
MIZORAM STATE CAMPA ANNUAL PLAN OF OPERATION (APO) 2022 – 2023

From : fc campa mizoram <fc.campa.mizoram@gmail.com>

Thu, Dec 23, 2021 03:15 PM

Subject : MIZORAM STATE CAMPA ANNUAL PLAN OF OPERATION (APO) 2022 – 2023

 3 attachments

To : N CAMPA <adhoc-campa-mef@nic.in>

Cc : ro nez shil <ro.nez.shil@gmail.com>, MoEF&CC, Regional Office, Shillong <moefro.shillong@gov.in>

Sir/Madam,

I am directed to send herewith a forwarding letter with CAMPA APO 2022-23 duly approved by the Steering Committee, State CAMPA.

Regards,

FC & CAMPA Cell
PCCF's Office, Aizawl

 **APO forwarding.pdf**

612 KB

 **MINUTE OF STEERING COMMITTEE OF STATE AUTHORITY, MIZORAM CAMPA ..pdf**

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 **Mizoram APO 2022-23.pdf**

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GOVERNMENT OF MIZORAM
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
DEPARTMENT OF ENVIRONMENT, FORESTS & CLIMATE CHANGE
MIZORAM::AIZAWL

No.B.20018/54/2020-CAMPA/PCCF

Dated Aizawl the 11th Dec, 2021

To,

Chief Executive Officer,
National Authority, CAMPA
Government of India,
Ministry of Environment, Forests & Climate Change,
Indira Paryavaran Bhavan,
Jorbagh road, Alliganj, New Delhi- 11003
E-mail: *adho-campa-mef@nic.in*

Subj: Annual Plan of Operation – 2022-23 of Mizoram State CAMPA.

Sir,

Kindly find enclosed herewith Annual Plan of Operation, Mizoram State CAMPA for the year 2022-23 with a budget outlay of Rs. 20.40 crore for kind consideration and approval. The APO has been approved by the Steering Committee of the State CAMPA in its meeting held on 21.12.2021. A copy of the minutes of the meeting of the Steering Committee is also enclosed herewith for kind perusal.

It is therefore, requested to kindly approve the APO (2022-23) with sanction of the required funds for timely implementation of the work in accordance with APO (2022-23) under CAMPA.

Encl: As above

Yours faithfully,


(LIANDAWLA)

Principal Chief Conservator of Forests
Mizoram, Aizawl

Dated Aizawl the 11th Dec,

Memo No.B.20018/54/2020-CAMPA/PCCF
2021

Copy to :

1. Director General of Forests & Special Secretary, Ministry of EF & CC, Govt. of India for favour of information.
2. Dy. Inspector General of Forests (C), Ministry of EF & CC, NE Regional Office, Law-U-Sib-, Lumbatngen, Shillong – 793021 E-mail : ro.nez.shil@gmail.com
3. Under Secretary to the Govt. of Mizoram, EF&CC Department for information.


(RS SINHA)

Chief Executive Officer
State Authority, Mizoram CAMPA

**MINUTES OF THE MEETING OF STEERING COMMITTEE OF STATE AUTHORITY
(CAMPA) HELD ON 21.12.2021 IN THE CHIEF SECRETARY'S CONFERENCE ROOM,
AIZAWL, MIZORAM**

A meeting of Steering Committee of State Authority CAMPA constituted vide Notification No. B.11021/9/2015-FST dated 07.12.2018 was held on 21.12.2021 in the Conference Room of Chief Secretary, Mizoram to scrutinize and approve the draft Annual Plan of Operation (APO) of CAMPA for the year 2022-23. The draft APO was earlier discussed in the meeting of Executive Committee held on 30.11.2021 and the suggestions emerged were incorporated in the draft APO. The Steering Committee meeting was Chaired by the Chief Secretary, Govt. of Mizoram. The attendance sheet of participants is appended as Annexure-I.

Chief Secretary welcomed the participating members of the Steering Committee and invited the official concerned to highlight and present the activities proposed in the draft APO of 2022-23 by the Executive Committee.

Since the proposed activities with financial targets are permissible upto 10% of the principal amount accumulated under CAMPA, the activities were identified and proposed in line with the Compensatory Afforestation Fund Rules, 2018. The following activities were proposed before the Steering Committee :

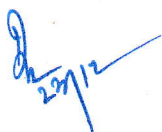
**1. Division wise Physical & Financial targets of CA , CATP & Dwarf Plantation
proposed in APO 2022-23**

CA (Compensatory Afforestation) :

Sl. No	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Financial target (in Rs.)
1	MADC	CA	Widening & Upgradation of NH-54 Addl. RF (Package III)	24	Advance work	6,82,831
2	Mamit	CA	Construction of 132 Kv Transmission Line (W. Phaileng to Marpara)	210	Advance work	59,74,773
3	Darlawn	CA	Widening & Upgradation of NH-54 Deem Forest (Package-1) & Addl. RF (Package II)	15.807	Advance work	4,49,730
4	Aizawl	CA	Construction of 132 Kv Transmission Line (Sakawrtuichhun - Sihhmui)	18.78	Creation	7,25,415
5	LADC	CA	Widening & Upgradation of NH-54	4.81	Creation	

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			to 2-lane (Package-3) km 250-380 within Lawngtlai District			1,85,796
6	MADC	CA	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-350 within Siaha District	6.37	Creation	2,46,054
7	Darlawn	CA	Construction of Tuirial Hydro Electric Project	479	Creation	1,85,02,333
8	Darlawn	CA	Widening & Upgradation of NH-54 to 2-lane (Package- 1&2) km 8.00-250 within Aizawl & Lunglei District	12.09	1st yr maintenance	1,32,726
9	Darlawn	CA	Construction of NH- 150 (Zemabawk - E.Phaileng road)	23.69	1st yr maintenance	2,60,074
10	Darlawn	CA	Construction of Tuirial Hydro Electric Project)	551	1st yr maintenance	60,48,988
11	Darlawn	CA	IBB Fencing inside Dampa Tiger Reserve	717	1st yr maintenance	78,71,369
12	Darlawn	CA	Construction of Tuirial Hydro Electric Project	432.5	2nd yr maintenance	31,65,381
13	Darlawn	CA	Construction of Tuirial Hydro Electric Project	346.5	4th year maintenance	22,54,190
14	Darlawn	CA	IBB Fencing inside Dampa Tiger Reserve	804	1 st yr* & 2 nd yr maintenance	1,47,10,788
13	Lunglei	CA	Construction of bridge over Kawrawnglui	0.2424	4th year maintenance	1,577
14	Darlawn	CA	MSRP-II, Gr-I (Tlabung - Kawrpuchhuah road)	4.98	4th year maintenance	32,398
15	Kolasib	CA	Construction of 400 KV Transmission line from Srikona - Melriat (Sakawrtuichhun)	768.06	6th year maintenance	43,72,116



16	Darlawn	CA	Construction of railway BG line from Bairabi - Sairang	46.55	6th year maintenance	2,65,010
17	Darlawn	CA	MSRP-II, Gr-I (Chhumkhum - Chawngte road)	3.85	6th year maintenance	21,916
18	Darlawn	CA	Construction of NH-44A, Lengpui - Langkaih road	56.63	6th year maintenance	3,22,378
19	Darlawn	CA	Construction of BG railway line from Bairabi - Sairang	27.93	7th year maintenance	1,36,291
20	Thenzawl	CA	Diversion of 0.9963 ha of forest land for upgradation and improvement of Serchhip to Buarpui road	2	6 th yr* and 7 th yr maintenance	21,143
21	Darlawn	CA	Construction of Tuirial Hydro Electric Project	591	6 th yr* and 7 th yr maintenance	62,47,815
TOTAL				3020.9824		7,26,31,092

**Liabilities of APO 2021-22*

CATP (Catchment Area Treatment Plan) :

Sl. No.	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Financial target (in Rs.)
1	Aizawl	CATP	Tuirial HEP	200	2nd year maintenance#	11,38,480
2	Kolasib	CATP	Tuirial HEP	300	2nd year maintenance#	17,07,720
3	Darlawn	CATP	Tuirial HEP	300	2nd year maintenance#	17,07,720
4	Aizawl	CATP	Tuirial HEP	150	5th year maintenance	4,87,920
5	Kolasib	CATP	Tuirial HEP	300	5th year maintenance	9,75,840

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6	Darlawn	CATP	Tuirial HEP	300	5th year maintenance	9,75,840
TOTAL				750	-	24,39,600

Maintenance will be carried out from the available funds of APO 2021-22. Thus, amount is not added in the total amount

DP (Dwarf Plantation) :

Sl. No	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Amount for Works
1	Aizawl	Dwarf Plantation	132 KV Transmission Line Sakawrtuichhun to Sihhmui)	2.08	Creation	33,095
2	Kolasib	Dwarf Plantation	400 KV Transmission Line (Silchar to Sakawrtuichhun)	21.5	6th yr maintenance	2,01,064
TOTAL				23.58		2,34,159

The Committee approved the proposal as mentioned above for CA, CATP and Dwarf Plantations, as these are to fulfil the conditions stipulated while agreeing for diversion of forest land and in conformity with the Forest (Conservation) Act, 1980.

2. The activities under NPV components proposed for APO (2022-23) as below :

ABSTRACT OF ACTIVITIES UNDER NET PRESENT VALUE (NPV)

Core activities (not less than 80%)

S. No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)	Remarks
1	Creation of Avenue (roadside) Plantations (Advance works) in potential divisions with fruit bearing tall seedlings.	2 lakh tall seedlings @ Rs.60/-	1,20,00,000.00	5(2)(b)	Since soil erosion and land slide in Mizoram is very common due to hilly terrain thus, Avenue Plantation on road sides will not only stabilize the soil but will also ameliorate aesthetic aspect.
2	Forest fire prevention and control operations	16 divisions	1,20,00,000.00	5(2)(f)	Forest fire in remote hilly areas is quite common due to jhum burning thus, prevention measures are required annually. The fireline created in 2021-22 shall be maintained.
3	Protection of plantations and forests	16 divisions	80,00,000.00	5(2)(d)	Due to acute shortage of field staff, the protection of forests & plantations is required with engagement of local people for transportation of seized forest

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					products from interiors and taking other suitable measures.
4	Soil & Moisture Conservation works in the forests	In vulnerable forest divisions	50,00,000.00	5(2)(g)	Soil erosion and land slide is very common on hilly terrain thus, S&M Conservation activities are felt necessary.
5	Improvement of wildlife habitats provided in the approved WL Management Plan or Working Plan	500 ha	50,00,000.00	5(2)(i)	In line with prescriptions of approved WL Management Plan/Working Plan the WL habitats need to be improved with improvement of patrolling paths in Lengteng, Thorangtlang, etc.
6	Lidar based project-Biodiversity Conservation at Kawrthah & Mamit	1000 ha	1,00,00,000.00	5(2)(m)	An area of 10,000 ha. was selected for LIDAR based project in 2020-21. It is proposed to take up 1000 ha. in 2022-23.
7	Planting and rejuvenation of forest cover on non-forest land with wildlife corridors	500 ha.	1,00,00,000.00	5(2)(j)	Some non-forest lands viz. Durtlangkham under Aizawl, etc. are frequently visited by wild animals as corridors thus, planting and rejuvenation of such areas is proposed.
8	Creation of Seed Production Areas (SPAs) under different Forest Divisions	Potential territorial divisions	1,00,00,000.00	5(2)(m)	For raising quality planting material, creation of Seed Production Areas (SPA) is indispensable thus, it may be initiated in 5 forest divisions.
9	Management of biological diversity and biological resources in forests including wetlands.	10 forest divisions	1,40,00,000.00	5(2)(m)	Some forest areas on Govt. as well as community lands including wetlands are rich in biodiversity therefore, preservation and management of these resources is required.
10	Creation of Herbal Garden at suitable sites viz. Lengpui, etc.	2 sites	20,00,000.00	5(2)(m)	Herbal garden is proposed for awareness creation on medicinal plants and their conservation.
11	Development of Orchids	1 site	10,00,000.00	5(2)(m)	Endemic orchid species in Mizoram have immense scope for its conservation and promotion.
		TOTAL	8,90,00,000.00		

Allied activities (not more than 20%)

S. No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)	Remarks
1	Promoting conservation of Community/ Village Forests and Community	400 Hectare	1,20,00,000.00	5(3)(b)	In Mizoram every Village has safety & supply community reserve forests.

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	Forests and Community Reserve Sanctuaries maintained by local people and NGOs (YMA etc.)				community reserve forests. Similarly, largest NGO (YMA) is also having some parks. To promote their protection and conservation, some technical and financial support is required.
2	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas for protection duties.	In vulnerable forest divisions	40,000,00.00	5(3)(d)	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas are required for protection duties.
3	Construction of check posts/camps, waiting sheds and wooden boats for protection duties by forest field staff.	LS	30,00,000.00	5(3)(d)	Construction of check posts/camps and wooden boats are essential for protection duties by forest field staff in Riverine Reserved Forests.
4	Engagement of local casual staff/ labours to assist regular staff of State Forest Department in various works for protection of forests and wildlife including anti-poaching squad.	44 nos.	60,19,200.00	5(3)(f)	Due to acute shortage of regular forest staff, the functioning of nodal office as well as field offices has become quite challenging. Thus, casual engagement of local people in the nodal office as well as in division offices to assist regular staff of forest department for smooth functioning and effective execution of works in protection of forest, wildlife and CAMPA activities is indispensable.
5	Independent and third party monitoring & evaluation of various forestry works.	LS	10,00,000.00	5(3)(h)	Independent third party monitoring and evaluation is required to ensure implementation of approved works up to satisfactory level.
6	Publicity cum awareness and extension activities related to forest and wildlife conservation.	LS	25,00,000.00	5(3)(i)	For extension activities such as organizing awareness campaign, workshop and seminars, quiz, essay writing, painting competition for students, displaying banners, hoarding on bio-diversity conservation, environment protection, publication of

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					on forest wildlife conservation and other related issues. Documentation of biological diversity. (Faunal & floral)
7	Improvement/upgradation of existing forest nurseries with signboards, inspection paths, repair of fencing, weeding, etc.	All forest divisions	30,00,000.00	5(3)(a)	Nurseries are the backbone of plantations. Good nursery is an essential pre-requisite for quality planting material. Works will include improvement of water supply, nursery beds, inspection paths, procurement of tools, weeding, repair of fencing, etc.
8	Purchase/maintenance of communication devises viz. cell phones, laptops, etc. used for monitoring and protection of forests.	LS	10,00,000.00	5(3)(c)	Due to remote and difficult hilly terrain of Mizoram, the communication with forest field staff in various forest divisions and ranges is difficult. Thus, procurement of communication devises viz. cell phones, laptops, etc. is proposed.
9	Raising of thick walled bamboo planting material	LS	20,00,000.00	5(3)(a)	Since the bamboo has immense potential for economical development in the state, therefore raising of thick walled bamboo planting material is proposed
		TOTAL	3,45,19,200.00		

Total of NPV component Rs. 12,35,19,200.00

After detailed deliberations, the committee approved the above activities.

3. Activities proposed under interest component for APO 2022-23 :

The activities under interest component proposed in the meeting are as follows :

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ABSTRACT OF ACTIVITIES UNDER INTEREST COMPONENT

Permissible activities for not less than 60% of INTEREST :

S. No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Disbursement of wages/allowances to contractual staff engaged to assist State CAMPA	22	42,00,000.00	6(a)(iv)
2	Disbursement of sitting fees/allowances to the members and invitees in Executive/Steering Committee meetings of State Authority with refreshment, etc.	LS	1,00,000.00	6(a)(v)
		TOTAL	43,00,000.00	

Permissible activities for not more than 40% of INTEREST :

S. No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Management of office establishment	1	5,00,000.00	6(a)(i)
2	Office equipment and its maintenance	LS	2,00,000.00	6(a)(ii)
3	Other contingencies for management of the State Authority	LS	2,00,000.00	6(a)(v)
		TOTAL	9,00,000.00	

Total (Interest component) : 52,00,000.00

Since the SEIAA (State Environment Impact Assessment Authority) and SEAC (State Expert Appraisal Committee) have been constituted in the State of Mizoram for environment clearance projects however these bodies do not have separate budget provision thus, their office expenses may also be met from the interest component of CAMPA. An Interest amount of more than Rs. 13 crore is available in State CAMPA of which Rs. 0.52 crore is proposed for meeting the expenditure on wages/salary of contractual staff engaged under State Authority CAMPA and other office expenses in line with the provisions under Section 4 (2) of CAF Act, 2016 and Rule 6 (a) & (b) (v) of CAF Rules, 2018. The Committee agreed for utilization of proposed Interest amount available with the State Authority.

The Committee after examination of activities, approved the draft APO for 2022-23 for Rs. 20.40 crore and recommended for submission of the same to the National Authority, Ministry of Environment, Forests & Climate Change, Govt. of India for sanction.

The meeting ended with thanks to the chair and the participants.



(Dr. RENU SHARMA)

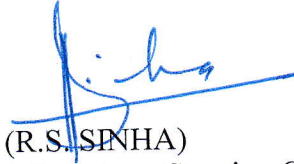
Chief Secretary & Chairman, Steering Committee

Memo No. B.20018/37/2020/CAMPA/PCCF/68-76

Dated Aizawl, the 23rd December, 2021.

Copy to :

- 1). Add. Chief Secretary to Chief Minister, Mizoram & Chairman of Governing Body of State Authority, CAMPA.
- 2). Chief Executive Officer, National Authority (CAMPA), Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003.
- 3). All members of Steering Committee of State Authority, CAMPA, Mizoram.
- 4). Dy. Director General of Forests (C), Ministry of Environment, Forests & Climate Change, Regional Office, Shillong.



(R.S. SINHA)

APCCF & Member Secretary, Steering Committee

**MINUTES OF THE MEETING OF EXECUTIVE COMMITTEE OF STATE AUTHORITY
(CAMPA) HELD ON 30.11.2021 IN THE CONFERENCE HALL OF PCCF OFFICE,
AIZAWL**

A meeting of Executive Committee of State Authority (CAMPA) constituted vide Notification No. B.11021/9/2015-FST dated 07.12.2018 was held on 30.11.2021 in the Conference Hall of PCCF's Office, Aizawl to examine and finalize the draft Annual Plan of Operation (APO) of CAMPA for the year 2022-23. A list of participants who attended the meeting is appended as Annexure-I.

The Principal Chief Conservator of Forests welcomed members of the Executive Committee and briefed about the CAMPA and APO. He thereafter invited DCF (FC) for highlighting the activities proposed in the draft APO of 2022-23.

DCF (FC) stated that since the proposed activities with financial targets are required to be upto 10% of the principal amount (i.e approx Rs 201.82 crore) accumulated under State CAMPA thus, care has been taken and activities are proposed in line with the relevant rules and guidelines. It was informed that the following main activities are proposed in the CAMPA APO for 2022-23:

**Division wise Physical & Financial targets of CA, CATP & Dwarf Plantation proposed for
APO 2022-23**

CA (Compensatory Afforestation) :

Sl. No	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Financial target (in Rs.)
1	MADC	CA	Widening & Upgradation of NH-54 Addl. RF (Package III)	24	Advance work	6,82,831
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6	MADC	CA	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-350 within Siaha District	6.37	Creation	2,46,054
7	Darlawn	CA	Construction of Tuirial Hydro Electric Project	479	Creation	1,85,02,333
8	Darlawn	CA	Widening & Upgradation of NH-54 to 2-lane (Package-1&2) km 8.00-250 within Aizawl & Lunglei District	12.09	1st yr maintenance	1,32,726
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15	Kolasib	CA	Construction of 400 KV Transmission line from Srikona - Melriat (Sakawrtuichhun)	768.06	6th year maintenance	43,72,116
16	Darlawn	CA	Construction of railway BG line from Bairabi - Sairang	46.55	6th year maintenance	2,65,010
17	Darlawn	CA	MSRP-II, Gr-I (Chhumkhum - Chawngte road)	3.85	6th year maintenance	21,916
18	Darlawn	CA	Construction of NH-44A, Lengpui - Langkaih road	56.63	6th year maintenance	3,22,378

19	Darlawn	CA	Construction of BG railway line from Bairabi - Sairang	27.93	7th year maintenance	1,36,291
20	Thenzawl	CA	Diversion of 0.9963 ha of forest land for upgradation and improvement of Serchhip to Buarpui road	2	6 th yr* & 7 th yr maintenance	21,143
21	Darlawn	CA	Construction of Tuirial Hydro Electric Project	591	6 th yr* & 7 th yr maintenance	62,47,815
TOTAL				5146.7894		7,26,31,092

** Liabilities of APO 2021-22*

CATP (Catchment Area Treatment Plan) :

Sl. No.	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Financial target (in Rs.)
1	Aizawl	CATP	Tuirial HEP	200	2nd year maintenance#	11,38,480
2	Kolasib	CATP	Tuirial HEP	300	2nd year maintenance#	17,07,720
3	Darlawn	CATP	Tuirial HEP	300	2nd year maintenance#	17,07,720
4	Aizawl	CATP	Tuirial HEP	150	5th year maintenance	4,87,920
5	Kolasib	CATP	Tuirial HEP	300	5th year maintenance	9,75,840
6	Darlawn	CATP	Tuirial HEP	300	5th year maintenance	9,75,840
TOTAL				750	-	24,39,600

Maintenance will be carried out from the available funds of APO 2021-22. Thus, amount is not added in the total amount

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DP (Dwarf Plantation) :

Sl. No	Division	Scheme	Name of FC Project	Phy. Target (in ha)	Activity	Amount for Works
1	Aizawl	Dwarf Plantation	132 KV Transmission Line Sakawrtuichhun to Sihhmui)	2.08	Creation	30,930
2	Kolasib	Dwarf Plantation	400 KV Transmission Line (Silchar to Sakawrtuichhun)	21.5	6th yr maintenance	1,87,910
TOTAL				23.58		2,18,840

DCF (FC) stated that the activities under CA, CATP and Dwarf Plantation are proposed as per plantation programme subsequent to whatever activities taken up during the current year. The Committee agreed that since the plantation creation and their maintenance are time bound and mandatory activities and their continuous operation is required for survival of CA plantations thus, the above proposal was recommended.

The proposed activities under NPV and interest components were then presented as follows :

ABSTRACT OF NET PRESENT VALUE (NPV) ACTIVITIES***Core activities (not less than 80%)***

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)	Remarks
1	Creation of Avenue (roadside) Plantations (Advance works) in potential divisions with fruit bearing tall seedlings.	2 lakh tall seedlings @ Rs.60/-	1,20,00,000.00	5(2)(b)	Since soil erosion and land slide in Mizoram is very common due to hilly terrain thus, Avenue Plantation on road sides will not only stabilize the soil but will also ameliorate aesthetic aspect.
2	Forest fire prevention and control operations	16 divisions	1,20,00,000.00	5(2)(f)	Forest fire in remote hilly areas is quite common due to jhum burning thus, prevention measures are required annually. The fireline created in 2021-22 shall be maintain
3	Protection of plantations and forests	16 divisions	80,00,000.00	5(2)(d)	Due to acute shortage of field staff, the protection of forests & plantations is required with engagement of local people with transportation of seized forest products from interiors.
4	Soil & Moisture Conservation works in the forests	In vulnerable forest divisions	50,00,000.00	5(2)(g)	Soil erosion and land slide is very common on hilly terrain with drought in some areas during dry season thus, S&M Conservation activities are felt necessary.
5	Improvement of wildlife habitats provided in the approved WL Management Plan or Working Plan	500 ha	50,00,000.00	5(2)(i)	In line with prescriptions of approved WL Management Plan/Working Plan the WL habitats need to be improved with improvement of patrolling paths in Lengtung, Thorangtlang, etc.
6	Lidar based project-Biodiversity Conservation at	1000 ha	1,00,00,000.00	5(2)(m)	An area of 10,000 ha. was selected for LIDAR based project in 2020-21. It is proposed to take up 1000 ha. in 2022-23.

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	Kawrthah & Mamit				
7	Planting and rejuvenation of forest cover on non-forest land with wildlife corridors	500 ha.	1,00,00,000.00	5(2)(j)	Some non-forest lands viz. Durtlangkham under Aizawl, etc. are frequently visited by wild animals as corridors thus, planting and rejuvenation of such areas is proposed.
8	Creation of Seed Production Areas (SPAs) under different Forest Divisions	Potential territorial divisions	1,00,00,000.00	5(2)(m)	For raising quality planting material, creation of Seed Production Areas (SPA) is indispensable thus, it may be initiated in 5 forest divisions.
9	Management of biological diversity and biological resources in wetland and surrounding areas	10 forest divisions	1,40,00,000.00	5(2)(m)	Some forest areas on Govt. as well as community lands including wetlands are rich in biodiversity therefore, preservation and management of these resources is required.
10	Creation of Herbal Garden at suitable sites viz. Lengpui, etc.	2 sites	20,00,000.00	5(2)(m)	Herbal garden is proposed for awareness creation on medicinal plants and their conservation.
11	Development of Orchids	1 site	10,00,000.00	5(2)(m)	Endemic orchid species in Mizoram have immense scope for its conservation and promotion.
		TOTAL	8,90,00,000.00		

ABSTRACT OF NET PRESENT VALUE (NPV) ACTIVITIES

Allied activities (not more than 20%)

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)	Remarks
1	Promoting conservation of Community/ Village Forests and Community Reserve Sanctuaries maintained by local people and NGOs (YMA etc.)	400 Hectare	1,20,00,000.00	5(3)(b)	In Mizoram every Village has safety & supply community reserve forests. Similarly, largest NGO (YMA) is also having some parks. To promote their protection and conservation, some technical and financial support is required.
2	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas for protection duties.	In vulnerable forest divisions	40,00,000.00	5(3)(d)	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas are required for protection duties.
3	Construction of check posts/camps, waiting sheds and wooden boats for protection duties by forest field staff.	LS	30,00,000.00	5(3)(d)	Construction of check posts/camps and wooden boats are essential for protection duties by forest field staff in Riverine Reserved Forests.
4	Engagement of local casual staff/ labours to assist regular staff of State Forest Department in various works for protection of forests and wildlife including anti-poaching squad.	44 nos.	60,19,200.00	5(3)(f)	Due to acute shortage of regular forest staff, the functioning of nodal office as well as field offices has become quite challenging. Thus, casual engagement of local people in the nodal office as well as in division offices to assist regular

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					staff of forest department for smooth functioning and effective execution of works in protection of forest, wildlife and CAMPA activities is indispensable.
5	Independent and third party monitoring & evaluation of various forestry works.	LS	10,00,000.00	5(3)(h)	Independent third party monitoring and evaluation is required to ensure implementation of approved works up to satisfactory level.
6	Publicity cum awareness and extension activities related to forest and wildlife conservation.	LS	25,00,000.00	5(3)(i)	For extension activities such as organizing awareness campaign, workshop and seminars, quiz, essay writing, painting competition for students, displaying banners, hoarding on bio-diversity conservation, environment protection, publication of books, pamphlets, reports on forest wildlife conservation and other related issues. Documentation of biological diversity. (Faunal & floral)
7	Improvement/upgradation of existing forest nurseries with signboards, inspection paths, repair of fencing, weeding, etc.	All forest divisions	30,00,000.00	5(3)(a)	Nurseries are the backbone of plantations. Good nursery is an essential pre-requisite for quality planting material. Works will include improvement of water supply, nursery beds, inspection paths, procurement of tools, weeding, repair of fencing, etc.
8	Purchase/maintenance of communication devises viz. cell phones, laptops, etc. used for monitoring and protection of forests.	LS	10,00,000.00	5(3)(c)	Due to remote and difficult hilly terrain of Mizoram, the communication with forest field staff in various forest divisions and ranges is difficult. Thus, procurement of communication devises viz. cell phones, laptops, etc. is proposed.
9	Raising of thick walled bamboo planting material	LS	20,00,000.00	5(3)(a)	Since the bamboo has immense potential for economical development in the state, therefore raising of thick walled bamboo planting material is proposed
		TOTAL	3,45,19,200.00		

The committee after detailed deliberation made following suggestions / comments –

- 1) The Avenue (mainly road side) plantations should be taken up along the roads which are not likely to be widened as the widening of road may cause destruction of plantations. For this

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purpose tall seedlings of fruit bearing species be raised with initial target of 2 lakhs seedlings.

- 2) Creation of herbal garden with involvement of YMA be taken up at Lengpui and other suitable sites.
- 3) The forest fire prevention and control operations proposed under core activities at Sl. No. 2 should be implemented with participation of local people and non-profit NGOs.
- 4) Orchid development project may be taken up at suitable sites.
- 5) Lidar project activities be continued under CAMPA.
- 6) Thick walled bamboo species be raised for distribution to public.
- 7) Development of forest museum at Forest Training School be also proposed under CAMPA.

Thereafter, the activities under interest component were proposed as follows :

ABSTRACT OF COST OF INTEREST

Permissible activities for not less than 60% of INTEREST :

S.N o.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Disbursement of wages/allowances to contractual staff engaged to assist State CAMPA	22	42,00,000.00	6(a)(iv)
2	Disbursement of sitting fees/allowances to the members and invitees in Executive/Steering Committee meetings of State Authority with refreshment, etc.	LS	1,00,000.00	6(a)(v)
		TOTAL	43,00,000.00	

Permissible activities for not more than 40% of INTEREST :

S.N o.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Management of office establishment	1	5,00,000.00	6(a)(i)
2	Office equipment and its maintenance	LS	2,00,000.00	6(a)(ii)
3	Other contingencies for management of the State Authority	LS	2,00,000.00	6(a)(v)
		TOTAL	9,00,000.00	

Total (Interest component) :52,00,000.00

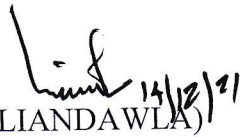
ABSTRACT OF CAMPA APO 2022-23

S. No.	Head	Physical target	Financial target (in Rs)
1	CA	5146.7894	7,26,31,092
2	CATP	750	24,36,600
3.	Dwarf Plantation	23.58	2,34,159
4.	Net Present Value	LS	12,35,19,200
5	Interest	LS	52,00,000
	TOTAL		20,40,21,051

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It was mentioned that since the SEIAA (State Environment Impact Assessment Authority) and SEAC (State Expert Appraisal Committee) have been constituted in the State of Mizoram for environment clearance projects however these bodies do not have separate budget provision thus, their office expenpenses may be met from the interest component of CAMPA.

The Committee after examination of activities agreed to the proposal and recommended for submission of draft CAMPA APO (2022-23) to the Steering Committee after making necessary corrections.



(LIANDAWLA)
PCCF & Chairman
Executive Committee

Memo No.B.20018/50/2021-CAMPA/PCCF

Dated Aizawl, the ^{14th}..... December, 2021

Copy to :

- 1) Member Secretary, Steering Committee, State CAMPA, Mizoram, Aizawl.
- 2) The Chief Executive Officer, National Authority CAMPA, Ministry of Environment, Forests & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, N.Delhi-110003.
- 3) Dy. Director General of Forests, Integrated Regional Office, Ministry of Environment, Forests & Climate Change, Shillong.
- 4) All members of Executive Committee, State CAMPA Authority, Mizoram.
- 5) Under Secretary to the Govt. of Mizoram, Environment, Forests & Climate Change Department, Aizawl.


(MZ SINGSON)
Dy. Chief Executive Officer
State Authority, CAMPA

EXECUTIVE COMMITTEE OF CAMPA STATE AUTHORITY

Dated 30.11.2021 (3:00 PM)

ATTENDANCE SHEET

S.No	Name	Designation	Signature
1	LIANDAWLA, IFS	PCCF (MOD)	
2	JITENDRA KUMAR, IFS	PCCF (P&D)	
3	LIANKIMA LAIUNG, IFS	APCCF (A) & CEO, CAMPA	
4	RS SINHA, IFS	CWLW	
5	K. LACHMANAKHARIA	JT. DIRECTOR, R.D.	
6	Prof. Malsambhara	Asst. Secy, CYMA	
7	George Lalthanungnu	Dy Director of Agri.	
8	m. z. singhan	DCF (FC)	
9	C. Lalbake	Field Director	
10	H. LIANMAW (A)	CF (WL) & (R&D)	

ANNUAL PLAN OF OPERATION 2022 - 2023



MIZORAM STATE CAMPA
Amount : Rs. 20.40 Crore

MIZORAM STATE CAMPA
ANNUAL PLAN OF OPERATION (APO) 2022 – 2023

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SUMMARY OF ANNUAL PLAN OF OPERATION (APO) 2022-2023

Sl. No.	Activities	Amount (Rs. in Crore)	Head of Accounts
1	<u>Compensatory Afforestation (CA)</u>	7.26	Major Head : 8336 - Civil Deposits Minor Head : 102 - National CA Deposits Sub - Head : 18 Detailed Head : 01
	i. CA Scheme (Advance work for 3 projects)	0.71	
	ii. CA Scheme (Creation for 4 projects)	1.97	
	iii. CA Scheme (Maintenance for 10 projects)	4.58	
2	<u>Catchment Area Treatment Plan (CATP)</u>	0.24	Major Head : 8336 - Civil Deposits Minor Head : 102 - National CA Deposits Sub - Head : 18 Detailed Head : 02
	i. CATP (Maintenance) for 3 project.	0.24	
3	<u>Net Present Value (NPV)</u>	12.35	Major Head : 8336 - Civil Deposits Minor Head : 102 - National CA Deposits Sub - Head : 18 Detailed Head : 04
	i. Core activities (not less than 80%)	8.90	
	ii. Allied Activities (not more than 20 %)	3.45	
4	<u>Interest</u>	0.52	Major Head : 8336 - Civil Deposits Minor Head : 102 - National CA Deposits Sub - Head : 18 Detailed Head : 05
	i. Permissible activities for not less than 60 %	0.43	
	ii. Permissible activities for not more than 40 %	0.09	
5	<u>Dwarf Plantation (DW)</u>	0.024	Major Head : 8336 - Civil Deposits Minor Head : 102 - National CA Deposits Sub - Head : 18 Detailed Head : 06
	i. Dwarf Plantation (Creation) for 1 project.	0.004	
	ii. Dwarf Plantation (Maintenance) for 1 project	0.02	
GRAND TOTAL		20.40	

Rupees twenty crore forty lakh only

ANNUAL PLAN OF OPERATION (APO)2022-2023
FOR THE STATE OF MIZORAM

PART 1

Brief history & Past Performance

a) Brief description of Forest and Forestry Sector in the State.

Location: Mizoram is located in the North Eastern corner of India and shares its boundaries with Assam, Manipur and Tripura and has very long international borders with Bangladesh and Myanmar. The total geographic area of the State is 21,081 sq.km, and lies between 25°56' N to 24°31' N latitudes and 92° 16' E to 93° 26' E longitudes.

Forest Resources: Forests have been the most important natural resources to the people as 85.41 per cent of the geographical area of the State is under forest and tree cover (ISFR, 2019).

The Area of Forests under different class are given in the table below.

Class	Area in Sq.km	% of geographical area
Very Dense Forest (VDF)	157.05	0.74
Moderately Dense Forest (MDF)	5800.75	27.52
Open Forest (OF)	12047.71	57.15
Scrub	0.9	0.00
Non-Forest	3074.59	14.59
Total	21081	100

The forest types of Mizoram based on Champion and Seth Classification (1968) are given below.

Forest types	Area in sq.km	Percent
2B/2S1 Pioneer Euphorbiaceous Scrub	79.22	0.44
2B/C2 Cachar Tropical Semi-Evergreen Forest	5527.69	30.70
2/2S1 Secondary Moist Bamboo Brakes	6737.66	37.42
3C/C3b East Himalayan Moist Mixed Deciduous Forest	5543.90	30.79
8B/C1 East Himalayan Subtropical Wet Hill Forest	7.20	0.04
9/C2 Assam Subtropical Pine Forest	109.83	0.61
Total	18005.5	100

Forestry Sector: When Mizoram became Union Territory in 1972, the State Forest Department was also established headed by Director of Forests as head of Department. Initially, the whole of Mizoram was divided into only two territorial Forest Divisions namely Aizawl Forest Division and Lunglei Forest Division. The head of the Department (Director of Forests) was then re-named as Chief Conservator of Forests with the creation of new post of Chief Conservator of Forests in 1983.

In 1987, the Forest Department of Mizoram was re-named as *Environment & Forest Department* vide No. 13015/183-FST dt 8.4.1987 and the head of the Department was upgraded from Chief Conservator of Forest (CCF) to Principal Chief Conservator of Forests (PCCF) in 1988. With inclusion of the subject *Climate Change*, the name of the Department *Environment & Forests Department* was then re-named as *Environment, Forests & Climate Change Department* vide Notification No.A.46013/2006-GAD/Loose dt 19.4.2016.

b) Compensatory afforestation, other forestry & related schemes (Physical & Financial) including CATP during last 5 years from State Fund.

S.No	Scheme	Activities	Year	Achievement	
				Phy. (in ha.)	Fin. (in ha.)
1.	New Land Use Policy (NLUP)	Bamboo Plantation	2015-16	416	36.59
2.	New Economic Development Project (NEDP)	Mixed Plantation	2018-19	500	76.95
TOTAL				916	113.54

(c) Forestry and other related schemes (Physical & Financial) and activities carried out in Mizoram in previous years from fund received under other scheme of Govt. of India.

Scheme (CSS)	Physical	Financial Central Only (Rs. in lakhs)			
		2017-18	2018-19	2019-20	2020-21
NAP	Afforestation with local people (Through VFDC)	579.72	590.42	Nil	739.59
GIM	Afforestation with local people (Through Revamped VFDC)	2000.00	2236.42	1967.67	299.48
IFMS	Forest fire prevention & other related activities	66.00	86.37	120.21	126.97
NPCA (Wetland Conservation)	Wetland conservation through afforestation, SMC Measures awareness campaign etc.	98.46	117.2	106.043	309.225
NBM	Raising of Bamboo plantation with community involvement (Through VFDC)	492.75	514.04	Nil	Nil
IDWH		477.75	251.2788	437.798	377.0086

d)Year-wise total Forest Area diverted in various District/ Forests Divisions in Mizoram since 1980.

Sl.No	Year	Area of forest diverted (Ha.)
1	1995-1996	0.92
2	1996-1997	54.24
3	1997-1998	0
4	1998-1999	43
5	1999-2000	5411.073
6	2000-2001	0.63
7	2001-2002	2.66
8	2002-2003	1.114
9	2003-2004	3.57
10	2004-2005	140.58
11	2005-2009	0
12	2009-2010	0.59435
13	2010-2013	0
14	2013-2014	384.031
15	2014-2015	75.4845
16	2015-2016	0
17	2016-2017	1523.6624
18	2017-2018	9.39
19	2018-2019	17.98
20	2019-2020	23.69
21	2020-2021	196.335
22	2021-2022	-

Total forest land diverted in Mizoram since 1980 : 7888.95425 Ha

e) Year-wise total compensatory afforestation carried out in Mizoram since 1980.

S.No	Year	Name of Project	Work Description	Area (in ha.)
1	1980-08	KDZKT Road, 132 Kv Line (Badharpur-Aizawl), Construction of IBB Fencing and Patrol Road (Demagiri-Bharapansuri)	Achieved	5518.52
2	2009-10	Serlui Hydro Electric Power	Advanced work	632
		Tuivai Hydro Electric Power	Advanced work	32.57
3	2010-11	Tuivawl Bridge	Advanced work	0.2817
		Champhai-Hnahlan-Khuangphah Road	Advanced work	110.195
		Regeneration & Protection	Advanced work	57
		20 MW Thermal Power Plant at Bairabi	Advanced work	3.57
		Petrol Pump at Sairang	Advanced work	0.36
4	2011-12	-NIL-		
5	2012-13	-NIL-		
6	2013-14	20 MW Thermal Power Plant at Bairabi	Creation	3.57
		Champhai-Hnahlan-Khuangphah Road	Creation	110.198
		Petrol Pump at Sairang	Creation	0.36
		Serlui Hydro Electric Power	Creation	632
		Tuivai Hydro Electric Power	Creation	32.57
		Tuivawl Bridge	Creation	0.2817
		Regeneration & Protection	Creation	57
7	2014-15	Serlui Hydro Electric Power	1st Year maintenance	632
		Tuivai Hydro Electric Power	1st Year maintenance	32.57
		Construction of Bridge over River Tuivawl	1st Year maintenance	0.2817
		Champhai-Hnahlan-Khuangphah Road	1st Year maintenance	110.195
		20 MW Thermal Power Plant at Bairabi	1st Year maintenance	3.57
		Establishment of petrol pump at Sairang	1st Year maintenance	0.36
		New BG Railway Line between Bairabi - Sairang	Advanced work	27.93
		Construction of 400 KV DC Transmission line between Sakawrtuichhun (Sihhmui) to Srikona (Silchar)	Advanced work	768.062
		Improvement and Widening of SerchhipBuarpui road	Advanced work	2
		Tuirial Hydro Electric Project	Advanced work	591
8	2015-16	Serlui Hydro Electric Power	2nd Year maintenance	632
		Tuivai Hydro Electric Power	2nd Year maintenance	32.57
		Construction of Bridge over River Tuivawl	2nd Year maintenance	0.2817
		Champhai-Hnahlan-Khuangphah Road	2nd Year maintenance	110.195

		20 MW Thermal Power Plant at Bairabi	2nd Year maintenance	3.57
		Establishment of petrol pump at Sairang	2nd Year maintenance	0.36
		New BG Railway Line between Bairabi - Sairang	Creation	27.93
		Improvement and Widening of SerchhipBuarpui road	Creation	2
		Tuirial Hydro Electric Project	Creation	591
		Widening of NH-44-A (Lengpui-Langkaih)	Advanced work	56.633
		New BG Railway Line between Bairabi - Sairang	Advanced work	46.555
		Improvement of Chhumkhum - Chawngte Road	Advanced work	3.85
9	2016-17	Serlui Hydro Electric Power	3rd Year maintenance	632
		Tuivai Hydro Electric Power	3rd Year maintenance	32.57
		Construction of Bridge over River Tuivawl	3rd Year maintenance	0.2817
		Champhai-Hnahlan-Khuangphah Road	3rd Year maintenance	110.195
		20 MW Thermal Power Plant at Bairabi	3rd Year maintenance	3.57
		Establishment of petrol pump at Sairang	3rd Year maintenance	0.36
		New BG Railway Line between Bairabi - Sairang	1st Year maintenance	27.933
		Improvement and Widening of SerchhipBuarpui road	1st Year maintenance	2
		Tuirial Hydro Electric Project	1st Year maintenance	591
		Const. of 400 KV DC Transmission line between Sakawrtuichhun (Sihhmui) to Srikona (Silchar)	Creation	768.062
		New BG Railway Line between Bairabi - Sairang	Creation	46.555
		Widening of NH-44-A (Lengpui-Langkaih)	Creation	56.633
		Improvement of Chhumkhum - Chawngte Road	Creation	3.85
		Tuirial Hydro Electric Project	Advanced work	147.5
10	2017-18	Serlui Hydro Electric Power	4th Year maintenance	632
		Tuivai Hydro Electric Power	4th Year maintenance	32.57
		Construction of Bridge over River Tuivawl	4th Year maintenance	0.2817
		Champhai-Hnahlan-Khuangphah Road	4th Year maintenance	110.195
		20 MW Thermal Power Plant at Bairabi	4th Year maintenance	3.57
		Establishment of petrol pump at Sairang	4th Year maintenance	0.36
		New BG Railway Line between Bairabi - Sairang	2nd Year maintenance	27.933
		Improvement and Widening of SerchhipBuarpui road	2nd Year maintenance	2
		Tuirial Hydro Electric Project	2nd Year maintenance	591
		Construction of 400 KV DC Transmission line between Sakawrtuichhun (Sihhmui) to Srikona (Silchar)	1st Year maintenance	768.062
		New BG Railway Line between Bairabi - Sairang	1st Year maintenance	46.555

		Widening of NH-44-A (Lengpui-Langkaih)	1st Year maintenance	56.633
		Improvement of Chhumkhum - Chawngte Road	1st Year maintenance	3.85
		Tuirial Hydro Electric Project	Advanced work	346.5
		Bridge over Kawrawnglui	Advanced work	0.2424
		MSRP-II (Gr-I) Tlabung-Kawrupuichhuah	Advanced work	4.98
11	2018-19	Serlui Hydro Electric Power	5th Year maintenance	632
		Tuivai Hydro Electric Power	5th Year maintenance	32.57
		Construction of Bridge over River Tuivawl	5th Year maintenance	0.2817
		Champhai-Hnahlan-Khuangphah Road	5th Year maintenance	110.195
		20 MW Thermal Power Plant at Bairabi	5th Year maintenance	3.57
		Establishment of petrol pump at Sairang	5th Year maintenance	0.36
		New BG Railway Line between Bairabi - Sairang	3rd Year maintenance	27.933
		Improvement and Widening of SerchhipBuarpui road	3rd Year maintenance	2
		Tuirial Hydro Electric Project	3rd Year maintenance	591
		Construction of 400 KV DC Transmission line between Sakawrtuichhun (Sihhmui) to Srikona (Silchar)	2nd Year maintenance	768.062
		New BG Railway Line between Bairabi - Sairang	2nd Year maintenance	46.555
		Widening of NH-44-A (Lengpui-Langkaih)	2nd Year maintenance	56.633
		Improvement of Chhumkhum - Chawngte Road	2nd Year maintenance	3.85
		Tuirial Hydro Electric Project	Creation	346.5
		Bridge over Kawrawnglui	Creation	0.2424
		MSRP-II (Gr-I) Tlabung-Kawrupuichhuah	Creation	4.98
		Tuirial Hydro Electric Project	Advanced work	1462.5
12	2019-20	NIL		
13	2020-21 (including liability of 2019-20)	Widening & Upgradation of NH-54 to 2-lane (Package-1&2) km 8.00-250 within Lawngtlai District	Advanced work	12.09
		Construction of NH-150 (Zemabawk – E.Phaileng road)	Advanced work	23.69
		IBB Fencing & Patrol roads inside DTR	Advanced work	1521
		Construction of Tuirial Hydro Electric Project	Creation	432.5
		IBB Fencing & Patrol roads inside DTR	Creation	804
		Construction of Tuirial Hydro Electric Project	1 st &2 nd Year maint.	346.5
		Construction of Bridge over Kawrawnglui	1 st &2 nd Year Maint.	0.2424
		MSRP-II, Gr-I (Tlabung – Kawrupuichhuah road)	1 st &2 nd Year Maint.	4.98

		Construction of 400 KV Transmission line from Srikona – Melriat (Sakawrtuichhun)	3 rd &4 th Year Maint.	768.062
		Construction of railway BG line from Bairabi – Sairang	3 rd &4 th Year Maint.	46.555
		MSRP-II, Gr – I (Chhumkhum – Chawngte road)	3 rd &4 th Year Maint.	3.85
		Construction of BG railway line from Bairabi – Sairang	3 rd & 4 th year Maint.	46.555
		Construction of Lengpui – Langkaih, NH-44A	3 rd & 4 th year Maint.	56.633
		Construction of Tuirial Hydro Electric Project	4 th & 5 th Year Maint.	591
		Improvement of Serchhip – Buarpui road	4 th &5 th Year Maint.	2.00
		Construction of BG railway line from Bairabi – Sairang	4 th &5 th Year Maint.	27.933
14	2021-22	Construction of 132 KV Transmission line from (Sakawrtuichhun - Sihhmui)	Advanced work	18.78
		Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-380 within Lawngtlai District	Advanced work	4.81
		Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-380 within Siaha District	Advanced work	6.37
		Widening & Upgradation of NH-54 to 2-lane (Package-1&2) km 8.00-250 within Lawngtlai District	Creation	12.09
		Construction of NH-150 (Zemabawk – E.Phaileng road)	Creation	23.69
		IBB Fencing & Patrol roads inside DTR	Creation	717
		Construction of Tuirial Hydro Electric Project	Creation	551
		Construction of Tuirial Hydro Electric Project	1 st Year maint.	432.5
		Construction of Tuirial Hydro Electric Project	3 rd Year maint.	346.5
		Construction of Bridge over Kawrawnglui	3 rd Year Maint.	0.2424
		MSRP-II, Gr-I (Tlabung – Kawrpuichhuah road)	3 rd Year Maint.	4.98
		Construction of 400 KV Transmission line from Srikona – Melriat (Sakawrtuichhun)	5 th Year Maint.	768.062
		Construction of railway BG line from Bairabi – Sairang	5 th Year Maint.	46.555
		MSRP-II, Gr – I (Chhumkhum – Chawngte road)	5 th Year Maint.	3.85
		Construction of BG railway line from Bairabi – Sairang	5 th year Maint.	46.555
		Construction of Lengpui – Langkaih, NH-44A	5 th year Maint.	56.633
		Construction of BG railway line from Bairabi – Sairang	6 th Year Maint.	27.933

The total area of CA which have been taken up under Mizoram State CAMPA Authority at DFL & NFL are **10742.5321 Ha**

f) Brief description and abstract of the monitoring work done by the Monitoring and Evaluation Wing of the State Forest Department.

Since there is no separate Monitoring and Evaluation wing under Mizoram Forest Department, Senior Forest Officers such as CF and above conducted monitoring

activities as and when required and necessary action/directions were given to the implementing Divisions based on performance.

g) Brief description and abstract of the monitoring work done by the independent monitor (Third Party Monitoring) in the State.

The State Forests Department has been undertaking various works viz. Compensatory Afforestation (CA) and Non-Compensatory Afforestation (Plantation works other than CA) works with funds provided under APOs of 2009-20 till 2019-20 of State CAMPA *in lieu* of forest land diverted in respect of various FCA Projects.

In compliance of the guidelines on State CAMPA and Ministry of Environment, Forests & Climate Change D.O letter No. 15-2(0)/2014-CAMPA dt. 18.9.2014, the State Environment & Forests Department engaged Third party / Independent Monitoring Agencies viz Association for Environmental Preservation (ASEP) and Save Environment Association (SENA) vide B.20018/23/2015-CAMPA/PCCF/6 dt. 30.03.2017. The Independent Monitoring Agency had conducted monitoring of works undertaken for the APO year 2016-17 in various territorial Forest Divisions in the State under CAMPA during the month of April and May, 2017.

Further, the State Forest Department had also engaged Independent Monitoring Agency viz CEP (Centre for Environment Protection) to carry out Monitoring and Evaluation of works under CAMPA APO (2016-17 & 2017-18) vide Memo No. B.11021/9/2015-FST dt. 19.03.2019 for which the monitoring works has been completed and submitted to the Ministry.

With regards to plantation works carried out for 2018-19, as APO 2019-20 has not been sanctioned by the Ministry, Third Party Monitoring could not be done for this financial year. Third Party / External Monitoring of plantation works undertaken during 2018-19 is proposed to be carried out during 2021-22 financial year.

In addition, the State Forests Department conducts Internal monitoring and evaluation of various CA and non-CA works undertaken in various territorial Forest Divisions from time to time.

(h) Any other important information for consideration relevant for preparing APO

The Principal Amount (Total amount accumulated in the State CAMPA account) is Rs.202.613 crore (Rs.Two hundred two crore sixty one lakh three thousand) and the stipulated limit which can be released per year is 10% of the Principal amount.

Since the Principal amount for 2022-23 is Rs. 202.613 crore (approx) thus, the (10%) becomes Rs. 20.26 crore (approx). In APO there are mainly three components under which various activities are proposed i.e. CA, NPV and Interest component.

For APO 2021-22 under CA component, Rs. 7.53 crore is proposed for mandatory afforestation works viz CA, CATP & Dwarf Plantation. Under NPV component, Rs. 12.35 crore is proposed and under Interest component, Rs. 52.00 lakh is proposed.

Thus, the total amount proposed for APO 2022-23 is Rs. 20.40 Crore.

PART II

Activities to be undertaken for CA, CATP and Dwarf Plantations

ABSTRACT OF COST OF CA, CATP & DWARF PLANTATION UNDER APO (2022-23)

S.No	Plantation works		Amount (in Crore)
1	Compensatory Afforestation	CA proposed for APO 2022-23	7.26
2.	Catchment Area Treatment Plan	CATP proposed for APO 2022-23	0.24
3.	Dwarf Plantation	Dwarf Plantation proposed for APO 2022-23	0.024
Grand total :			7.53

1. COMPENSATORY AFFORESTATION :

Physical & Financial targets proposed for APO 2022-23

Sl.No	Name of FC Proposal	Division	Phy. Target (in ha)	Work Items	Fin. Target (in Rs.)
1	Widening & Upgradation of NH-54 Addl. RF (Package-III)	MADC	24	Advance	682,831
2	Construction of 132 Kv Transmission Line (W. Phaileng to Marpara)	Mamit	210	Advance	5,974,773
3	Widening & Upgradation of NH-54 Deem Forest (Package-I) & Addl. RF (Package-II)	Darlawn	15.807	Advance	449,730
4	Construction of 132 Kv Transmission Line (Sakawrtuichhun - Sihhmui)	Aizawl	18.78	Creation	725,415
5	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-380 within Lawngtlai District	LADC	4.81	Creation	185,796
6	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-350 within Siaha District	MADC	6.37	Creation	246,054
7	Construction of Tuirial Hydro Electric Project)	Darlawn	479	Creation	18,502,333
8	Widening & Upgradation of NH-54 to 2-lane (Package- 1&2) km 8.00-250 within Aizawl & Lunglei District	Darlawn	12.09	1st Year Maintenance	132,726
9	Construction of NH-150 (Zemabawk - E.Phaileng road)	Darlawn	23.69	1st Year Maintenance	260,074
10	Construction of Tuirial Hydro Electric Project)	Darlawn	551	1st Year Maintenance	6,048,988
11	IBB Fencing inside Dampa Tiger Reserve	Darlawn	717	1st Year Maintenance	7,871,369
12	IBB Fencing inside Dampa Tiger Reserve	Darlawn	804	1st Year** Maintenance	8,826,473
13	IBB Fencing inside Dampa Tiger Reserve	Darlawn	804	2nd Year Maintenance	5,884,315
14	Construction of Tuirial Hydro Electric Project)	Darlawn	432.5	2nd Year Maintenance	3,165,381
15	Construction of Tuirial Hydro Electric Project)	Darlawn	346.5	4th Year Maintenance	2,254,190
16	Construction of bridge over Kawrawnglui	Lunglei	0.2424	4th Year Maintenance	1,577
17	MSRP-II, Gr-I (Tlabung - Kawrpuichhuah road)	Darlawn	4.98	4th Year Maintenance	32,398
18	Construction of 400 KV Transmission line from Srikona - Melriat (Sakawrtuichhun)	Kolasib	768.062	6'th Year Maintenance	4,372,116
19	Construction of railway BG line from Bairabi - Sairang	Darlawn	46.555	6th Year Maintenance	265,010
20	MSRP-II, Gr-I (Chhumkhum - Chawngte road)	Darlawn	3.85	6th Year Maintenance	21,916
21	Construction of NH-44A, Lengpui - Langkaih road	Darlawn	56.633	6th Year Maintenance	322,378

22	Diversion of 0.9963 ha. Of forest land for upgradation and improvement of Serchhip to Buarpui road	Thenzawl	2	6th Year** Maintenance	11,385
23	Construction of Tuirial Hydro Electric Project)	Darlawn	591	6th Year** Maintenance	3,364,208
24	Diversion of 0.9963 ha. Of forest land for upgradation and improvement of Serchhip to Buarpui road	Thenzawl	2	7th Year Maintenance	9,758
25	Construction of Tuirial Hydro Electric Project)	Darlawn	591	7th Year Maintenance	2,883,607
26	Construction of BG railway line from Bairabi - Sairang	Darlawn	27.933	7th Year Maintenance	136,291
TOTAL			6543.802		72,631,092

** Liabilities of APO 2021-22

1. (A) ABSTRACT OF COST OF CA SCHEME UNDER APO 2022-23

Sl. No	Name of FC Proposal	Forest Land Diverted (in Ha)	Stipulation of CA (with integrated activity) (in Ha)	Proposed Target / Allocation during 2022-23			Total Estimated cost
				Status of Activity	Division	Phy. Target (in ha)	
1	Widening & Upgradation of NH-54 Addl. RF (Package-3)	11.62	24	Advance preparatory work is proposed in the APO 2022-23	MADC	24	682,831
2	Construction of 132 Kv Transmission Line (W. Phaileng to Marpara)	104.77	240	Advance preparatory work is proposed in the APO 2022-23	Mamit	210	5,974,773
3	Widening & Upgradation of NH-54 Deem Forest (Package-1) & Addl. RF (Package II)	5.84	15.807	Advance preparatory work is proposed in the APO 2022-23	Darlawm	15.807	449,730
4	Construction of 132 Kv Transmission Line (Sakawtuichhun - Sihhmu)	9.39	18.78	Advance work done during 2021-22. Creation of plantation is proposed in the APO 2022-23	Aizawl	18.78	725,415
5	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-380 within Lawngtlai District	11.18	11.18	Advance work done during 2021-22. Creation of plantation is proposed in the APO 2022-23	LADC	4.81	185,796
6	Widening & Upgradation of NH-54 to 2-lane (Package-3) km 250-350 within Siaha District	11.18	11.18	Advance work done during 2021-22. Creation of plantation is proposed in the APO 2022-23	MADC	6.37	246,054
7	Construction of Tuirial Hydro Electric Project	5380	5380	Advance work done during 2018-19. Creation of plantation is proposed in the APO 2022-23	Darlawm	479	18,502,333
8	Widening & Upgradation of NH-54 to 2-lane (Package- 1&2) km 8.00-250 within Aizawl & Lunglei District	12.09	12.09	Plantation created, 1st year maint. is proposed in the APO 2022-23	Darlawm	12.09	132,726
9	Construction of NH-150 (Zemabawk - E.Phaileng road)	23.69	23.69	Plantation created, 1st year maint. is proposed in the APO 2022-23	Darlawm	23.69	260,074
10	Construction of Tuirial Hydro Electric Project	5380	5380	Plantation created, 1st year maint. is proposed in the APO 2022-23	Darlawm	551	6,048,988
11	IBB Fencing inside Dampa Tiger Reserve	1521	1521	Plantation created, 1st year maint. is proposed in the APO 2022-23	Darlawm	717	7,871,369

12	IBB Fencing inside Dampa Tiger Reserve	1521	1521	1521	Plantation created in 2020-21, 1st year maint. is proposed in the APO 2022-23 (liabilities of APO 2021-22)	Darlawm	804	8,826,473
13	IBB Fencing inside Dampa Tiger Reserve	1521	1521	1521	Plantation created in 2020-21, 2nd year maint. is proposed in the APO 2022-23	Darlawm	804	5,884,315
14	Construction of Tuirial Hydro Electric Project)	5380	5380	5380	Plantation created, yearly maint. with allied activities are on progress up to 2nd yr maint. in the APO 2022-23, 3rd yr maintenance is proposed	Darlawm	432.5	3,165,381
15	Construction of Tuirial Hydro Electric Project)	5380	5380	5380	Plantation created, yearly maint. with allied activities are on progress up to 2nd yr maint. In the APO 2021-22, 3rd yr maintenance is proposed	Darlawm	346.5	2,254,190
16	Construction of bridge over Kawrawnglui	0.2424	0.2424	0.2424	Plantation created, yearly maint. with allied activities are on progress up to 3rd yr. maintenance. 4th yr maintenance is proposed in APO 2022-23	Lunglei	0.2424	1,577
17	MSRP-II, Gr-I (Tlabung - Kawrpuichhuah road)	4.98	4.98	4.98	Plantation created, yearly maint. with allied activities are on progress up to 3rd yr. In the APO 2022-23, 3rd yr maintenance is proposed	Darlawm	4.98	32,398
18	Construction of 400 KV Transmission line from Srikona - Melriat (Sakawrtuichhun)	384.031	768.062	768.062	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23, 6th yr maintenance is proposed	Kolasib	768.062	4,372,116
19	Construction of railway BG line from Bairabi - Sairang	74.4882	74.4882	74.4882	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23, 6th yr maintenance is proposed	Darlawm	46.555	265,010
20	MSRP-II, Gr-I (Chhumkhum - Chawngte road)	3.85	3.85	3.85	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23, 6th yr maintenance is proposed	Darlawm	3.85	21,916

21	Construction of NH-44A, Lengpui - Langkaih road	56.633	56.633	56.633	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23, 6th yr maintenance is proposed	Darlawn	56.633	322,378
22	Diversion of 0.9963 ha. Of forest land for upgradation and improvement of Serchhip to Buarpui road	0.9963	2	2	Plantation created, yearly maint. with allied activities are on progress upto 5 th yr maint. In the APO 2022-23. 6th yr maintenance is proposed (Liabilities of APO 2021-22)	Thenzawl	2	11,385
23	Construction of Tuirial Hydro Electric Project)	5380	5380	5380	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23 6th yr maintenance is proposed (liabilities of APO 2021-22)	Darlawn	591	3,364,208
24	Diversion of 0.9963 ha. Of forest land for upgradation and improvement of Serchhip to Buarpui road	0.9963	2	2	Plantation created, yearly maint. with allied activities are on progress upto 6 th yr maint. In the APO 2022-23. 7th yr maintenance is proposed	Thenzawl	2	9,758
25	Construction of Tuirial Hydro Electric Project)	5380	5380	5380	Plantation created, yearly maint. with allied activities are on progress upto 6 th yr maint. In the APO 2022-23. 7th yr maintenance is proposed	Darlawn	591	2,883,607
26	Construction of BG railway line from Bairabi - Sairang	74.4882	74.4882	74.4882	Plantation created, yearly maint. with allied activities are on progress up to 6th yr. In the APO 2022-23, 7th yr maintenance is proposed	Darlawn	27.933	136,291
TOTAL							6544	72,631,092

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 008/2020-SHI/1305-1306 dt. 14.09.2021

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023		
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 41,14,680		682,831		
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs. NIL				
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		682,831		
Advance works									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/- manday	Amount
1	Widening & Upgradation of NH-54 Addl. RF (Package-II)	MADC	4	5	6	7	8	9	10
					(a) Survey and demarcation including mapping			1140	27,360
					(b) Area preparation by cutting grasses & shrubs			7600	182,400
					(c) Fire line cutting, burning and maintenance			2280	54,720
					(d) Clearance of site for nursery, preparation of nursery bed, filling of poly-bags, manuring, shed erection.	Ha	24	7600	182,400
					(e) Cost of seeds, poly-bags, implements etc.			1890	45,360
					(f) Treatment and sowing of seeds			1900	45,600
					(g) Weeding & watering			4180	100,320
					Sub- Total :			26,590	638,160
					Monitoring & Evaluation (2% of plantation cost)				12,763
					Over head (5% of plantation cost)				31,908
					Total :				682,831

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ A 044/2020-SHI/32226-27 dt. 15.01.2021

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023		
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 3,55,27,800		5,974,773		
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs. NIL				
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		5,974,773		
Advance works									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/- manday	Amount
1	2	3	4	5	6	7	8	9	10
2	Construction of 132 KV Transmission Line (W. Phaileng to Marpara)	Mamit	Rawpuich hip	Hmumpui Village	(a) Survey and demarcation including mapping	Ha	210	1140	239,400
					(b) Area preparation by cutting grasses & shrubs			7600	1,596,000
					(c) Fire line cutting, burning and maintenance			2280	478,800
					(d) Clearance of site for nursery, preparation of nursery bed, filling of poly-bags, manuring, shed erection.			7600	1,596,000
					(e) Cost of seeds, poly-bags, implements etc.			1890	396,900
					(f) Treatment and sowing of seeds			1900	399,000
					(g) Weeding & watering			4180	877,800
Sub- Total :								26,590	5,583,900
Monitoring & Evaluation (2% of plantation cost)									111,678
Over head (5% of plantation cost)									279,195
Total :									5,974,773

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 009/2020-SHI/632-33 dt. 5.8.2020 & 3-MZ C 007/2020-SHI/441-442 dt. 4.9.2020

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023		
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs.20,82,960		449,730		
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs. NIL				
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		449,730		
Advance works									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/- manday	Amount
1	2	3	4	5	6	7	8	9	10
3	Widening & Upgradation of NH-54 Deem Forest (Package-I) & Addl. Reserve Forest (Package II)	Darlawn	Suangpuil awn	Khawtentiang, Suangpuilawn	(a) Survey and demarcation including mapping (b) Area preparation by cutting grasses & shrubs (c) Fire line cutting, burning and maintenance (d) Clearance of site for nursery, preparation of nursery bed, filling of poly-bags, manuring, shed erection. (e) Cost of seeds, poly-bags, implements etc. (f) Treatment and sowing of seeds (g) Weeding & watering	Ha	15.807	7600	120,133
								1890	29,875
								1900	30,033
								4180	66,073
								26,590	420,308
					Sub- Total :				
					Monitoring & Evaluation (2% of plantation cost)				8,406
					Over head (5% of plantation cost)				21,015
					Total :				449,730

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 005/2014-SHI/241-42 dt. 17.07.2017

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023		
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 36,85,965/-		725,415		
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs. 534,315.00				
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		725,415		
Creation									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/- manday	Amount
1		3	4	5	6	7	8	9	10
4	Construction of 132 KV Transmission Line (Sakawrtuichhun to Shhmui)	Aizawl	Sairang	Lungsezang, Setlak ram (Tlawng RRF)	a) Site preparation, alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting site, planting/sowing, construction of camp shed, inspection path, signboard and other misc. works b) Weeding 3 times including vacancy filling and watch & ward c) Fire protection measures like fire line cutting, engagement of fire watchers	Ha	18.78	9500	178410
								25460	478139
								1140	21409
								36,100	677,958
					Sub- Total :				13559
					Monitoring & Evaluation (2% of plantation cost)				33898
					Over head (5% of plantation cost)				725,415
					Total :				

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 079/2017-SHI/828-29 dt. 20.08.2019

Major Head : 2406		Forestry & Wildlife				FUND POSITION		Estimated cost for 2022-2023	
Sub Major Head : 4		Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 28,48,750/-		185,796	
Minor Head : 103		State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 11,08,086/-			
Sub-Head : 18		State Authority Mizoram				Proposed Fund allocation during the year 2022-2023		185,796	
Creation									
Status of the CA scheme	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount
1	2	3	4	5	6	7	8	9	10
5	Widening & Upgradation of NH-54 to 2- lane (Package-3) Km 250-380 within Lawngtlai District	LADC	Lawngtlai	Mampui ram	a) Site preparation, alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting site, planting/sowing, construction of camp shed, inspection path, signboard and other misc. works	Ha	4.81	9500	45695
					(b) Weeding 3 times including vacancy filling and watch & ward			25460	122463
					(c) Fire protection measures like fire line cutting, engagement of fire watchers			1140	5483
					Sub- Total :			36,100	173,641
					Monitoring & Evaluation (2% of plantation cost)				3473
					Over head (5% of plantation cost)				8682
					Total :				185,796

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 079/2017-SHI/828-29 dt. 20.08.2019

Major Head : 2406	Forestry & Wildlife		FUND POSITION		Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development		Approved CA cost recovered from User Agency : Rs. 28,48,750/-		246,054				
Minor Head : 103	State Compensatory Afforestation (SCA)		Fund utilized till 30.03.2022 : Rs. 11,08,086/-						
Sub-Head : 18	State Authority Mizoram		Proposed Fund allocation during the year 2022-2023		246,054				
Creation									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
6	Widening & Upgradation of NH-54 to 2- lane (Package-3) Km 250-380 within Siaha District	MADC	Bualpui Ng	Siahtla - Tlapi road, Bualpui Ng, Lapi Parohpa, Laikaichha	a) Site preparation, alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting site, planting/sowing, construction of camp shed, inspection path, signboard and other misc. works (b) Weeding 3 times including vacancy filling and watch & ward (c) Fire protection measures like fire line cutting, engagement of fire watchers	Ha	6.37	9500	60515
								25460	162180
								1140	7262
								36,100	229,957
									4599
									11498
									246,054

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 079/2017-SHI/828-29 dt. 20.08.2019

Major Head : 2406	Forestry & Wildlife			FUND POSITION	Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 6,98,88,270 /-	6,048,988				
Minor Head : 103	State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-					
Sub-Head : 18	State Authority Mizoram			Proposed Fund allocation during the year 2022-2023	6,048,988				
Creation									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
7	Construction of Tuirial Hydro Electric Project	Darlawn	Darlawn	i) Chhahnhhuahna - 10 ha ii) N. Serzawl - 142.5 ha iii) Hmunghak - 80.00 ha iv) Buhban - 200 ha v) Khanpui - 46.5 ha	a) Site preparation, alignment, preparation of stakes, digging of pits, preparation of planting materials, carriage to planting site, planting/sowing, construction of camp shed, inspection path, signboard and other misc. works (b) Weeding 3 times including vacancy filling and watch & ward (c) Fire protection measures like fire line cutting, engagement of fire watchers	Ha	479	9500	4550500
Sub- Total :								36,100	17,291,900
Monitoring & Evaluation (2% of plantation cost)									345838
Over head (5% of plantation cost)									864595
Total :									18,502,333

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 076/2017-SHI/830-31 dt. 20.08.2019

Major Head : 2406	Forestry & Wildlife	FUND POSITION	Estimated cost for 2022-2023						
Sub Major Head : 4	Afforestation and Ecological Development	Approved CA cost recovered from User Agency : Rs. 29,08,750/-	132,726						
Minor Head : 103	State Compensatory Afforestation (SCA)	Fund utilized till 30.03.2022 : Rs.11,08,086/-							
Sub-Head : 18	State Authority Mizoram	Proposed Fund allocation during the year 2022-2023	132,726						
1st yr maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount in Rupees
1	2	3	4	5	6	7	8	9	10
8	Widening & Upgradation of NH-54 to 2-lane (Package 1&2) km 8.00 to 250 within Aizawl & Lunglei District	Darlawn	Suangpuil awn	Khawnten tlang, Ramrikawr, Suangpuilawn	(a) Weeding 3 times + vacancy filling (10+9+5)	Ha	12.09	9120	110261
					(b) Fire protection measurres			1140	13783
					Sub- Total :			10,260	124,043
					Monitoring & Evaluation (2% of plantation cost) Over head (5% of plantation cost)				2481 6202
Total :									132,726

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 065/2010-SHI/2472-43 dt. 29.10.2019

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023							
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 9,41,125/-	260,074							
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs.15,71,704/-								
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	260,074							
1st year maintenance													
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount in Rupees				
1	2	3	4	5	6	7	8	9	10				
9	Construction of NH-150 (Zemabawk - E.Phaileng road)	Darlawn	Ratu	Mualkawi hla, Damdai	(a) Weeding 3 times + vacancy filling (10+9+5)	Ha	23.69	9120	216053				
					(b) Fire protection measusres			1140	27007				
					Sub- Total :							10,260	243,059
					Monitoring & Evaluation (2% of plantation cost)								4861
Over head (5% of plantation cost)									12153				
Total :									260,074				

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the State Govt. under Forest (Conservation) Act, 1980
Vide letter No. F.No. 8-116/92-FC dt. 16.03.2000

Major Head : 2406	Forestry & Wildlife		FUND POSITION		Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development		Approved CA cost recovered from User Agency : Rs. 6,98,88,270 /-		6,048,988				
Minor Head : 103	State Compensatory Afforestation (SCA)		Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-						
Sub-Head : 18	State Authority Mizoram		Proposed Fund allocation during the year 2022-2023		6,048,988				
1st year maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
10	Construction of Tuirial Hydro Electric Project	Darlawm	i) Darlawm ii) Darlawm iii) Khawruhlian	i) N.Serzawl (23.5 ha) ii) Chhanchhuahna (316 ha) iii) Khanpui (211.5 Ha)	(a) Weeding 3 times + vacancy filling (10+9+5) (b) Fire protection measurres	Ha	551	9120 1140	5025120 628140
Sub- Total :								10,260	5,653,260
Monitoring & Evaluation (2% of plantation cost)									113065
Over head (5% of plantation cost)									282663
Total :									6,048,988

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the State Govt. under Forest (Conservation) Act, 1980
Vide letter No. G.20015/39/2015-FST/87 dt. 19.9.2016

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023		
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 13,89,68,779 /-		7,871,369		
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2021 : Rs. 9,92,61,559/-				
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		7,871,369		
1st year maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount
1	2	3	4	5	6	7	8	9	10
				1) Buhban (126.70) 2) Lailak, Hmarcha hmun (127.53) 3) Khawruhlian, Mualkir ram (158.05) 4) Sunhluchhip, Kandar ram (91.14) 5) Chhanchhuahna, Lawikai mual (183.58) 6) Lungsum, Selemual (30)	(a) Weeding 3 times + vacancy filling (10+9+5) (b) Fire protection measurres	Ha	717	9120 1140	6539040 817380
11	IBB Fencing and Patrol road inside DTR	Darlawn	1) Khawruhlian 2) Ratu 3) Darlawn		Sub- Total : Monitoring & Evaluation (2% of plantation cost) Over head (5% of plantation cost)			10,260	7,356,420 147128 367821
Total :									7,871,369

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the State Govt. under Forest (Conservation) Act, 1980
Vide letter No. G.20015/39/2015-FST/87 dt. 19.9.2016

Major Head : 2406	Forestry & Wildlife			FUND POSITION	Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 13,89,68,779 /-	8,826,473				
Minor Head : 103	State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2021 : Rs. 9,92,61,559/-					
Sub-Head : 18	State Authority Mizoram			Proposed Fund allocation during the year 2022-2023	8,826,473				
1st year maintenance (Liabilities of APO 2021-22)									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount
1	2	3	4	5	6	7	8	9	10
				1) Zawngin, Chithar ram (22.28) 2) Luangpawm, Khawhnuai ram (113) 3) Phullen-I Ngaizel ram (19) 4) Phullen-II Darkhuang ram (450.39) 5) Sawleng, Sasaw tiang (58.28) 6) Hmunnghak, Thereng ngaw (32.55) 7) Khanpui, Hmawnkhar ram (45.84) 8) Pehlawn Phunchawng khawhmun tiang (31.64) 9) E Phaileng Phunchawng Khawhmun tiang (31.02)	(a) Weeding 3 times + vacancy filling (10+9+5) (b) Fire protection measurres	Ha	804	9120 1140	7332480 916560
12	IBB Fencing and Patrol road inside DTR	Darlawn			Sub- Total :			10,260	8,249,040
					Monitoring & Evaluation (2% of plantation cost)				164981
					Over head (5% of plantation cost)				412452
Total :									8,826,473

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the State Govt. under Forest (Conservation) Act, 1980
Vide letter No. G.20015/39/2015-FST/87 dt. 19.9.2016

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023						
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 13,89,68,779 /-	5,884,315						
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2021 : Rs. 9,92,61,559/-							
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	5,884,315						
2nd year maintenance												
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount			
1	2	3	4	5	6	7	8	9	10			
13	IBB Fencing and Patrol road inside DTR	Darlawn	1) Suangpui lawn 2) Darlawn 3) Khawtruh Iian	1) Zawngin, Chithar ram (22.28) 2) Luangpawm, Khawhnuai ram (113) 3) Phullen-I Ngaizel ram (19) 4) Phullen-II Darkhuang ram (450.39) 5) Sawleng, Sasaw tiang (58.28) 6) Hmunnghak, Thereng ngaw (32.55) 7) Khanpui, Hmawnkhar ram (45.84) 8) Pehlawn Phunchawng khawhmun tiang (31.64) 9) E Phaileng Phunchawng Khawhmun tiang (31.02)	(a) Weeding 2 times (10+5)	Ha	804	5700	4582800			
					(b) Fire protection measusres			1140	916560			
					Sub- Total :						6,840	5,499,360
					Monitoring & Evaluation (2% of plantation cost)							
					Over head (5% of plantation cost)				274968			
Total :									5,884,315			

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. F.No. 8-116/92-FC dt. 16.03.2000

Major Head : 2406	Forestry & Wildlife	FUND POSITION		Estimated cost for 2022-2023					
Sub Major Head : 4	Afforestation and Ecological Development	Approved CA cost recovered from User Agency : Rs. 6,98,88,270/-		3,165,381					
Minor Head : 103	State Compensatory Afforestation (SCA)	Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-							
Sub-Head : 18	State Authority Mizoram	Proposed Fund allocation during the year 2022-2023		3,165,381					
2nd Year Maintenance									
Status of the CA scheme									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount in Rupees
1	2	3	4	5	6	7	8	9	10
14	Construction of Tuirial Hydro Electric Project	Darlawn	Darlawn	N.Serzawl ram		Ha	432.5	5700 1140	2465250 493050
					Sub- Total :			6,840	2,958,300
					Monitoring & Evaluation (2% of plantation cost)				59166
					Over head (5% of plantation cost)				147915
					Total :				3,165,381

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. No. F.No. 8-116/92-FC dt. 16.03.2000

Major Head : 2406	Forestry & Wildlife		FUND POSITION		Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development		Approved CA cost recovered from User Agency : Rs. 6,98,88,270/-		2,254,190				
Minor Head : 103	State Compensatory Afforestation (SCA)		Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-						
Sub-Head : 18	State Authority Mizoram		Proposed Fund allocation during the year 2022-2023		2,254,190				
4th Year Maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
15	Construction of Tuirial Hydro Electric Project	Darlawn	Darlawn	1) Chhanchhuah na ram tlak lam (200) 2) Phaitlang ram, N.Serzawl (100) 3) Ngaizel, Khanpui ram (46.5)	(a) Weeding 2 times (8+5)	Ha	346.5	4940	1711710
					(b) Fire protection measusres			1140	395010
					Sub- Total :			6,080	2,106,720
					Monitoring & Evaluation (2% of plantation cost) Over head (5% of plantation cost)				42134 105336
Total :									2,254,190

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ C 006/2014-SHI/3977-78 dt. 7.12.2016

Major Head : 2406	Forestry & Wildlife		FUND POSITION		Estimated cost for 2022-2023					
Sub Major Head : 4	Afforestation and Ecological Development		Approved CA cost recovered from User Agency : Rs. 21,587 /-		1,577					
Minor Head : 103	State Compensatory Afforestation (SCA)		Fund utilized till 30.03.2022 : Rs. 16742 /-							
Sub-Head : 18	State Authority Mizoram		Proposed Fund allocation during the year 2022-2023		1,577					
4th Year Maintenance										
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount	
1	2	3	4	5	6	7	8	9	10	
16	Construction of Bridge over Kawrawnglui	Lunglei	Tawipui	Near Ramhuai lui, Minzau ram	(a) Weeding 2 times (8+5)	Ha	0.2424	4940	1197	
					(b) Fire protection measusres			1140	276	
					Sub- Total :				6,080	1,474
					Monitoring & Evaluation (2% of plantation cost)					29
					Over head (5% of plantation cost)				74	
					Total :				1,577	

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
vide No. 3-MZ C 067/2016-SHI/998-99 dt. 12.06.2018

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023						
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 5,32,560/-							
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 3,40,666/-							
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023							
4th Year Maintenance												
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount			
1	2	3	4	5	6	7	8	9	10			
17	MSRP-II, Gr-I (Tlabung - Kawrpuichhuah road)	Darlawn	Darlawn	Sasaw tlang	(a) Weeding 2 times (8+5)	Ha	4.98	4940	24601			
					(b) Fire protection measusres			1140	5677			
					Sub- Total :						6,080	30,278
					Monitoring & Evaluation (2% of plantation cost)							606
					Over head (5% of plantation cost)				1514			
Total :									32,398			

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter F.No. 8-97/2011-FC dt. 08.07.2013

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023			
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 3,66,17,355/-	4,372,116			
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 6,06,51,948/-				
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	4,372,116			
6th Year Maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
18	Construction of 400 KV Transmission line from Srikona - Melriat (Sakawrtuichhun)	Kolasib	Kolasib, Buhchang, Kawnpui, Bukpui	1) Kawnpui, Ar khuanglo ram (180.062)	(a) Weeding / tending	Ha	768.062	4560	3502363
				2) Buhchang, Dolchota tiangpui, Phaisen (198)	(b) Fire protection measusres			760	583727
				3) Phuhrawlian ram, Saizawl kawng (200)	Sub- Total :			5,320	4,086,090
				4) Teipui lui ram (190)	Monitoring & Evaluation (2% of plantation cost)				81722
Total :									204304
Total :									4,372,116

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter F.No. 8-38/2012-FC dt. 23.07.2014

Major Head : 2406	Forestry & Wildlife		FUND POSITION		Estimated cost for 2022-2023				
Sub Major Head : 4	Afforestation and Ecological Development		Approved CA cost recovered from User Agency : Rs. 79,80,442/-		265,010				
Minor Head : 103	State Compensatory Afforestation (SCA)		Fund utilized till 30.03.2022 : Rs. 59,56,134/-						
Sub-Head : 18	State Authority Mizoram		Proposed Fund allocation during the year 2022-2023		265,010				
6th Year Maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount in Rupees
1	2	3	4	5	6	7	8	9	10
19	Construction of railway BG line from Bairabi - Sairang	Darlawn	Darlawn	Lenhmui zawl, N.Serzawl	(a) Weeding / tending (b) Fire protection measurres	Ha	46.555	4560 760	212291 35382
						Sub- Total :		5,320	247,673
						Monitoring & Evaluation (2% of plantation cost)			4953
						Over head (5% of plantation cost)			12384
						Total :			265,010

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 3-MZ B 017/2014-SHI/104-08 dt. 13.04.2016

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023							
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 4,11,719/-	21,916							
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 3,19,879/-								
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	21,916							
6th Year Maintenance													
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount				
1	2	3	4	5	6	7	8	9	10				
20	MSRP-II Gr-I (Chhumkhum - Chawngte road)	Darlawm	Darlawm	Sasaw tlang, Sawleng	(a) Weeding / tending	Ha	3.85	4560	17556				
					(b) Fire protection measusres			760	2926				
					Sub- Total :				Monitoring & Evaluation (2% of plantation cost)			5,320	20,482
					Total :				Over head (5% of plantation cost)				410
									1024				
									21,916				

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. 8/38/2012-FC dt. 23.7.2014

Major Head : 2406	Forestry & Wildlife	FUND POSITION		Estimated cost for 2022-2023					
Sub Major Head : 4	Afforestation and Ecological Development	Approved CA cost recovered from User Agency : Rs. 20,00,454/-		322,378					
Minor Head : 103	State Compensatory Afforestation (SCA)	Fund utilized till 30.03.2021 : Rs. 46,64,206/-							
Sub-Head : 18	State Authority Mizoram	Proposed Fund allocation during the year 2022-2023		322,378					
6th Year Maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount
1	2	3	4	5	6	7	8	9	10
21	Construction of NH-44A (Lengpui - Langkaih road)	Darlawn	Ratu	Tlamsam ram, Kawipui chung, New Vervek area	(a) Weeding / tending	Ha	56.633	4560	258246
					(b) Fire protection measusres			760	43041
					Sub- Total :			5,320	301,288
					Monitoring & Evaluation (2% of plantation cost)				6026
					Over head (5% of plantation cost)				15064
									322,378

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. No. F.No. 8-116/92-FC dt. 16.03.2000

Major Head : 2406	Forestry & Wildlife	FUND POSITION		Estimated cost for 2022-2023								
Sub Major Head : 4	Afforestation and Ecological Development	Approved CA cost recovered from User Agency : Rs. 73.920		11,385								
Minor Head : 103	State Compensatory Afforestation (SCA)	Fund utilized till 30.03.2022 : Rs 1,61,000										
Sub-Head : 18	State Authority Mizoram	Proposed Fund allocation during the year 2022-2023		11,385								
6th Year Maintenance												
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount			
1	2	3	4	5	6	7	8	9	10			
22	Diversion of 0.9963 ha. of forest land for upgradation and improvement of Serchhip to Buarpui road	Thenzawl	Serchhip	Degraded forest land at Tuimhialchuah ram, Tlawng RRF	(a) Weeding / tending	Ha	2	4560	9120			
					(b) Fire protection measusres			760	1520			
					Sub- Total :						5,320	10,640
					Monitoring & Evaluation (2% of plantation cost)							213
					Over head (5% of plantation cost)				532			
									11,385			

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
vide Letter No. 8-38/2012-FC dt. 23.7.2014

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023			
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 6,98,88,270 /-	3,364,208			
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-				
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	3,364,208			
6th Year Maintenance									
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount
1	2	3	4	5	6	7	8	9	10
23	Diversion of 5380 ha of forest land for Tuirial Hydro Electric Project, Aizawl District	Darlawn	Darlawn, Zohmun, Ratu	Phaitlang ram, Bawkmual, Chhanchhuahna, Talanmual, Hmunngahak, Ratu, Ngaizel, Chalfilh, Zohmun	(a) Weeding / tending (b) Fire protection measusres	Ha	591	4560 760	2694960 449160
					Sub- Total :			5,320	3,144,120
					Monitoring & Evaluation (2% of plantation cost)				62882
					Over head (5% of plantation cost)				157206
									3,364,208

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter No. No. F.No. 8-116/92-FC dt. 16.03.2000

Major Head : 2406		Forestry & Wildlife			FUND POSITION		Estimated cost for 2022-2023						
Sub Major Head : 4		Afforestation and Ecological Development			Approved CA cost recovered from User Agency : Rs. 73.920		9,758						
Minor Head : 103		State Compensatory Afforestation (SCA)			Fund utilized till 30.03.2022 : Rs 1,61,000								
Sub-Head : 18		State Authority Mizoram			Proposed Fund allocation during the year 2022-2023		9,758						
7th Year Maintenance													
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount				
1	2	3	4	5	6	7	8	9	10				
24	Diversion of 0.9963 ha. of forest land for upgradation and improvement of Serchhip to Buarpui road	Thenzawl	Serchhip	Degraded forest land at Tuimhialchuah ram, Tlawng RRF	(a) Weeding / tending	Ha	2	3800	7600				
					(b) Fire protection measusres			760	1520				
					Sub- Total :							4,560	9,120
					Monitoring & Evaluation (2% of plantation cost)								182
Over head (5% of plantation cost)									456				
									9,758				

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
vide Letter No. 8-38/2012-FC dt. 23.7.2014

Major Head : 2406	Forestry & Wildlife				FUND POSITION	Estimated cost for 2022-2023							
Sub Major Head : 4	Afforestation and Ecological Development				Approved CA cost recovered from User Agency : Rs. 6,98,88,270 /-	2,883,607							
Minor Head : 103	State Compensatory Afforestation (SCA)				Fund utilized till 30.03.2022 : Rs. 14,04,39,716/-								
Sub-Head : 18	State Authority Mizoram				Proposed Fund allocation during the year 2022-2023	2,883,607							
7th Year Maintenance													
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/ manday	Amount				
1	2	3	4	5	6	7	8	9	10				
25	Diversion of 5380 ha of forest land for Tuirial Hydro Electric Project, Aizawl District	Darlawn	Darlawn, Zohmun, Ratu	Phaitlang ram, Bawkmual, Chhanchhuahna, Talanmual, Hmunngghak, Ratu, Ngaizel, Chalfilh, Zohmun	(a) Weeding / tending	Ha	591	3800	2245800				
					(b) Fire protection measusres		760	449160					
					Sub- Total :							4,560	2,694,960
					Monitoring & Evaluation (2% of plantation cost)								53899
Over head (5% of plantation cost)									134748				
									2,883,607				

DETAILED ESTIMATE FOR COMPENSATORY AFFORESTATION SCHEME (CAS) - PROJECT WISE UNDER APO 2022-2023
(Based on Forest Clearance conveyed by the MoEFCC, GOI under Forest (Conservation) Act, 1980
Vide letter F.No. 8-38/2012-FC dt. 23.07.2014

Major Head : 2406	Forestry & Wildlife	FUND POSITION		Estimated cost for 2022-2023						
Sub Major Head : 4	Afforestation and Ecological Development	Approved CA cost recovered from User Agency : Rs.79,80,442/-		136,291						
Minor Head : 103	State Compensatory Afforestation (SCA)	Fund utilized till 30.03.2022 : Rs. 58,50,130/-								
Sub-Head : 18	State Authority Mizoram	Proposed Fund allocation during the year 2022-2023		136,291						
7th Year Maintenance										
Status of the CA scheme										
Sl.No	Name of scheme stipulated for the approved FC case	Division	Range	Location	Item of works	Unit	Physical target to the achieved	CA cost per ha. @ Rs. 380/manday	Amount	
1	2	3	4	5	6	7	8	9	10	
26	Construction of BG Railway line from Bairabi - Sairang	Darlawn	Darlawn	Lenhmui zawl, N.Serzawl	(a) Weeding / tending	Ha	27.933	3800	106145	
					(b) Fire protection measurres		760	21229		
					Sub- Total :				4,560	127,374
					Monitoring & Evaluation (2% of plantation cost)					
Over head (5% of plantation cost)								6369		
Total :									136,291	

2. CATCHMENT AREA TREATMENT PLAN

Physical & Financial targets proposed for APO 2022-23

Sl.No	Name of FC Proposal	Division	Phy. Target (in ha)	Work Items	Fin. Target (in Rs.)
1	Construction of Tuirial Hydro Electric Project	Aizawl	200	2nd year maintenance*	1,138,480
		Kolasib	300	2nd year maintenance*	1,707,720
		Darlawn	300	2nd year maintenance*	1,707,720
2	Construction of Tuirial Hydro Electric Project	Aizawl	150	5th yr Maintenance	487,920
		Kolasib	300	5th yr Maintenance	975,840
		Darlawn	300	5th yr Maintenance	975,840
	TOTAL :		1550		2,439,600

* 2nd year maintenance from available fund of APO 2021-22

2. (B) ABSTRACT OF COST OF CATP SCHEME UNDER APO 2022-23

Sl.No	Name of FC Proposal	Total cost funded by UA	Division	Range	Location	Proposed Target / Allocation during 2021-22		
						Status of Activity	Phy. Target (in ha)	Fin. Target (in Rs.)
1	Construction of Tuirial Hydro Electric Project	59,788,730	Aizawl	Seling, Aibawk, Sadar	Hmawngkawn, Sateek, Hlimen	Plantation created, yearly maintenance with allied activities are on progress upto 1st year. In the APO 2022-23, 2nd yr maintenance in proposed*	200	1,138,480
			Kolasib	Saipum, N.Hlimen, Bukpui	Theichang bung tiang, Uikai lui, Uvai zau		300	1,707,720
			Darlawn	Zohmun, Darlawn	Pangbul lian, Zohmun (50 Ha) Darlawn (250 Ha)		300	1,707,720
2	Construction of Tuirial Hydro Electric Project	59,788,730	Aizawl	Aibawk	Phulrawpang, Maubuang	Plantation created, yearly maintenance with allied activities are on progress upto 4th year. In the APO 2022-23, 5th yr maintenance in proposed	150	487,920
			Kolasib	Saipum, N.Hlimen, Bukpui	Suarhliap (85 Ha), Theichangbung tiang (85 Ha), Uj kaih lui (130 Ha)		300	975,840
			Darlawn	Ratu, Zohmun	Buallawn ram (150 Ha), Suanglawn ram (150 Ha)		300	975,840
TOTAL :							1550	2,439,600

* 2nd year maintenance from available funds of APO 2021-22

**DETAILED HEAD : 02 (CATCHMENT AREA TREATMENT PLAN)
DETAILED ESTIMATE FOR CATCHMENT AREA TREATMENT (CAPP) PLAN FOR TUIRIAL HEP
(Vide No. F.No. 8-116/92-FC dt. 16.03.2000
(2nd year Maintenance)**

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	2nd year maintenance								
i)	Weeding 2 times	Aizawl	Seling, Aibawk, Sadar	Hmawngkawn Sateek Hlimen	12	4560	4560	200	912,000
ii)	Fire protection measures				2	760	760		152,000
					14	5320	5320		1,064,000
	Sub Total:								
	Monitoring & evaluation (2% of plantation cost)								
	Overheads (5% of plantation cost)								
	Total :								
	1,138,480								

**DETAILED HEAD : 02 (CATCHMENT AREA TREATMENT PLAN)
DETAILED ESTIMATE FOR CATCHMENT AREA TREATMENT (CATP) PLAN FOR TUIRIAL HEP
(Vide No. F.No. 8-116/92-FC dt. 16.03.2000
(2nd year Maintenance)**

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	2nd year maintenance								
i)	Weeding 2 times	Darlawn	Zohmun & Darlawn	Zohmun, Darlawn	12	4560	4560	300	1,368,000
ii)	Fire protection measures				2	760	760		228,000
	Sub Total:				14	5320	5320		1,596,000
	Monitoring & evaluation (2% of plantation cost)								31,920
	Overheads (5% of plantation cost)								79,800
	Total :								1,707,720

**DETAILED HEAD : 02 (CATCHMENT AREA TREATMENT PLAN)
DETAILED ESTIMATE FOR CATCHMENT AREA TREATMENT (CATP) PLAN FOR TUIRIAL HEP
(Vide No. F.No. 8-116/92-FC dt. 16.03.2000
(5th Year Maintenance)**

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	5TH YEAR MAINTENANCE								
i)	Weeding / tending	Aizawl	Aibawk	Phulrawpang, Maubuang	6	2280	2280	150	342,000
ii)	Fire protection measures				2	760	760		114,000
	Sub Total:				8	3040	3040		456,000
	Monitoring & evaluation (2% of plantation cost)								9,120
	Overheads (5% of plantation cost)								22,800
	Total :								487,920

**DETAILED HEAD : 02 (CATCHMENT AREA TREATMENT PLAN)
DETAILED ESTIMATE FOR CATCHMENT AREA TREATMENT (CATP) PLAN FOR TUIRIAL HEP
(Vide No. F.No. 8-116/92-FC dt. 16.03.2000
(5th Year Maintenance)**

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	5TH YEAR MAINTENANCE								
i)	Weeding / tending	Kolasib	i) Saipum, ii) N. Hlilmen iii) Bukpui	i) Suarhliap (85 Ha) ii) Theichangbung tlang (85 Ha) iii) Ui kaih lui (130 Ha)	6	2280	2280	300	684,000
ii)	Fire protection measures				2	760	760		228,000
	Sub Total:				8	3040	3040		912,000
	Monitoring & evaluation (2% of plantation cost)								18,240
	Overheads (5% of plantation cost)								45,600
	Total :								975,840

**DETAILED HEAD : 02 (CATCHMENT AREA TREATMENT PLAN)
DETAILED ESTIMATE FOR CATCHMENT AREA TREATMENT (CATP) PLAN FOR TUIRIAL HEP
(Vide No. F.No. 8-116/92-FC dt. 16.03.2000
(5th Year Maintenance)**

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	5TH YEAR MAINTENANCE								
i)	Weeding / tending	Darlawn	i) Ratu ii) Zohmun	i) Buallawn ram (150 Ha) ii) Suanglawn ram (150 Ha)	6	2280	2280	300	684,000
ii)	Fire protection measures				2	760	760		228,000
	Sub Total				8	3040	3040		912,000
	Monitoring & evaluation (2% of plantation cost)								18,240
	Overheads (5% of plantation cost)								45,600
	Total :								975,840

3. DWARF PLANTATION

Physical & Financial targets proposed for APO 2022-23

Sl.No	Name of FC Proposal	Division	Phy. Target (in ha)	Work Items	Fin. Target (in Rs.)
1	132 KV Transmission Line (Sakawrtuichhun to Sihhmui)	Aizawl	2.08	Creation	33,095
2	400 KV Transmission Line (Silchar to Sakawrtuichhun)	Kolasib	21.5	6th Year Maint.	201,064
TOTAL :			23.58		234,159

3. (C) ABSTRACT OF COST OF DWARF PLANTATION SCHEME UNDER APO 2022-23

Sl. No	Name of FC Proposal	Total Amount funded by UA	Division	Range	Location	Proposed Target / Allocation during 2021-22		
						Status of Activity	Phy. Target (in ha)	Total Estimated cost (in Rs.)
1	132 KV Transmission Line (Sakawrtuichhun to Sihhmui)	269,639	Aizawl	Sairang	As per original estimate, the dwarf plantation is to be taken up in 3 m width below the conductor of 132 Kv Transmission Line on both side. Total length of the line in RF being 3.481 km , hence, total area for plantation will be 3481m x 6 m = 20886 Sq.m i.e 2.08 Ha	Plantation created. In the APO 2022-23, 1st yr maintenance is proposed	2.08	33,095
2	400 KV Transmission Line (Silchar to Sakawrtuichhun)	2,691,630	Kolasib	i) Vairengte, ii) Bilkhawthlir iii) Kolasib iv) Kawnpui	i) NH-54, VL Para ram bul ii) Kharzawl, N.Chhimluang iii) Chhungbawnga camp lui kam iv) Thingdawl lui kam	Plantation created, yearly maint. with allied activities are on progress up to 5th yr. In the APO 2022-23, 6th yr maintenance is proposed	21.5	201,064
TOTAL :							23.58	234,159

DETAILED HEAD : 06 (DWARF PLANTATION)
DETAILED ESTIMATE FOR DWARF PLANTATION FOR 400 KV TRANSMISSION LINE FROM SILCHAR TO SAKAWRTUICHHUN
Vide letter F.No. 8-97/2011-FC dt. 08.07.2013
(6th Year Maintenance)

Implementing Agency : Environment, Forests & Climate Change Department, Mizoram									
Object Head	Name of Activity	Division	Range	Location	Estimated cost per hectare			Proposed Activities	
					Mandays required (in Nos.)	Labour component (in Rs.)	Cost /Ha (in Rs.)	Phy. Target (Ha)	Fin. Target (Rs.)
1	2	3	4	5	6	7	8	9	10
A	6TH YEAR MAINTENANCE								
	i) Weeding 2 times (10+8) ii) Fire protection measures	Kolasib	Vairengte	NH-54, Para ram bul	23	380	8740	21.5	187910
			Bilkhawthlir	Kharzawl,					
			Kolasib	N.Chhimluang					
			Kawnpui	Chhungbawnga camp lui kam					
				Thingdawl lui kam					
	Sub Total								
	187,910								
	Monitoring & evaluation (2% of plantation cost)								
	3758.2								
	Overheads (5% of plantation cost)								
	9395.5								
	Total :								
	201,064								

PART III

Activities to be undertaken from Net Present Value and Interest Component

ABSTRACT OF COST OF NPV AND INTEREST

S.No	Items	Amount (in Rs.)
1.	Net Present Value	12,35,19,200.00
	(A) Core Activities (not less than 80%)	8,90,00,000.00
	(B) Allied Activities (not more than 20%)	3,45,19,200.00
2.	Interest	52,00,000.00
	(A) Permissible activities for not less than 60%	43,00,000.00
	(B) Permissible activities for not more than 40%	9,00,000.00
Total :		12,87,19,200.00

1 (A) ABSTRACT OF COST OF NET PRESENT VALUE (NPV)

Core activities (not less than 80%)

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)	Remarks
1	Creation of Avenue (roadside) Plantations (Advance works) in potential divisions with fruit bearing tall seedlings.	2 lakh tall seedlings @ Rs.60/-	1,20,00,000.00	5(2)(b)	Since soil erosion and land slide in Mizoram is very common due to hilly terrain thus, Avenue Plantation on road sides will not only stabilize the soil but will also ameliorate aesthetic aspect.
2	Forest fire prevention and control operations	16 divisions	1,20,00,000.00	5(2)(f)	Forest fire in remote hilly areas is quite common due to jhum burning thus, prevention measures are required annually. The fireline created in 2021-22 shall be maintain
3	Protection of plantations and forests	16 divisions	80,00,000.00	5(2)(d)	Due to acute shortage of field staff, the protection of forests & plantations is required with engagement of local people with transportation of seized forest products from interiors.
4	Soil & Moisture Conservation works in the forests	In vulnerable forest divisions	50,00,000.00	5(2)(g)	Soil erosion and land slide is very common on hilly terrain with drought in some areas during dry season thus, S&M Conservation activities are felt necessary.
5	Improvement of wildlife habitats provided in the approved WL Management Plan or Working Plan	500 ha	50,00,000.00	5(2)(i)	In line with prescriptions of approved WL Management Plan/Working Plan the WL habitats need to be improved with improvement of patrolling paths in Lengteng, Thorangtlang, etc.
6	<i>Lidar based project- Biodiversity Conservation at Kawrthah & Mamit</i>	1000 ha	1,00,00,000.00	5(2)(m)	An area of 10,000 ha. was selected for LIDAR based project in 2020-21. It is proposed to take up 1000 ha. in 2022-23.
7	Planting and rejuvenation of forest cover on non-forest land with wildlife corridors	500 ha.	1,00,00,000.00	5(2)(j)	Some non-forest lands viz. Durtlangkham under Aizawl, etc. are frequently visited by wild animals as corridors thus, planting and rejuvenation of such areas is proposed.
8	Creation of Seed Production Areas (SPAs) under different Forest Divisions	Potential territorial divisions	1,00,00,000.00	5(2)(m)	For raising quality planting material, creation of Seed Production Areas (SPA) is indispensable thus, it may be initiated in 5 forest divisions.
9	Management of biological diversity and biological resources in wetland and surrounding areas	10 forest divisions	1,40,00,000.00	5(2)(m)	Some forest areas on Govt. as well as community lands including wetlands are rich in biodiversity therefore, preservation and management of these resources is required.
10	Creation of Herbal Garden at suitable sites viz. Lengpui, etc.	2 sites	20,00,000.00	5(2)(m)	Herbal garden is proposed for awareness creation on medicinal plants and their conservation.
11	Development of Orchids	1 site	10,00,000.00	5(2)(m)	Endemic orchid species in Mizoram have immense scope for its conservation and promotion.
		TOTAL	8,90,00,000.00		

NPV
A (2) Proposal under NPV Fund : NPV (A) – Permissible activities under 80% of NPV

S.No	Item of works	Physical target	Rate (in Rs.)	Financial Target (in Rs.)	Justification
1	Creation of Avenue (roadside) Plantations (Advance works) in potential divisions with fruit bearing tall seedlings.	2 lakh tall seedlings	60	1,20,00,000.00	Since soil erosion and land slide in Mizoram is very common due to hilly terrain thus, Avenue Plantation on road sides will not only stabilize the soil but will also ameliorate aesthetic aspect.
2	Forest fire prevention and control operations	16 divisions	LS	1,20,00,000.00	Fire during dry season is one of the staunch enemy of forests and plantations. Since the area is hilly, it is extremely difficult to wipe out fire once it breaks out. So, Fireline cutting and maintenance of old fire lines at fire prone areas with engagement of fire watchers proved to be very effective in prevention of forest fires.
3	Protection of plantations and forests	16 divisions	LS	80,00,000.00	Due to acute shortage of field staff, the protection of forests & plantations is required to be done with engagement of local people and transportation of seized forest products from interiors.
4	Soil & Moisture Conservation works in the forests	In vulnerable 5 forest divisions	LS	50,00,000.00	Soil erosion and land slide is very common on hilly terrain with drought in some areas during dry season thus, S&M Conservation activities are felt necessary.
5	Improvement of wildlife habitats provided in the approved WL Management Plan or Working Plan	500 ha	LS	50,00,000.00	In line with the prescriptions of approved Wildlife Management Plan/Working Plan the WL habitats need to be improved.
6	<i>Lidar based project</i> - Biodiversity Conservation at Kawrthah & Mamit	1000 ha	LS	1,00,00,000.00	An area of 10,000 ha. was selected for LIDAR based project in 2020-21. It is proposed to take up 1000 ha. in 2022-23.
7	Planting and rejuvenation of forest cover on non-forest land with wildlife corridors	500 ha.	20000/ ha.	1,00,00,000.00	Some non-forest lands viz. Durtlangkham under Aizawl, etc. are frequently visited by wild animals as corridors thus, planting and rejuvenation of such areas is proposed.
8	Creation of Seed Production Areas (SPAs) under different Forest Divisions	Potential territorial divisions	LS	1,00,00,000.00	For raising quality planting material, creation of Seed Production Areas (SPA) is indispensable thus, it may be initiated in 5 forest divisions.
9	Management of biological diversity and biological resources in wetland and surrounding areas	10 forest divisions	LS	1,40,00,000.00	Some forest areas on Govt. as well as community lands including wetlands are rich in biodiversity therefore, preservation and management of these resources is required.

10	Creation of Herbal Garden at suitable sites viz. Lengpui, etc.	2 sites	LS	20,00,000.00	Herbal garden is proposed for awareness creation on medicinal plants and their conservation.
11	Development of Orchids	1 site	LS	10,00,000.00	Endemic orchid species in Mizoram have immense scope for its conservation and promotion.
			Total :	8,90,00,000.00	

1.(B)ABSTRACT OF COST OF NET PRESENT VALUE (NPV)

Allied activities (not more than 20%)

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Promoting conservation of Community/ Village Forests and Community Reserve Sanctuaries maintained by local people and NGOs (YMA etc.)	400 Hectare	1,20,00,000.00	5(3)(b)
2	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas for protection duties.	In vulnerable forest divisions	40,00,000.00	5(3)(d)
3	Construction of check posts/camps, waiting sheds and wooden boats for protection duties by forest field staff.	LS	30,00,000.00	5(3)(d)
4	Engagement of local casual staff/ labours to assist regular staff of State Forest Department in various works for protection of forests and wildlife including anti-poaching squad.	44 nos.	60,19,200.00	5(3)(f)
5	Independent and third party monitoring & evaluation of various forestry works.	LS	10,00,000.00	5(3)(h)
6	Publicity cum awareness and extension activities related to forest and wildlife conservation.	LS	25,00,000.00	5(3)(i)
7	Improvement/upgradation of existing forest nurseries with signboards, inspection paths, repair of fencing, weeding, etc.	All forest divisions	30,00,000.00	5(3)(a)
8	Purchase/maintenance of communication devises viz. cell phones, laptops, etc. used for monitoring and protection of forests.	LS	10,00,000.00	5(3)(c)
9	Raising of thick walled bamboo planting material	LS	20,00,000.00	5(3)(a)
		TOTAL	3,45,19,200.00	

NPV

B(2) Revised Proposal under NPV Fund : NPV (B) – Permissible activities under 20% of NPV

S.No	Item of works	Physical target	Rate (in Rs.)	Financial Target (in Rs.)	Justification
1	Promoting conservation of Community/Village Forests and Community Reserve Sanctuaries maintained by local people and NGOs (YMA etc.)	400 Hectare	LS	1,20,00,000.00	There are about 700 villages in Mizoram and most of them have safety, supply and community reserve forests. To ensure their protection and conservation some technical and financial support is required. It will promote conservation of these community/village forests.
2	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas for protection duties.	In vulnerable forest divisions	LS	40,000,00.00	Construction, upgradation and maintenance of inspection paths, forest roads in forest areas for protection duties are essential.
3	Construction of check posts/camps, waiting sheds and wooden boats for protection duties by forest field staff.	10 nos.	LS	30,00,000.00	Construction of check posts/camps and wooden boats for protection duties by forest field staff in Riverine Reserved Forests
4	Engagement of local casual staff/labours to assist regular staff of State Forest Department in various works for protection of forests and wildlife including anti-poaching squad.	44 nos. for 12 months	11400/-	60,19,200.00	Due to acute shortage of regular forest staff, the functioning of nodal office as well as field offices has become quite challenging. Thus, casual engagement of local people in the nodal office as well as division offices to assist regular staff of forest department for smooth functioning and effective execution of works in protection of forest, wildlife and CAMPA activities is indispensable.
5	Independent and third party monitoring & evaluation of various forestry works.	LS	As per bid amount	10,00,000.00	Independent third party monitoring and evaluation is required to ensure implementation of approved works up to satisfactory level.
6	Publicity cum awareness, and extension activities related to forest and wildlife conservation.	LS	LS	25,00,000.00	For extension activities such as organizing awareness campaign, workshop and seminars, quiz, essay writing, painting competition for students, displaying banners, hoarding on bio-diversity conservation, environment protection, publication of books, pamphlets, reports on forest wildlife conservation and other related issues. Documentation of biological diversity. (Faunal & floral)
7	Improvement/upgradation of existing forest nurseries with signboards, inspection paths, repair of fencing, weeding, etc.	All forest divisions	LS	30,00,000.00	Nurseries are the backbone of plantation. Good nursery is an essential pre-requisite for successful plantation. So, experiment of existing nurseries is excited for carrying out successful CA plantations as well as other plantation. Works will include improvement of water supply, nursery beds, inspection paths, procurement of tools, weeding, repair of fencing, etc.
8	Purchase/maintenance of communication devices viz. cell	LS	LS	10,00,000.00	Due to remote and difficult hilly terrain of Mizoram, the communication with forest field staff in various forest divisions and ranges is a challenging job. Thus, procurement of communication devices viz. cell phones, laptops, etc. is proposed.

	phones, laptops, etc. used for monitoring and protection of forests					
9	Raising of thick walled bamboo planting material	LS	LS	20,00,000.00	Since the bamboo has immense potential for economical development in the state, therefore raising of thick walled bamboo planting material is proposed	
			Total :	3,45,19,2000.00		

2.ABSTRACT OF COST OF INTEREST

(A) - Permissible activities for not less than 60% of INTEREST

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Disbursement of wages/allowances to contractual staff engaged to assist State CAMPA	22	42,00,000.00	6(a)(iv)
2	Disbursement of sitting fees/allowances to the members and invitees in Executive/Steering Committee meetings of State Authority with refreshment, etc.	LS	1,00,000.00	6(a)(v)
		TOTAL	43,00,000.00	

(B) - Permissible activities for not more than 40% of INTEREST

S.No.	Item of Works	Physical target	Financial target (in Rs)	Relevant CAF Rule (s)
1	Management of office establishment	1	5,00,000.00	6(a)(i)
2	Office equipment and its maintenance	LS	2,00,000.00	6(a)(ii)
3	Other contingencies for management of the State Authority	LS	2,00,000.00	6(a)(v)
		TOTAL	9,00,000.00	

Total (Interest component) :52,00,000.00

INTEREST

A. Permissible activities for not less than 60%

S.No	Item of works	Physical target	Rate (in Rs.)	Financial Target(in Rs.)	Justification
1	Disbursement of wages/allowances to contractual staff engaged to assist State CAMPA	22	Skilled II @ Rs15,600.00 Unskilled @ Rs 11,400.00	42,00,000.00	Due to acute shortage of regular staff (Technical & Ministerial) in the EF&CC department, local contractual /casual staff have been engaged to assist for smooth functioning of State CAMPA Authority in accordance with provision under Rule 6(a)(iv).
2	Disbursement of sitting fees/allowances to the members and invitees in Executive/Steering Committee meetings of State Authority with refreshment etc.	LS	@ 1000/- per person/day	1,00,000.00	Allowances/Honorarium to members and invitees in the meetings of Executive /Steering Committee under State Authority is proposed as permissible under Rule 6(a)(v) of CAF Rules, 2018 with refreshment expenses during meetings, etc.
			TOTAL	43,00,000.00	

INTEREST

B. Permissible activities for not more than 40%

S.No	Item of works	Physical target	Rate (in Rs.)	Financial Target (in Rs.)	Justification
1	Management of office establishment	1	LS	5,00,000.00	For various office expenses viz. expenditure on telephone, electricity, POL, stationaries, POL, etc.
2	Office equipment and its maintenance	LS	LS	2,00,000.00	For maintenance of computers, Xerox machine, printers, etc.
3	Other contingencies for management of the State Authority	LS	LS	2,00,000.00	For unforeseen expenses on visit of dignitaries and monitoring teams for hiring of vehicles, logistics, etc.
			TOTAL	9,00,000.00	

Grand total (under interest) 52,00,000.00

Rupees fifty two lakhs only.

Monitoring & Evaluation of CAMPA Works in the State of Mizoram

REPORT



2019



Centre for Environment Protection (CEP)
B-27/ 1, Tuikual South, Aizawl – 796001, Mizoram.

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Report of Monitoring and Evaluation of CAMPA Works in the State of Mizoram

1. Introduction:

The Environment, Forests & Climate Change Department, Govt. of Mizoram has appointed Centre for Environment Protection (CEP) to undertake monitoring and evaluation of various works implemented by the Department of EF & CC, Govt. of Mizoram, under CAMPA APO (2016-2017 & 2017-2018). The M & E has to be executed as per MoU/ ToR covering 10 territorial forest division and 3 wildlife divisions wherein civil works and all plantations with 10% random sampling area have to be selected for evaluation. Thus, the M & E has encompassed civil works and plantations such as compensatory afforestation (CA), catchment area treatment plan (CATP), natural forest management (NFM) and so on.

The Compensatory Afforestation Fund Rules, 2018 states that at least 80 percent of the fund shall be used for activities like assisted natural regeneration, artificial regeneration, silvicultural operations in forests, protection of plantations and forests, pest and disease control in forest, forest fire prevention and control operations, soil and moisture conservation works in the forest, voluntary relocation of villages from protected areas and improvement of wildlife habitat as provided in the approved wildlife management plan.

It will also be used in planting and rejuvenation of forest cover on non-forest land falling in wildlife corridors, establishment, operation and maintenance of animal rescue centre and veterinary treatment facilities for wild animals, supply of wood-saving cooking appliances and other forest produce saving devices in forest fringe villages and management of biological diversity and biological resource.

The remaining 20 percent will be used for strengthening of the forest and wildlife-related infrastructure and capacity building of the personnel. It will include activities like the establishment, upgradation and maintenance of modern nurseries and other planting stock, promoting conservation, conservation of land and folk varieties and cultivars, chronicling of knowledge relating to biological diversity, purchase and maintenance of equipment or devices used for communication and information technology for the purpose of protection of forest and wildlife.

Additionally, activities like construction, upgradation and maintenance of inspection paths, forest roads in forest area, fire lines, watchtowers, check posts and timber depots, construction of residential and official buildings in forests for frontline staffs deployed for protection of forest and wildlife and casual engagement of local people or labours to assist regular forest staff for forest protection work will be part of 20 percent expenses of the fund.

2. Study design and methodology:

The evaluation has been conducted by carrying out site inspections and examination of records such as actual payee receipt (APR), MB, treatment map, plantation register/ journal, expenditure, etc. to understand process documentation and the project cycle management. The maintenance of records has 10 points in total with 2 point for each record. The physical verifications of the project sites include the following parameters:-

a) Treatment & maintenance:

- i) Plant survival percent, growth of plants and natural regeneration.
- ii) Nala bunds, check dams, trenches, water absorption trenches (WATs), trench-cum-mound (TCM), live-hedge fence (LHF), etc.

b) Protection:

- i) Construction of fire lines and fences.
- ii) Slope stabilization with bio-engineering measures.

The following parameters with respect to *a) treatment & maintenance* have been employed during the course of site inspections.

c) Survival rate of the plantation:

- i) Total number of saplings planted at the plot (N_0)
- ii) Number of plants surviving currently (N_1)
- iii) Overall survival rate of the planted saplings at the plot ($N_1/ N_0 *100$) and mortality rate [$(N_0-N_1)/ N_0 *100$]

d) Average height of plant (in cm):

- i) Plant height was observed in pre-decided height classes (i.e. 10-20cm, 20-30cm), because it was very difficult to measure the actual height of each plant as it is very time consuming process.
- ii) The height of all the plants surviving at the plot during the monitoring exercise was put down in the monitoring sheets in different height classes.
- iii) Plant species average height = $\Sigma (f * x)/ N$, where, f = frequency i.e. no. of plants of the given spp. in a particular class interval, (e.g. 456 in 10-20cm class interval), x = Middle value of the class interval, (e.g. 15 for 10-20 cm class interval), N = total number of the plants of the particular spp.

3. Objectives of monitoring and evaluation:

- i) To make the physical assessment of works done, to judge the quality and standard attained.
- ii) To study the limitations and deficiencies in the implementation with a view to suggesting modifications in techniques and financial provisions.
- iii) The ultimate objective is to ensure maximum efficiency in the implementation and safeguard against infructuous expenditure and take timely and remedial measures wherever necessary.

4. The project locations:

The Forest Division-wise of the project locations with respect to CAMPA APO (2016-17 & 2017-2018) where M & E has been executed, are as given under:-

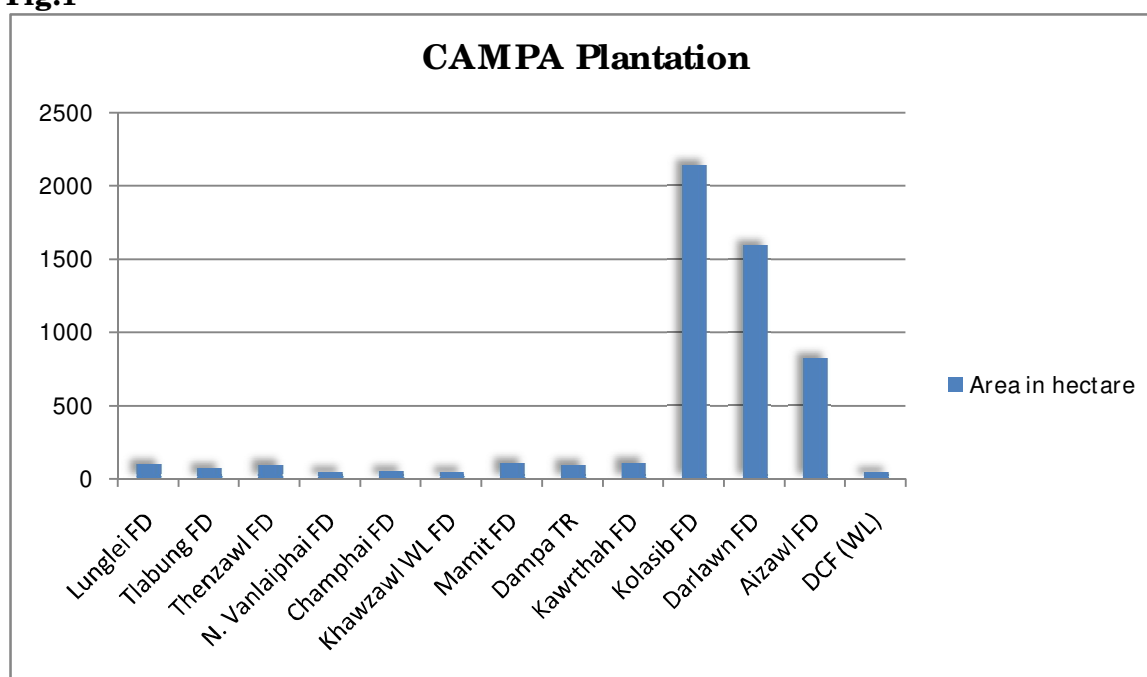
S.No.	Name of the projects	Plantation (Area in ha.)	Activity	APO Year
Lunglei FD				
1	Natural forest management	50	N/ A	2016-2017
2	Bridge over Kawrawng lui	0.2424	Advance work	2017-2018
3	Natural forest management	50	N/ A	2017-2018
Tlabung FD				
1	Natural forest management	70	N/ A	2016-2017
Thenzawl FD				
1	Serchhip – Buarpui road	2	1 st year maintenance	2016-2017
2	Natural forest management	50	N/ A	2016-2017
3	Serchhip – Buarpui road	2	2 nd year maintenance	2017-2018
4	Natural forest management	48	N/ A	2017-2018
N. Vanlaiphai FD				
1	Natural forest management	50	N/ A	2017-2018
Champhai FD				
1	Tuivawl Bridge	0.2817	3 rd year maintenance	2016-2017
2	Tuivawl Bridge	0.2817	4 th year maintenance	2017-2018
3	Natural forest management	56	N/ A	2017-2018
Khawzawl Wildlife Division				
1	Drinking water supply for Murlen National Park	LS	Const. of water storage dam	2016-2017
2	Drinking water supply for Lengteng WLS	LS	Const. of water storage dam	2016-2017
3	Fruit bearing trees, Murlen NP	25	3 rd year maintenance	2016-2017
4	Fruit bearing trees, Lengteng WLS	25	4 th year maintenance	2017-2018
Mamit FD				
1	Natural forest management	50	N/ A	2016-2017
2	Natural forest management	55	N/ A	2017-2018
Dampa Tiger Reserve FD				
1	Fruit bearing trees	25	3 rd year maintenance	2016-2017
2	Fruit bearing trees	25	4 th year maintenance	2017-2018
Kawrthah FD				
1	Natural forest management	50	N/ A	2016-2017
2	Natural forest management	60	N/ A	2017-2018

Kolasib FD				
1	Serlui 'B' HEP	632	3 rd year maintenance	2016-2017
2	400KV transmission line (Silchar – Sakawrtuichhun)	768.06	Creation	2016-2017
3	400KV transmission line (dwarf plantation)	8.5	2 nd year maintenance	2016-2017
4	400KV transmission line (dwarf plantation)	21.5	1 st year maintenance	2016-2017
5	CATP Tuirial HEP	350	1 st year maintenance	2016-2017
6	CATP Tuirial HEP	300	Advance work	2016-2017
1	Serlui 'B' HEP	632	4 th year maintenance	2017-2018
2	400KV transmission line (Silchar – Sakawrtuichhun)	768.06	1 st year maintenance	2017-2018
3	400KV transmission line (dwarf plantation)	8.5	3 rd year maintenance	2017-2018
4	400KV transmission line (dwarf plantation)	21.5	2 nd year maintenance	2017-2018
5	CATP Tuirial HEP	350	2 nd year maintenance	2017-2018
6	CATP Tuirial HEP	300	Advance work	2017-2018
7	Natural forest management	62	N/ A	2017-2018
Darlawn FD				
1	Tuivai HEP	32.57	3 rd year maintenance	2016-2017
2	BG Railway line (Bairabi – Sairang)	46.555	Creation	2016-2017
3	BG Railway line (Bairabi – Sairang)	27.933	1 st year maintenance	2016-2017
4	Tuirial HEP	591	1 st year maintenance	2016-2017
5	NH-44A (Lengpui-Langkaih)	56.633	Creation	2016-2017
6	Chhumkhum-Chawngte road	3.85	Creation	2016-2017
7	CATP Tuirial HEP	323	1 st year maintenance	2016-2017
8	Tuirial HEP (CA)	147.5	Advance work	2016-2017
9	CATP Tuirial HEP	300	Advance work	2016-2017
1	Tuivai HEP	32.57	4 th year maintenance	2017-2018
2	BG Railway line (Bairabi – Sairang)	46.555	1 st year maintenance	2017-2018
3	BG Railway line (Bairabi – Sairang)	27.933	2 nd year maintenance	2017-2018
4	Tuirial HEP	591	2 nd year maintenance	2017-2018
5	NH-44A (Lengpui-Langkaih)	56.633	1 st year maintenance	2017-2018
6	Chhumkhum-Chawngte road	3.85	1 st year maintenance	2017-2018
7	CATP Tuirial HEP	323	2 nd year maintenance	2017-2018
8	Tuirial HEP (CA)	147.5	Advance work	2017-2018
9	CATP Tuirial HEP	300	Creation	2017-2018
10	MSRP-II (Tlabung-Kawrupuichhuah) road	4.98	Advance work	2017-2018
11	Natural forest management	60	N/ A	2017-2018
Aizawl FD				
1	20MW Thermal power plant	3.57	3 rd year maintenance	2016-2017
2	Petrol pump at Sairang	0.36	3 rd year maintenance	2016-2017
3	Champhai-Hnahlan-Khuangphah road	110.195	3 rd year maintenance	2016-2017
4	CATP Tuirial HEP	400	1 st year maintenance	2016-2017
5	Natural forest management	100	N/ A	2016-2017
6	CATP Tuirial HEP	150	Advance work	2016-2017

1	20MW Thermal power plant	3.57	4 th year maintenance	2017-2018
2	Petrol pump at Sairang	0.36	4 th year maintenance	2017-2018
3	Champhai-Hnahlan-Khuangphah road	110.195	4 th year maintenance	2017-2018
4	CATP Tuirial HEP	400	2 nd year maintenance	2017-2018
5	Natural forest management	59	N/ A	2017-2018
6	CATP Tuirial HEP	150	Creation	2017-2018
7	Const. of approach road to Puansen WLS	LS	Const. of road	2017-2018
DCF (WL) Aizawl				
1	Plantation of fruit bearing trees	47	3 rd year maintenance	2016-2017
2	Plantation of fruit bearing trees	47	4 th year maintenance	2017-2018

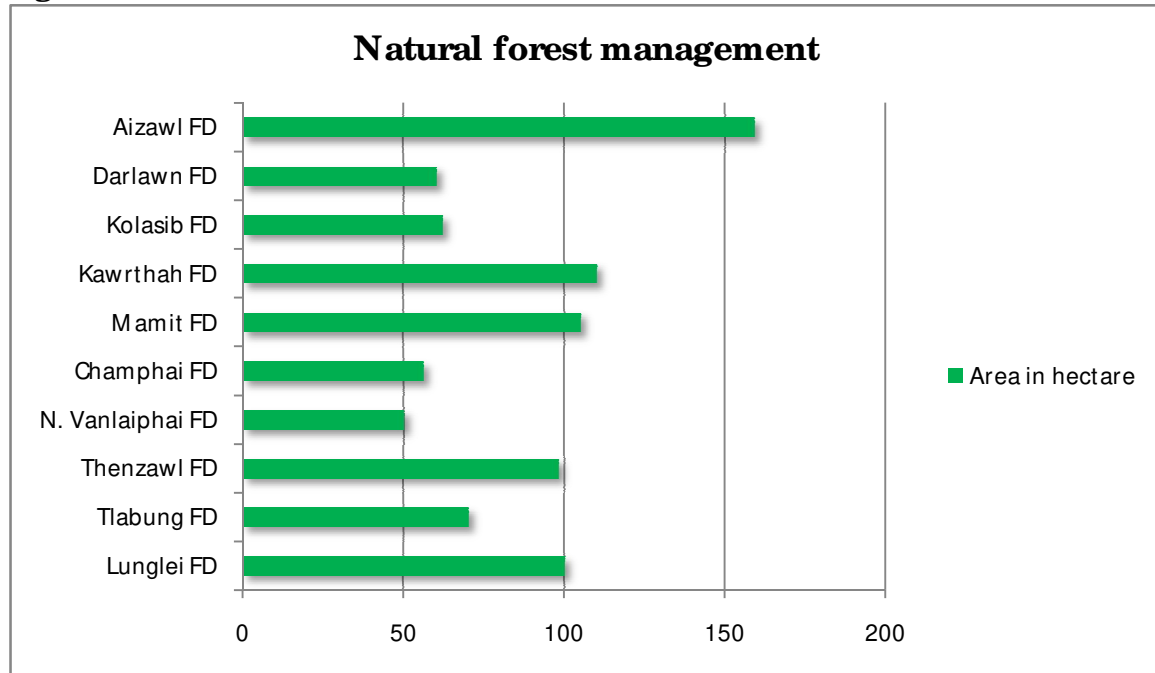
The Forest Division-wise allocation of various components of plantation under CAMPA including areas of natural forest management (NFM) during 2016-17 and 2017-18 is delineated at Fig.1 as given below:-

Fig.1



The total area of forestry operation executed under CAMPA during the APO year of 2016-17 and 2017-18 is 5347.7301 hectares of which Kolasib FD is allotted highest at 40.05% followed by Darlawn FD at 29.80% and Aizawl FD at 15.39%. One of the components taken up in forestry operation under CAMPA — natural forest management (NFM) is implemented by NGOs and the Village Councils. The NFM is, in fact, assisted natural regeneration as envisaged in the Compensatory Afforestation Fund Act, 2016. The Forest Division-wise implementation of NFM during the APO year of 2016-17 and 2017-18 is shown at Fig.2.

Fig.2



5. Field observations:

All records such as actual payee receipt (APR), treatment map (TM), measurement book (MB), plantation journal (PJ), cash book (CB) have been examined during the course of evaluation. Discussion and interactions have been held with the territorial staff and leaders of partner organizations where NFM is being implemented to obtain information with respect to various facets of project implementation processes. A point scoring system is employed for performance indicators pertaining to project cycle management wherein 2 point is awarded for each record; the total point is calculated and recorded in percentage based on number of implemented project in each Forest Division.

The techno-components employed in the sampling plots for treatment, maintenance and protection along with survival and average height of plants have been assessed thoroughly. The sampling area/ plot and locations of NFM in each Forest Division is delineated in tabular form as given in Table 1.

Table 1: Natural Forest Management (NFM): Area in hectare

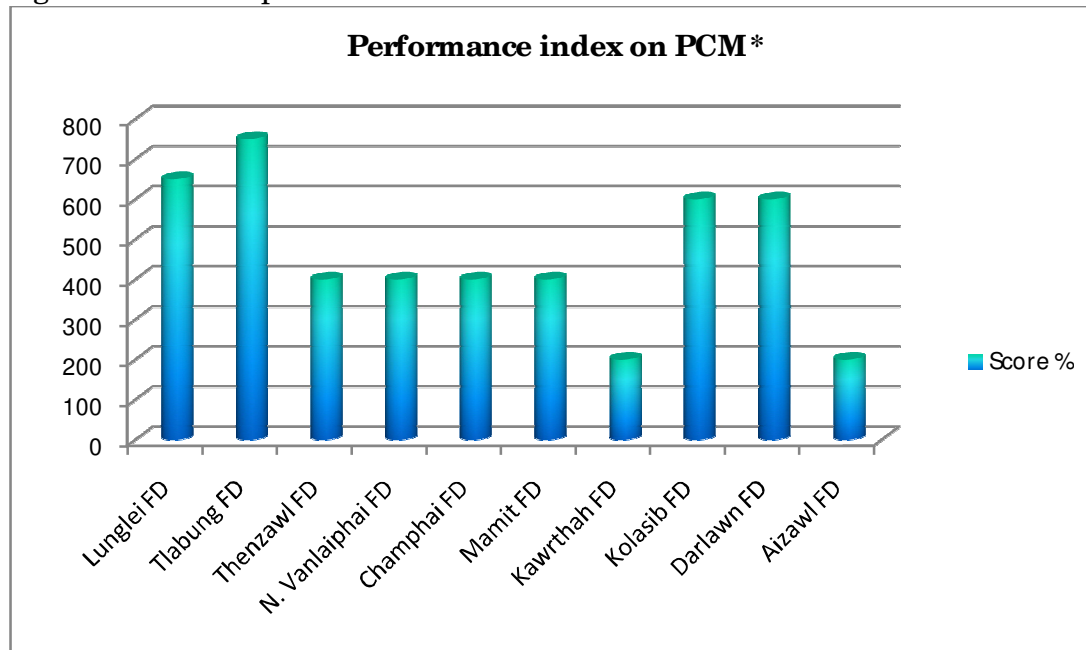
Project Area	Total Area	Sampling Locations	Range	Area Covered			Records	Scores	Average height of plant	Survival rate
				2016-17	2017-18	2016-17				
Lunglei FD										
50	100	Tawipui N-I	Tawipui	10	0		APR, PJ, CB	8	120cm	85%
		Bualte khawhlui	Bualte	0	30	40%	APR, PJ, CB	8	A/ W	NA
		Vanhne	Lunglei	0	10		TM, PJ, CB	6	60cm	70%
		Chengpui	Haulawng	10	0		TM, PJ	4	122cm	80%
			Total	20	40			650%		
Tlabung FD										
70	70	Sakuh tuikhur hnar	Tlabung	7	0		APR, TM, CB	8	135cm	90%
		YMA Zodin ram	Tlabung	4	0		APR, TM, CB	8	120cm	92%
		Hrangthuama tuikhur hnar	Tlabung	10	0	40%	APR, TM, CB	8	120cm	95%
		Mel veng hmun hlui	Lungsen	7	0		TM, PJ, CB	6	120cm	88%
			Total	28	0			750%		
Thenzawl FD										
50	98	YMA Park, Buangpui	Thenzawl	0	5		APR, CB	4	150cm	84%
		YMA Park, Kanghmun 'S	Mualthuam	5	0	50%	APR, CB	4	120cm	70%
		Zathawnga	Sialsuk	10	0		APR, CB	4	60cm	93%

		YMA Lenggpi Park	Lenggpi Park	YMA Phulpui Park	Marpara	0	15			TM, APR	4	In-situ conservation	NA
		YMA Lallen Park	YMA Saithah	0	10	0	10			TM, APR	4	In-situ conservation	NA
		Total		50	55								
Kawrthah FD													
50	60	110	Mauhak ram, Darlak	Kawrthah	0	5				CB	2	150cm	75%
			Sabual, Tuidam ram	Kawrthah	10	0				CB	2	In-situ conservation	NA
			Kawrthahwveng H/ S Park	Kawrthahwveng	0	5				CB	2	120cm	80%
			Jt. YMA Park, Kawrthah	Kawrthah	0	5				CB	2	90cm	95%
			Bairabi road, Zamuang	Zamuang	10	0		60%	83.33%	CB	2	180cm	90%
			Zaw Inuam Supply Reserve	Kanhmun	0	25				CB	2	60cm	82%
			Vengpui V/ C Park, Zaw Inuam	Kanhmun	0	5				CB	2	90cm	90%
			Reserve Bung ram, Borai	Kanhmun	10	0				CB	2	120cm	84%
			YMA Park, Kanhmun	Kanhmun	0	5				CB	2	45cm	70%
		Total		30	50								
Kolasib FD													
0	62	62	YMA Phaisen Park,	Buhchang	0	2				CB, Pj, TM	6	90cm	70%
			Kharzawl ram, Vairengte	Vairengte	0	20				CB, Pj, TM	6	90cm	65%
			Thenphek mual	Kolasib	0	40		0	100%	CB, Pj, TM	6	180cm	85%
		Total		0	62								

Darlawn FD													
0	60	60	Hriangtuinek khaw hmun hlui, Phuaibuang	Phuaibuang	0	15	0		100%	CB, Pj, TM	6	120cm	80%
			Vanbawng dai, Vanbawng	Suangpuilawn	0	5				CB, Pj, TM	6	90cm	75%
			Mualpheng ram, Ratu	Ratu	0	10				CB, Pj, TM	6	90cm	90%
			Thlanmual chuanhnuai	Darlawn	0	10				CB, Pj, TM	6	135cm	80%
			Thlanmual mawng	Darlawn	0	5				CB, Pj, TM	6	135cm	82%
			Pehlawn YMA Park	Khawruhlian	0	15				CB, Pj, TM	6	120cm	94%
			Total	Total	0	60					600%		
Aizawl FD													
100	59	159	Lamchhip YMA Park	Aibawk	10	0	100%		100%	CB	2	In-situ conservation	NA
			Thiak Zothei huan	Aibawk	10	0				CB	2	In-situ conservation	NA
			Sihfa YMA Park	Saitual	5	0				CB	2	In-situ conservation	NA
			Kaphleia Zothei huan, Tachhip	Aibawk	8	0				CB	2	In-situ conservation	NA
			Phulmawi Zothei huan	Seling	10	0				CB	2	In-situ conservation	NA
			Derhkentlang, Durtlang	Aizawl	15	0				CB	2	90cm	75%
			Zemabawk YMA Park	Aizawl	1	0				CB	2	In-situ conservation	NA
			Zawlpala thlan tlang, Phulpui	Aibawk	0	20				CB	2	120cm	90%
			Dara tlang, Thiak	Aibawk	0	80				CB	2	In-situ conservation	NA
			Total	Total	59	100					200%		

The process of planning, organizing, coordinating, and controlling of NFM project effectively and efficiently throughout its phases, from planning through execution then completion and review to achieve pre-defined objectives or satisfying the project stakeholder by producing the right deliverable at the right time, cost and quality have been assessed with available records in each FD. The variation of performance of each FD on process documentation is shown at Fig 3.

Fig.3 Variation of performance on NFM



*PCM = Project Cycle Management

The NFM is implemented with in-situ conservation in the community land mostly managed by Young Mizo Association (YMA) wherein the conservation of ecosystems and natural habitats and the maintenance and recovery of viable population of species in their surroundings have been undertaken.

5.1. The lacunae of NFM implementation:

- 1) No sanction letter and terms of reference (ToR) is issued to partner organizations, and this has prevented partner organizations to know the clear picture of the project model and concept.
- 2) Process documentation with respect to project cycle management is very weak at the Division and Range levels.
- 3) No proper action plans are available in each FD and FR and this has made it difficult to assess measurable impacts of the project.
- 4) Success indicators of the project are not put in place.
- 5) No proper treatment plans are available.
- 6) Proper monitoring mechanism is not available to undertake concurrent monitoring of works implemented by partner organizations.
- 7) No risk assessment and mitigatory measures are put in place. It is not sufficient to establish a conservation area and then assume its biodiversity is

automatically protected and without risk. Many risks, both natural and man-created, remain.

5.2. Recommendations for effective implementation of NFM:

The State has notified forests consisting of riverine reserved forest, innerline reserved forest, roadside reserved forest, protected areas and other reserved forests. The notified forests under District Councils are managed by Autonomous District Councils. The unclassified forests are owned by Government and private individuals.

The management of community forests — village safety reserve, supply reserve, jhum land and bamboo reserve (*mauhâk*) are vested with the Village Councils. Other community forests are maintained and managed by NGOs like YMA in almost every village in the State. The State's Forest Department has recognised that fragile community forest management institutions are likely to collapse under external and internal pressures, leading to accelerated depletion of the State's rich forests and biodiversity. Hence, the State's Forest Department has started the implementation of NFM under CAMPA since 2013-14 to support local communities to act effectively as custodians of the State's forests.

The implementation of the new community forestry support program — NFM has been assessed, and to ensure continuity of the program as a carbon mitigation option and to enhance ecosystem services, followings are recommendations for improvement in future course of actions.

Operational Guidelines of NFM should be put in place which should include the following salient features:-

1) The budget:

There should be budget break-up wherein 70% for operational costs (partner organization) and 30% for process documentation & monitoring (DFO). The budget break-up should be shown in the sanction letter to avoid doubts which may arise between the DFO and partner organizations.

2) Treatment plan:

- a) Preparation of map of the project area.
- b) Preparation of species diversity report.
- c) Random soil sampling of the project area to ensure proper soil treatment and management.
- d) Provision for fire line cuttings.
- e) Study and assessment of slope gradient to identify land-slip prone area and to prepare mitigation measures like soil bio-engineering measures, etc. for stabilization of soil.
- f) Provision for the construction of fences where biotic pressures need to prevent.

3) Soil moisture conservation:

The main objective of soil moisture conservation is to minimize the amount of water lost from the soils through evaporation (water loss directly from the soil) and transpiration (water loss occurring through the plants) – or combined, the evapotranspiration. Preserving soil moisture is important means to maintain the necessary water for plant and to enhance source of water for perennial streams. Hence, low cost *check dam* and *contour ploughing* are recommended where slope gradient is steep to reduce velocity of runoff and enhance water table.

4) Action plan:

Preparation of action plan for various techno-components with stipulated time frame is imperative to ensure measurable impacts of the NFM project.

5) Concurrent monitoring:

The concurrent monitoring and evaluation of NFM projects implemented by partner organizations at FD/ FR level by DFO/ RO is a must to ensure smooth and effective implementation of the project.

6) Capacity building:

The programme will strengthen the capacity of stakeholders with respect to processes and mechanisms that enable key direct stakeholders in forestry to be part of decision-making in all aspects of forest management, from managing resources to formulating and implementing institutional frameworks.

7) Reporting system:

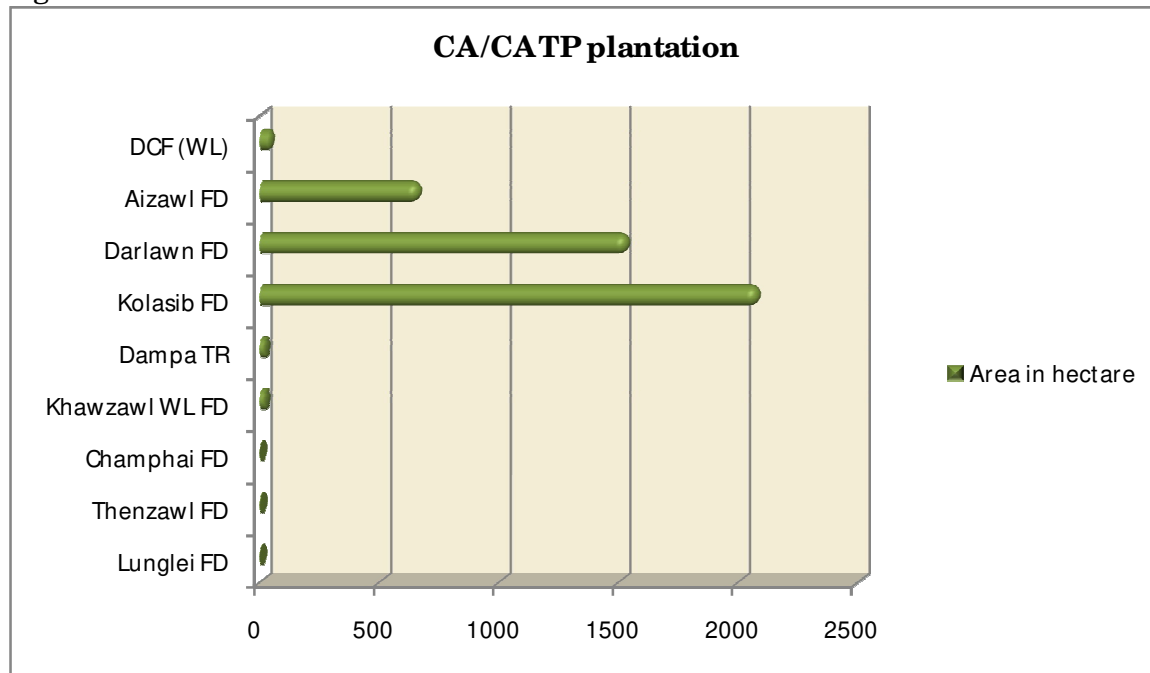
The reporting system of the project implementation should consist of formats to delineate achievement of various techno-components of the project as envisaged in the action plan. Such reports may be employed as management information system for decision making, and for the coordination, control and analysis to further improve project implementing processes.

Community-oriented forests stewardship has been practised in the State since the regime of village chieftainship and until now. However, the age-old traditional forest management system needs to be revitalized and strengthened in line with payment for ecosystem services (PES) in efforts to reduce deforestation and to offset atmospheric carbon sequestration. Hence, the investment on participatory NFM project as *in situ* conservation efforts will ensure better achievement in biodiversity conservation for the State's Forest Department while providing better ecosystem services for resident communities.

5.3. The compensatory afforestation (CA) and catchment area treatment plan (CATP):

Apart from NFM, CA/ CATP has been allotted to 9 FDs, the total area of CA/ CATP during the APO year of 2016-17 and 2017-18 is 4377.7301 hectares wherein Kolasib FD has highest allotment at 47.51% followed by Darlawn FD at 35.04% and Aizawl FD at 15.17%. Variation of the Forest Division-wise allotment of CA/ CATP during the APO year of 2016-17 and 2017-18 is as delineated at Fig.4.

Fig.4



5.3.1. Assessment of CA/CATP plantations:

The State's Forest Department has prepared CAMPA APO (2016-17 & 2017-18) in conformity with provisions of the CAF Rules, 2018. The work components of the APO include NFM, CATP/ CA, renovation of Forest Rest House, construction of approach roads, etc.

The Forest Division-wise assessment of CA/ CATP plantation has been carried out covering at least 10% plantation area in each FD wherein analysis of process documentation with respect to the maintenance of records like plantation journal, APR, treatment map, accounting system, etc. have been undertaken to understand the nature of project cycle management in each FD. Physical verification of plantations have been done with the focus on survival, growth and health of plants, protection measures adopted, soil moisture conservation measures and planting techniques employed. The Forest Division-wise analysis is given at Table 2.

Table 2: CA/CATP Plantations (Area in hectare)

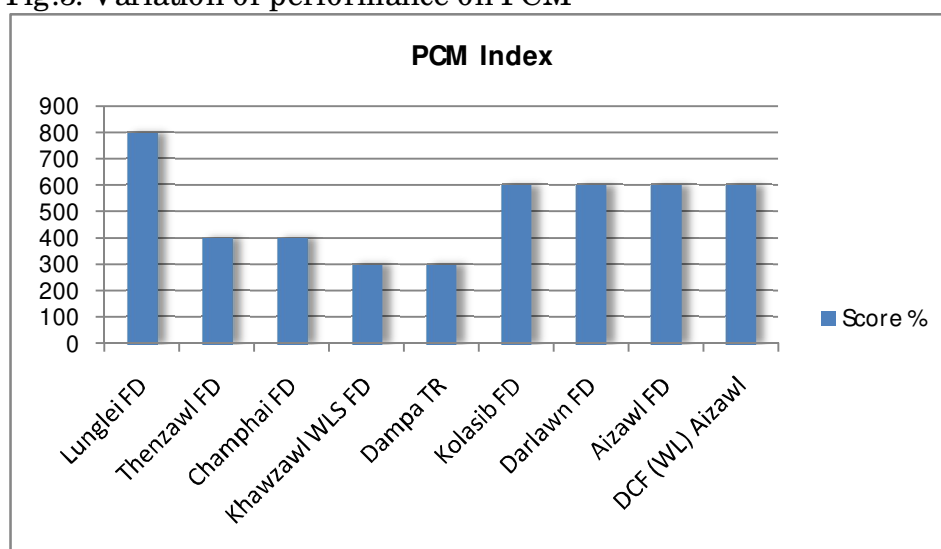
Project Area	Total Area	Sampling Locations	Range	Area Covered		Area Covered in %	Records	Scores	Average height of plant	Survival rate
				2016-17	2017-18					
Lunglei FD										
0	0.2424	Thingfal ram	Tawipui	0	0.2424	0	100%	8	90cm	95%
			Total	0	0.2424			800%		
Thenzawl FD										
2	2	Tuinhial chhuah	Thenzawl	2	2	100%	100%	8	180cm	99%
			Total	2	2			400%		
Champhai FD										
0.2817	0.2817	Keilungliah kawm	Champhai	0.2817	0.2817	100%	100%	8	90cm	85%
			Total	0.2817	0.2817			400%		
Khawzawl WL FD										
25	25	Chamdur ngaw phul, Murlen National Park	Rabung	25	25	100%	100%	6	120cm	60%
			Total	25	25			300%		
Dampa TR										
25	25	Teirei kam, Dampa Tiger Reserve	Teirei	25	25	100%	100%	6	90cm	72%
			Total	25	25			300%		
Kolasib FD										
A. Serlui 'B' HEP										
632	632	Thohuang ram	Bakpui	210	210	100%	100%	6	210cm	85%
		Mausin ram	Saipum	212	212			6	240cm	90%
		Thohuang ram	N. Hlimen	210	210			6	210cm	85%
			Sub-total	632	632					
B. 400KV Transmission Line (Silchar - Sakawrtuichhun)										
768.06	768.06	Tiangpuilian, Phaisen	Buhchang	198	198			6	180cm	70%
		Phulrawlian kawm	Bakpui	200	200			6	195cm	92%
		Ar khuang lo ram	Kawnpui	180.06	180.06			6	150cm	80%
			Sub-total	578.06	578.06	75.26%	75.26%			

C. 400KV Transmission Line (Dwarf plantation)												
8.5	8.5	8.5	Pu V.L. Para ram (NH54) bul	Vairengte	2	2	100%	100%	PJ, TM, CB	6	60cm	55%
			North Chhimluang	Bilkhawthlir	2	2				6	90cm	45%
			Chhungbawnga Camp luikam	Kolasib	2	2				6	90cm	55%
			Thingdaw luikam	Kawnpui	2.5	2.5				6	60cm	60%
			Sub-total		8.5	8.5						
D. 400KV Transmission Line (Dwarf plantation)												
21.5	21.5	21.5	Pu V.L. Para ram (NH54) bul	Vairengte	4	4			PJ, TM, CB	6	60cm	52%
			North Chhimluang	Bilkhawthlir	4	4				6	95cm	45%
			Chhungbawnga Camp luikam	Kolasib	6	6				6	90cm	55%
			Thingdaw luikam	Kawnpui	7.5	7.5				6	60cm	60%
			Sub-total		21.5	21.5						
E. CATP Tuirial HEP												
350	350	350	Theichangbung tiang	N. Hlumen	116	116			PJ, TM, CB	6	180cm	70%
			Sub-total		116	116						
F. CATP Tuirial HEP												
300	300	300	Suarhlap ram	Saipum	85	85			PJ, TM, CB	6	120cm	65%
			Sub-total		85	85						
			Total (A+B+C+D+E+F)		1441.06	1441.06				600%		
Darlawn FD												
A. Tuivai HEP												
32.57	32.57	32.57	Tuiriza chhuah	Suangpuilawn	32.57	32.57			PJ, TM, CB	6	120cm	70%
			Sub-total		32.57	32.57						
B. BG Railway Line (Bairabi-Sairang)												
46.555	46.555	46.555	N. Serzaw ram	Darlawn	46.555	46.555			PJ, TM, CB	6	90cm	45%
27.933	27.933	27.933	N. Serzaw ram	Darlawn	27.933	27.933			PJ, TM, CB	6	90cm	40%
			Sub-total		74.488	74.488						
C. Tuirial HEP (CA)												
147.5	147.5	147.5	Phaitiang ram, N.	Darlawn	74	74			PJ, TM, CB	6	120cm	55%

		Sakaw rhmuituai Beraw lui kam	Aizawl (Sadar) Aizawl (Sadar)	60 90	60 90				PJ, TM, CB PJ, TM, CB	6 6	185cm 160cm	85% 90%
D. C ATP Tuirial HEP				Sub-total	250	250						
150	150	Phulraw pang ram, Maubuang	Aibawk	150	150	100%	100%	100%	PJ, TM, CB	6	105cm	60%
				Sub-total	150	150						
				Total (A + B + C + D)	403.93	403.93				600%		
DCF (WL) Aizawl												
47	47	Tuihar ram, Khawnglung WLS	Khawnglung WLS	23	23	100%	100%	100%	PJ, TM, CB	6	120cm	70%
		Theichangbung Duty Camp hnuai, Pualreng WLS	Pualreng WLS	24	24				PJ, TM, CB	6	150cm	80%
				Total	47	47				600%		

The Forest Division-wise aspect of project cycle management with respect to maintenance of records for the implementation of CA/ CATP is delineated at Fig.5.

Fig.5. Variation of performance on PCM



The Lunglei FD has scored highest PCM index with only one project (0.2424 ha.), and is due to that a point scoring system is employed for performance indicators pertaining to project cycle management wherein 2 point is awarded for each record/ document, the total point is calculated and recorded in percentage based on number of implemented project in each Forest Division.

A structured way to manage projects is to make sure that CA/ CATP projects are aligned with its objectives. Hence, the monitoring team has focussed on maintenance of records of the implementing processes of CA/ CATP to understand the sustainability of the projects. At least plantation journal, treatment map and cash book are maintained by all Forest Divisions whereas most of the documents are not updated and maintained properly. In addition, observations have never been posted in plantation journals by inspecting officers like ACFs/ DFOs and above except in few project areas as given at Table 3.

Table 3

S.No.	Name of FD	Range	Name of projects	CA/CATP Location	Date of observations posted in plantation journals
1	Kolasib	Bûkpui	Serlui 'B' HEP	Thohuang ram, 210 ha.	23/ 6/ 2015 by ACF
		N. Hlimen	Serlui 'B' HEP	Thohuang ram, 210 ha.	23/ 6/ 2015 by ACF
		Saipum	CATP Tuirial HEP	Suarhliap ram, 85 ha.	1/ 10/ 2017 by DFO
2	Aizawl	Aizawl (Sadar)	CATP Tuirial HEP	Sakawrhmutuai, 60 ha.	21/ 1/ 2019 by ACF
		Aizawl (Sadar)	CATP Tuirial HEP	Berawlui kam, 90 ha.	5/ 4/ 2019 by ACF

5.3.2. Observations:

The process documentation that has been employed is more or less similar in all the Forest Divisions. As such, based on the verification of documents available at the FD and FR levels, followings are few observations of the monitoring agency.

- 1) Observations of the inspecting officers have never been posted in plantation journals except in information shown at Table 3. This has clearly indicated the absence of concurrent monitoring mechanism.
- 2) No project implementation schedule is given to the Range Officers while disbursing project fund/ forest advance (FA) from the offices of FD.
- 3) No nursery inventory is found among visited nurseries except at Tawipui Range under Lunglei FD.

The forestry operation or planting method adopted is also more or less similar in all the Forest Divisions, the forestry operation mostly employed is *assisted natural regeneration* as envisaged in the Compensatory Afforestation Fund Rules, 2018. Followings are Forest Division-wise/ Forest Range-wise observations of plantation:-

Table 4

Name of FD	Sampling location	Project area (in ha.)	Range	Species planted	Planting method	Observations
Lunglei FD	Thingfal ram	0.2424	Tawipui	<i>Michelia champaca, etc.</i>	ANR	1) Plantation is well maintained.
						2) Bamboo crib wall system is adopted for SMC. The methodology employed for soil bioengineering measure has been found quite impressive in terms of soil conservation. 3) Inspection path is constructed and signboard is also erected.
Thenzawl FD	Tuihnial chhuah, Tlawng kam	2	Thenzawl	<i>Tectona grandis</i>	ANR	Proper maintenance is done in compliance with forest advance (FA).
Champhai FD	Keilungliah kawn	0.2817	Champhai	<i>Toona ciliata</i>	ANR	The plantation is properly maintained.
Khawzawl WLS FD	Chamdur ngaw phul, Murlen	25	Rabung	<i>Prunus puddum,</i>	ANR	1) Plantation is well maintained.

	National Park			<i>Ficus spp., etc.</i>		
						2) Allotment of works under CAMPA should be done in tandem with MNP management plan.
Dampa TR	Teirei kam, Dampa Tiger Reserve	25	Teirei	<i>Chukrasia tabularis, etc.</i>	ANR	1) The plantation is well maintained.
						2) Allotment of works under CAMPA should be done in tandem with Tiger conservation plan.
Kolasib FD						
A. Serlui 'B' HEP						
	Thohuang ram	210	Bûkpui	<i>Magnifera indica, etc.</i>	ANR	Plantation is properly maintained. Signboard and inspection path are there.
	Mausin ram	212	Saipum	<i>Michelia champaca, etc.</i>	ANR	Signboard and inspection path are there. Plantation is well maintained.
	Thohuang ram	210	N. Hlimen	<i>Michelia champaca, etc.</i>	ANR	Plantation is properly maintained. Signboard and inspection path are there.
B. 400KV Transmission Line (Silchar – Sakawrtuichhun)						
	Tlangpuilian, Phaisen	198	Buhchang	<i>Tectona grandis, etc.</i>	ANR	No signboard erected and the area is contiguous with other plantations. Contour ploughing is done for SMC. The area seemed no bigger than 3 ha.
	Phulrawlian kawn	200	Bûkpui	<i>Michelia champaca, etc.</i>	ANR	The plantation is well maintained with good

						inspection path. Signboard and SMC works not seen during spot verification.
	Ar khuang lo ram	180.06	Kawnpui	<i>Michelia champaca, etc.</i>	ANR	Signboard is erected. The area is vulnerable due to illegal bamboo cutting done by non-Mizo. No SMC works and protection measures seen on the spot.
C. 400KV Transmission Line (Dwarf plantation) 8.5 ha.						
	Pu V.L. Param (NH54) bul	2	Vairengte	<i>Oroxylum indicum, etc.</i>	ANR	Due to depredation of plants by cows, protection measure is much needed. Proper refill is imperative. Signboard is not erected.
	Kharzawl, North Chhimluang	2	Bilkhawthlir	<i>Michelia champaca, etc.</i>	ANR	Since the area is a private land, the owner also planted areca palm. Signboard is not erected due to tenurial reasons.
	Chhungbawnga Camp luikam	2	Kolasib	<i>Bischofia javanica, etc.</i>	ANR	The plantation is not maintained properly. No inspection path and signboard. SMC is also not done.
	Thingdawl luikam	2.5	Kawnpui	<i>Oroxylum indicum, etc.</i>	ANR	Signboard is erected. Plantation is well maintained.
D. 400KV Transmission Line (Dwarf plantation) 21.5 ha.						
	Pu V.L. Param (NH54) bul	4	Vairengte	<i>Phyllanthus embica, etc.</i>	ANR	Due to depredation of plants by cows, protection measure is much needed. Proper refill is imperative. Signboard is not

						erected.
	Kharzawl, North Chhimluang	4	Bilkhaw thlir	<i>Michelia champaca, etc.</i>	ANR	Since the area is a private land, the owner also planted areca palm. Signboard is not erected due to tenurial reasons.
	Chhungbawnga Camp luikam	6	Kolasib	<i>Bischofia javanica, etc.</i>	ANR	The plantation is not maintained properly. No inspection path and signboard. SMC is also not done.
	Thingdawl luikam	7.5	Kawnpui	<i>Costus speciosus, etc.</i>	ANR	Signboard is erected. Plantation is well maintained.
E. CATP Tuirial HEP (350 ha.)						
	Theichangbung tlang	116	N. Hlimen	<i>Tectona grandis, etc.</i>	ANR	Plantation is properly maintained. Signboard is erected.
F. CATP Tuirial HEP (300 ha.)						
	Suarhliap ram	85	Saipum	<i>Toona ciliata, etc.</i>	AR	No signboard and inspection path. Fencing needed to prevent plantation from biotic pressure.
Darlawn FD						
A. Tuivai HEP						
	Tuiriza chhuah	32.57	Suangpuilawn	<i>Bischofia javanica, etc.</i>	ANR	Plantation is properly maintained.
B. BG Railway Line (Bairabi-Sairang)						
	N. Serzawl ram	46.555	Darlawn	<i>Tectona grandis, etc.</i>	ANR	Plantation is well maintained. No signboard erected.
	N. Serzawl ram	27.933	Darlawn	<i>Tectona grandis, etc.</i>	ANR	Plantation is well maintained. No signboard erected.
C. Tuirial HEP (CA)						
	Phaitlang ram, N. Serzawl	74	Darlawn	<i>Gmelina arborea, etc.</i>	ANR	Plantation is properly maintained.
D. NH-44/ A (Lengpui-Langkaih)						
	Kawipui chung, New Vervek	56.633	Ratu	<i>Michelia champaca, etc.</i>	ANR	Plantation is well maintained. Erection of

						signboard and construction of fences in vulnerable area is imperative.
E. Chhumkhum - Chawngte						
	Sasawtlang, Sawleng	3.85	Darlawn	<i>Tetrameles nudiflora, etc.</i>	ANR	Plantation is well maintained. No signboard and boundary pillars.
F. MSRP-II (Tlabung-Kawrupuichhuah)						
	Sasawtlang, Sawleng	4.98	Darlawn	<i>Michelia champaca, etc.</i>	ANR	Plantation is well maintained. No signboard and boundary pillars.
G. CATP Tuirial HEP						
	Phaitlang ram	100	Ratu	<i>Tectona grandis, etc.</i>	ANR	Plantation is properly maintained.
H. CATP Tuirial HEP						
	Ngaizel ram, Chalfil	46.5	Khawruhlian	<i>Cerasus cerasoides, etc.</i>	ANR	Plantation is well maintained.
	Phaitlang ram, N. Serzawl	100	Darlawn	<i>Bischofia javanica, etc.</i>	ANR	Plantation is properly maintained.
I. Tuirial HEP						
	Chengkawl luikam	200	Zohmun	<i>Tectona grandis, etc.</i>	ANR	Plantation is well maintained.
Aizawl FD						
A. 20 MW Thermal Power Plant						
	Bengbawm ram, Durtlang	3.57	Aizawl (Sadar)	<i>Bischofia javanica, etc.</i>	ANR	Plantation needs proper maintenance.
B. Petrol pump at Sairang						
	Mêl 11 luikam	0.36	Sairang	<i>Tectona grandis, etc.</i>	ANR	Plantation is properly maintained.
C. CATP Tuirial HEP						
	Phulraw pang, Maubuang	100	Aibawk	<i>Michelia champaca, etc.</i>	ANR	Plantation is well maintained. Signboard is erected and no SMC works done.
	Sakawrhmituai	60	Aizawl (Sadar)	<i>Michelia champaca, etc.</i>	ANR	Plantation is properly maintained.
	Berawlui kam	90	Aizawl (Sadar)	<i>Bischofia javanica, etc.</i>	ANR	Plantation is properly maintained.
D. CATP Tuirial HEP						
	Phulraw pang ram, Maubuang	150	Aibawk	<i>Michelia champaca, etc.</i>	ANR	Plantation is well maintained. Signboard is erected and no

						SMC works done. Erection of boundary pillar is imperative.
DCF (WL) Aizawl						
	Tuihar ram, Khawnglung WLS	23	Khawnglung WLS	<i>Emblica officinalis, etc.</i>	ANR	The plantation is properly maintained.
	Theichangbung Duty Camp hnuai, Pualreng WLS	24	Pualreng WLS	<i>Parkia timoriana, etc.</i>	ANR	The plantation is well maintained.

5.3.3. Recommendations:

The following are recommendations for the smooth and effective implementation of plantations under CA/ CATP of CAMPA.

Table 5




S.No.	Recommended Actions	Descriptions
1	Concurrent monitoring	The concurrent monitoring mechanism should be put in place wherein the inspecting officers like DFO/ ACF should post their observations regularly in the plantation journals, and compliance report of such observations may be posted by DFO/ ACF in the journals during the subsequent visit of the plantations. The concurrent monitoring protocol may be made mandatory.
2	Project implementation schedule or plan	The project implementation schedule/ plan shall be given to Range Officers along with forest advance (FA). The Project Implementation Schedule is a chart that clearly lists all the work components or tasks necessary to complete the project and related deadlines . This Schedule is the most important part of planning because it will become the tool to use for the monitoring and evaluation phases of the project. All the tasks or work components required for the implementation of the project shall be listed. The list of work components can be transferred into a chart, which will clearly state the timeframe for each work or task to be completed.
3	Maintenance of nursery inventory/ register	A well-kept and up-to-date nursery inventory/ register helps to assess whether the nursery is operating as planned, and whether demands are being met. The inventory/ register should list all plants currently in the nursery by bed or frame number, and details of delivery of seedlings, including the site, location and site conditions. It can be an important tool to record feedback from the planting sites and can then help to determine whether seedlings have the right quality for the sites on which they are planted.
4	Treatment plan of plantation area	<p>1) Random soil sampling of the plantation area is to be taken up to ensure proper soil treatment and management.</p> <p>2) Study and assessment of slope gradient to identify land-slip prone area and to prepare mitigation measures like soil bio-engineering measures, etc. for stabilization of soil.</p> <p>3) Construction of fences and fire lines should be made mandatory where biotic pressures and wild fire need to prevent. Construction of fences and fire lines are usually seen in paper but</p>







		not on the spots. 4) Soil moisture conservation (SMC) measure is to be taken as mandatory so as to minimize the amount of water lost from the soils through evaporation (water loss directly from the soil) and transpiration (water loss occurring through the plants) – or combined, the evapotranspiration. Preserving soil moisture is important means to maintain the necessary water for plant and to enhance source of water for perennial streams. Hence, low cost <i>check dam</i> and <i>contour ploughing</i> are recommended where slope gradient is steep to reduce velocity of runoff and enhance water table.
5	Reporting system	The reporting system of the project implementation should consist of formats to delineate achievement of various techno-components of the project as envisaged in the project implementation schedule/ plan. Such reports may be employed as management information system (MIS) for decision making, and for the coordination, control and analysis to further improve project implementing processes.







6. Glimpse of field visits:







The monitoring and evaluation has been conducted by carrying out site inspections and examination of records such as actual payee receipt (APR), MB, treatment map, plantation register/ journal, expenditure, etc. to understand process documentation, health of plantation and the project cycle management. Followings are some photographs of field visits.







Table 6







Name of FD	Sampling location	Range	Project	Photos
Lunglei FD				
	Thingfal ram	Tawipui	CA	
	Tawipui N-I	Tawipui	NFM	
	Vanhne	Lunglei	NFM	







	Chêngpui	Haulawng	NFM	
Tlabung FD				
	Sakuh tuikhur hnar	Tlabung	NFM	
	YMA Zodin ram	Tlabung	NFM	
	Hrangthuama tuikhur hnar	Tlabung	NFM	
	Mel veng hmun hlui	Lungsen	NFM	
Thenzawl FD				
	YMA Park, Buangpui	Thenzawl	NFM	







	YMA Park, Kanghmun 'S	Mualthuam	NFM	
	Zathawnga Bungmun, Samlukhai	Sialsuk	NFM	
	Sailam ngaw, Sailam	Sialsuk	NFM	
N. Vanlaiphai FD				
	Khawchung, Chekawn	North Vanlaiphai	NFM	
	Lungkawlh tlang, Lungkawlh	North Vanlaiphai	NFM	
	Fachil, North Vanlaiphai	North Vanlaiphai	NFM	







	Chirhdup tlang, Bawktlang	North Vanlaiphai	NFM	
	Khaw chung, Tlangmaw i	E. Lungdar	NFM	
Champhai FD				
	Zotuilak hnâr, Tualte	Khawzawl	NFM	
	YMA Park, Ngûr	Champhai	NFM	
	Pumphir ram, Zote	Champhai	NFM	
	Kawlkulh 'N' YMA Park	Kawlkulh	NFM	







Mamit FD				
	Kanghmun YMA Park	Kanghmun	NFM	
	YMA Park, Rulpuihlim	Rawpuichhip	NFM	
	YMA Park, Lengpui	Lengpui	NFM	
	Phulpui YMA Park	Marpara	NFM	
	Lallen YMA Park	Saithah	NFM	
Kawrthah FD				
	Mauhak ram, Darlak	Kawrthah	NFM	







	Sabual, Tuidam ram	Kawrthah	NFM	
	Kawrtethawveng H/ S Park	Kawrtethawveng	NFM	
	J. YMA Park, Kawrthah	Kawrthah	NFM	
	Bairabi road, Zamuang	Zamuang	NFM	
	Zawlnuam Supply Reserve	Kanhmun	NFM	
	Vengpui V/ C Park, Zawlnuam	Kanhmun	NFM	







	Reserve Bung ram, Borai	Kanhmun	NFM	
	YMA Park, Kanhmun	Kanhmun	NFM	
Kolasib FD				
	Tlangpuilian, Phaisen	Buhchang	CA	
	Thenphek mual	Kolasib	NFM	
	Mausin ram	Saipum	CATP	
	Thohuang ram	N. Hlimen	CATP	

	Phulrawlian kawn	Bûkpui	CA	
	Ar khuang lo ram	Kawnpui	CA	
	Pu V.L. Para ram (NH54) bul	Vairengte	CA	
	Kharzawl, North Chhimluang	Bilkhawthlir	CA	
	Chhungbawnga Camp luikam	Kolasib	CA	
	Thingdawl luikam	Kawnpui	CA	

	Suarhliap ram	Saipum	CATP	
Darlawn FD				
	Hriangtuinek khaw hmun hlui, Phuaibuang	Phuaibuang	NFM	
	Vanbawng dai, Vanbawng	Suangpuilaw n	NFM	
	Mualpheng ram, Ratu	Ratu	NFM	
	Thlanmual mawng	Darlawn	NFM	
	Pehlawn YMA Park	Khawruhlian	NFM	

	N. Serzawl ram	Darlawn	CA	
	Kawipui chung, New Vervek	Ratu	CA	
	Sasawtlang, Sawleng	Darlawn	CA	
	Ngaizel ram, Chalfilh	Khawruhlian	CATP	
	Chengkawl luikam	Zohmun	CATP	
Aizawl FD				
	Lamchhip YMA Park	Aibawk	NFM	

	Thiak Zothei huan	Aibawk	NFM	
	Sihfa YMA Park	Saitual	NFM	
	Kaphleia Zothei huan, Tachhip	Aibawk	NFM	
	Phulmawi Zothei huan	Seling	NFM	
	Derhkentlang, Durtlang	Aizawl (Sadar)	NFM	
	Zemabawk YMA Park	Aizawl (Sadar)	NFM	

	Zawlpala thlan tlang, Phulpui	Aibawk	NFM	
	Bengbawm ram, Durtlang	Aizawl (Sadar)	CA	
	Phulraw pang, Maubuang	Aibawk	CATP	
	Sakawrhmutuai	Aizawl (Sadar)	CATP	
	Berawlui kam	Aizawl (Sadar)	CATP	
DCF (WL) Aizawl				
	Theichangbung Duty Camp hnuai, Pualreng WLS	Pualreng WLS, N. Hlimen	CA	

Khawzawl WLS FD				
	Chamdur ngaw phul, Murlen National Park	Rabung	CA	