



**ABSTRACT**

Forests – Removal of Invasive Alien Species and Restoration of Native Grass Land in Kodaikanal Division – Administrative approval accorded for Rs.84.70 lakhs for a period of three years from 2017-2018 to 2019-2020 – Release of a sum of Rs.42.91 lakhs for the year 2017-2018 under Tamil Nadu Innovation Initiatives Fund (TANII) - Sanction - Orders – Issued.

**Environment and Forests (FR.6) Department**

G.O.(D)No: 42

Dated: 13.02.2018

ஹேவிளம்பி, மாசி – 01

திருவள்ளூர் ஆண்டு – 2049

Read:

1. From the PCCF Ref.No.J1/24259/2017, dated: 06.09.2017.
2. From the Member Secretary, State Planning Commission, Letter No.1644/SPC(PC)/2017, dated: 14.11.2017.
3. From the Principal Chief Conservator of Forests Ref.No.J1/22051/2017, dated: 20.12.2017.

**ORDER :**

In the letter first read above, the Principal Chief Conservator of Forests has placed a proposal of “Restoration of Native Grass Land in Kodaikanal Division” at a cost of Rs.164.01 lakhs for a period of three years from 2017-2018 to 2019-2020, before the State Planning Commission during the second round meeting of Tamil Nadu Innovation Initiative (TANII).

2. In the letter second read above, the State Planning Commission has approved the above project under TANII fund after excluding the cost of Computers and accessories and accordingly has recommended the proposal for 50 hectares at a reduced outlay of Rs.84.70 lakhs only for the year 2017-2018.

3. In the letter third read above, the Principal Chief Conservator of Forests has sent revised proposal for “Restoration of Native Grass Land in Kodaikanal Division” for an amount of Rs.84.70 lakhs under TANII Fund for a period of three years from 2017-2018 to 2019-2020. The Principal Chief

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Conservator of Forests has furnished detailed justification of the proposal as below:-

**Restoration of Native Grassland under Tamilnadu Innovation and Initiative Scheme during 2017-18**

The Western Ghats are home to thousands of animal species including atleast 325 globally threatened species. Many endemic species, especially in the amphibian, reptilian and high classes, are endemic to the Western Ghats. The Western Ghats are the main catchment area for many rivers of Southern India. The Palani hill is one of the important hills situated in Western Ghats. The Grass lands in Palani hills are being invaded by mostly Wattle and other weeds. The invasion of Exotics has reached beyond the stage of congestion leading to a lesser population of prey and predator species and has caused serious threat to the eco system. Now the situation has come to an alarming stage. At the present context, Wattle has encroached a large extent of area where it is unwarranted. It has affected the different pristine eco systems viz. water bodies, swamps, sholas, grass lands etc., adversely. The shola grassland of the Western Ghats is a unique type of grass land. Natural grasslands primarily occur in regions that receive more than 500 mm of rain per year. This type of forest occurs in the Upper Palani's plateau from 1700-2450M elevation where the rainfall is 1200 mm.

Removal of Wattle and monitoring of bio-diversity was earlier sanctioned under Tamil Nadu Biodiversity Conservation and Greening Project. A pilot study of eco restoration and wattle removal works were done under Tamil Nadu Biodiversity Conservation and Greening Project during 2012-13 and 2013-14 to an extent of 100 ha. The results were promising and the monitoring of bio diversity in the wattle removed areas showed remarkable eco-restoration. The results were submitted and monitoring team from Project Management Unit and JICA team also visited the removal areas and they had ascertained the eco-restoration in wattle removed areas. Hence this work of restoration of native grass lands by removal of invasive species has to be carried out in large scale in Kodaikanal wildlife sanctuary for improvement of habitat for wildlife.

**Methodology for Restoration of Grasslands in Kodaikanal Division**

1. Removal of invasive such as wattle will be carried out on a priority basis in the existing grasslands. Removal will be carried out preferably prior to the monsoon season. It is planned to carryout removal in 2 locations depending upon the invasive species intensity in the area. (High, Medium, Low). In each location an area of 25 ha removal has been planned. The location will be preferably in Amphthill down Reserve Forest and Gundar Valley Reserve

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Forest. The location selection will also be based on wild animal movement in the area and also to mitigate the human animal conflict.

2. Water bodies, marshlands and water ways encroached by wattle will be cleared of the invasive species for maintaining a healthy hydrological regime, which is crucial for survival of wildlife inside the forest areas and also to conserve the sources of drinking water for people. Berijam lake is the primary source of drinking water for Periyakulam town at the foothills.
3. Nurseries of grassland species will be raised. The services of grassland experts will be utilised for raising such nurseries. The objective will be to raise as many different species as possible so as to improve the bio-diversity of the restoration sites.
4. There will be periodical exchange of ideas and information of the ground situations between Forest department, stake holders, field scientists and reputed academicians for better field success of restoration programmes.

#### **Proposed Schedule of Operation for Restoration of Native Grassland**

The Grass lands cover an extent of 4963.48 ha area in Kodaikanal Wildlife Sanctuary. About 50 Ha will be taken up in this project period for removal of wattle invaded in grasslands. The same area will be maintained for two years. The proposed period of operation for rejuvenating the grass lands in 50 Ha is as follows:-

Sl. No	Year	Initial year. Removal of wattle (in Ha.)	1st year maintenance (Area in Ha.)	2nd year maintenance (Area in Ha.)	3rd year maintenance (Area in Ha.)
1	2017-18	50	--	--	--
2	2018-19	--	50	--	--
3	2019-20	--	--	50	--
4	2020-21	--	--	--	50
<b>Total</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>

This removal and maintenance plan chart will be continued for 2 years for 2017-18 and 2018-19. After 2<sup>nd</sup> year the worked out area will be revisited and decision will be taken according to the field condition for further maintenance. Since, the maximum area occupied by the exotics fall in Kodaikanal Wildlife Sanctuary, the removal and disposal of exotics will be carried out with necessary adherence under sec. 29 of Wildlife Protection Act 1972.

#### **Following are the methods to be adopted for creation of Native grassland:-**

1. Survey and Study about the present status of Native Grassland and about the native grass species by engaging a qualified Botanist through NGO.

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2. Documentation of study reports and compilation of study reports in printing of books
3. Removal of alien species which have invaded into the existing grass lands 50 ha @34128/ha
4. Raising advanced grass nursery containing local grass species 1000 slips/ha x 100 ha @ 25,250/-ha in the first year.
5. II Year maintenance of invasive species removed area by removing and uprooting and weeding out the alien species which may grow in the removed area @ 23851/ha x 50 ha
6. Planting of Native grass slips during 2018-19 which were raised in the advance nursery during 2017-18 @25400/ha x 50 ha
7. III year maintenance of alien species removed area by uprooting and weeding out the alien species which may grow in the removed area during 2019-20 @ 16849/ha x 50 ha
8. Maintenance of planted grass area and replacement of casualties where empty patches seen in the planted area @17515/ha
9. Engaging a technical assistant/Research assistant to carry the project works, documentation, field visits.

4. The Principal Chief Conservator of Forests has also stated that the outcome of the Project would help in restoring the native grassland ecosystem which is unique to Kodaikanal Wildlife Sanctuary.

5. The Government after careful consideration of the proposal of the Principal Chief Conservator of Forests for "Resoration of Native Grass Land in Kodaikanal Division" have decided to accept the same. Accordingly administrative sanction is accorded for a sum of Rs.84.70 lakhs (Rupees Eighty four lakhs and seventy thousand only) for a period of three years from 2017-2018 to 2019-2020 and sanction a sum of Rs.42.91 lakhs (Rupees Forty two lakhs and ninety one thousand only) for the year 2017-2018 under Tamil Nadu Innovation Initiatives Fund, as per the cost table annexed to this order, for implementing the scheme.

6.(i) The expenditure sanctioned in para 5 above shall be debited to the following head of account:-

"2406 Forestry and Wild Life. 02 Environmental Forestry and Wild life. 110 Wild Life Preservation. STATE'S EXPENDITURE. JO Restoration of Native grass Land in Kodaikanal under State Innovation Fund - 09 Grants - in - Aid - 03 Grants for Specific Schemes.  
(DPC - 2406 02 110 JO 0933)"

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(ii) The expenditure shall be met from the State Innovation Fund by deducting under the following head of account:-

“2406 Forestry and Wild Life – 02 Environmental Forestry and Wild life. 902 Deduct – Amount met from State Innovation Fund. State’s Expenditure. JA Deduct – Amount met from State Innovation Fund. 30 Inter- Account Transfers (DPC – 2406 02 902 JA 3000)”

And Contra – debiting the following fund account:-

“ J- Reserve Fund – (b) Reserve funds not bearing interest – 8229-00-Development welfare Funds – 200. Other Development and Welfare Funds – BE State Innovation Fund

(DPC -8229 00 200 BE 0006) (Outgo)

7. Necessary funds have been included in the Supplementary Estimates 2017-2018.

8. The Principal Chief Conservator of Forests is directed to send necessary proposal for the consecutive years, for sanction of funds for implementing the scheme.

9. This order issues with the concurrence of Finance Department vide its U.O.No.5991/AHD&F/2018 dated:12.02.2018.

**(BY ORDER OF THE GOVERNOR)**

**MD. NASIMUDDIN  
PRINCIPAL SECRETARY TO GOVERNMENT**

To  
The Principal Chief Conservator of  
Forests (Head of Department), Ch-15.  
The Pay & Accounts Officer (South), Chennai – 35.  
The Principal Accountant General(A&E), Chennai-18.  
The Accountant General – I/II, Chennai – 18.  
The Resident Audit Officer (G&SSA), Secretariat, Chennai-9.

**Copy to :-**

Finance (AHD&F) / (BG-II) Department, Chennai-9.  
The Member Secretary, State Planning Commission, Ch-5.  
The Planning Development and Special Initiatives Department, Chennai -9.  
Stock File/Spare Copy.

// FORWARDED BY ORDER //

*4/18*  
*B. Sulochana.*  
Section Officer

*CP*  
*14/2/18*

Annexure to G.O. (D) No. 42, Environment and Forests (FR.6) Department, dated: 13.02.2018.

**COST TABLE FOR THE PROPOSAL RESTORATION OF NATIVE GRASS LAND (2017-18 to 2019-20)**

ITEM	Unit Cost in lacs	Quantity Required	Target		Total	Remarks
			Physical	Finacial		
<b>A. RECURRING</b>						
1) STAFF COST	18000/ month	--	--	6.48	6.48	--
2) OTHER COST	--	--	--	--	--	--
<b>TOTAL</b>				<b>6.48</b>	<b>6.48</b>	--
<b>B. NON RECURRING</b>	--	--	--	--	--	--
<b>CREATION OF NATIVE GRASS LAND</b>						
1. Survey and Study about the present status of Grassland and about the native grass species by engaging a qualified Botonist through NGO	LS 12 month	LS	LS	4.5	4.50	
2) Documentation of study reports and compilation of study reports in printing of books	LS	LS	LS	1.25	1.25	
3) Removal of alien species which are invaded in the existing grass lands 50 ha @34128/ha	34128/ Ha	50 Ha	50 Ha	17.06	17.06	

(P.t.o)

4) Raising advance grass nursery containing local grass species 1000 slips/ha x 50 ha @ 25,250/- 2017-18	25250 / Ha	50 Ha	50 Ha	12.62	12.62
5) II Year maintenance of alien species removed area by removing and uprooting and weeding out the alien species which are grown in the removed area @ 23851/ha x 50 ha during 2018-19	23851 / Ha	50 Ha	50 Ha	11.92	11.92
6) Planting of Native grass slips which are grown in the advance nursery raised from 2017-18 during 2018-19 @25400/ha x 50 ha	25400 / Ha	50 Ha	50 Ha	12.70	12.70
7) III year maintenance of alien species removed area by uprooting and weeding out the alien species which are grown in the removed area during 2019-20 @ 16849/ha x 50 ha	16849 / Ha	50 Ha	50 Ha	8.42	8.42
8) Maintenance of planted grass area and replacement of casualties where empty patches seen in the planted area @17515/ha 2019-20	17515 / Ha	50 Ha	50 Ha	8.75	8.75
9) Monitory and evaluation of the above work	LS	LS	LS	1.00	1.00
<b>TOTAL</b>				<b>84.70</b>	<b>84.70</b>

MD. NASIMUDDIN  
PRINCIPAL SECRETARY TO GOVERNMENT

//True copy//

*B Subochana*  
Section Officer

*14/2/18*