatives (linear projects)			
16.	Details of RoW – existing and proposed (linear projects)			
17.	Area and details of scheme of plantation of dwarf plants under the RoW (Transmission line and Wind Power projects)			
18.	Submergence area, command area, Dam heights, FRL, DRL, etc (irrigation/hydel projects)			
19.	Rehabilitation of Ousteas			
	i. No of families involved			
	ii. Category of families			
	i. Details of rehabilitation plan			
20.	Whether the complete information has been submitted by the user agency in Common Application form and Part-I			
	<b>Part-II (DFO)</b>			
21.	Whether complete information has been submitted by DFO in Part-II			
22.	Site inspection report of the DFO indicating the status of forest land applied by the user agency and violation committed, if any, along with his observations and inspection notes.			
23.	Requirement of forest land is unavoidable and barest minimum for the project.			
24.	Vulnerability of the area for erosion.			
25.	<b>Vegetation Details</b>			
	i. Species wise composition (details of scientific name of local species)			
	ii. Density and Eco-class			
	iii. Project affected trees (Abstract details of number of trees categorized into below 30 cm girth and above 30 cm girth)			

	iv. Number of trees i.e. Old trees (mango banyan, ficus, etc.) specially in road widening trees which can be protected and kept intact.			
	v. Enumeration details (complete or projected)			
26.	<b>Wildlife</b>			
	i. National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, Elephant/wildlife corridor, etc. if any located in the area			
	ii. Whether the area is located within a distance of 10 km from the boundary of PAs			
	iii. In case the proposals located in the vicinity of the PAs, detail of notification of Eco-Sensitive Zone, if any, issued by the MoEF&CC indicating the area/distance of eco-sensitive zone from the boundary of PA.			
	iv. Rare/Endangered/Threatened species of flora and fauna, if any found in the area.			
	v. Details of schedule-I species, if any			
	vi. Special mitigation measures, if any, required for wildlife corridors			
27.	Protected archaeological/ heritage site/defense establishment or any other important monuments, if any, located in the area.			
28.	Violation Details			
	A. Violation of Indian Forest Act, 1927			
	(i) Encroachment in proposed forest land, if any.			
	(ii) Encroachment case, if any, under IFA			
	(iii) Present status of case booked under IFA			
	(iv) Present status of work violation (ongoing or stopped)			
	B. Violation of Adhinyam			
	(i) Violation of Adhinyam if any, committed			
	(ii) Name of the erring officials, if any, identified			
	(iii) Present status of work violation (ongoing or stopped)			
	C. Action taken under section 3A and 3B of the Adhinyam			
	(i) Status report on action taken by the State/Regional Office of MoEF&CC against the erring official			
29.	Compensatory Afforestation (CA)			
	(i) Legal status of land identified for raising CA			
	(ii) Whether the land is under the administrative and management control of the State Forest Department			
	(iii) Whether the land proposed for CA swapped from Accredited Compensatory Afforestation			
	(iv) Details of non-forest area/degraded forest area identified for CA, its distance from adjoining forest, number of patches, size of each patches.			
	(v) Detailed CA scheme including species to be planted, implementing agency, time schedule, cost structure, Protection measures provided in the scheme, etc.			
	(vi) Whether CA scheme is site-specific or not			
	(vii) Total financial outlay for CA			

	(viii) Financial outlay for protection and watch & ward			
	(ix) Whether the CA land is free from encumbrance and is suitable from management point of view.			
	(x) Whether the user agency, being the Central/State/private entity is eligible for CA over the proposed land			
30.	Catchment Area Treatment Plan			
	(i) Total Catchment Area (ha)			
	(ii) Total cultural command area (ha)			
	(iii) Financial Provisions			
31.	Recommendation of the DFO/DCF			
	(i) Specific recommendation and specific conditions, if any recommended by the DFO			
	(ii) Adverse comments and reasons thereof, if any, mentioned			
32.	Detail of progress made on raising compensatory afforestation in the Forest Division			
	(i) Total CA stipulated since 1980 a. Forest land b. Penal CA over forest land c. Non-forest land			
	(ii) Progress CA as on date a. Forest land b. Penal CA over forest land c. Non-forest land			
	<b>Part-III</b>			
33.	Recommendations of the PSC/Nodal Officer/PCCF			
	(i) Specific recommendation and specific conditions, if any recommended by the Nodal Officer			
	(ii) Adverse comments and reasons thereof, if any, mentioned			
	(iii) Comments/justification for overruling the adverse comments of the DFO, if applicable.			
	(iv) Site inspection of the CF/CCF and recommendation made therein, if applicable			
	(v) Site inspection of the Nodal Officer and recommendation made therein, if applicable			
	<b>Part-IV</b>			
34.	Recommendation made by the State/UT			
	(i) Specific recommendation of the State Government along with specific conditions, if any recommended.			
	(ii) Remarks/Justification on the adverse comments of the DFO/CF/CCF, if any,			
35.	Remarks, if any.			

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