
Chapter V

Catchment Area Treatment (CAT) Plans

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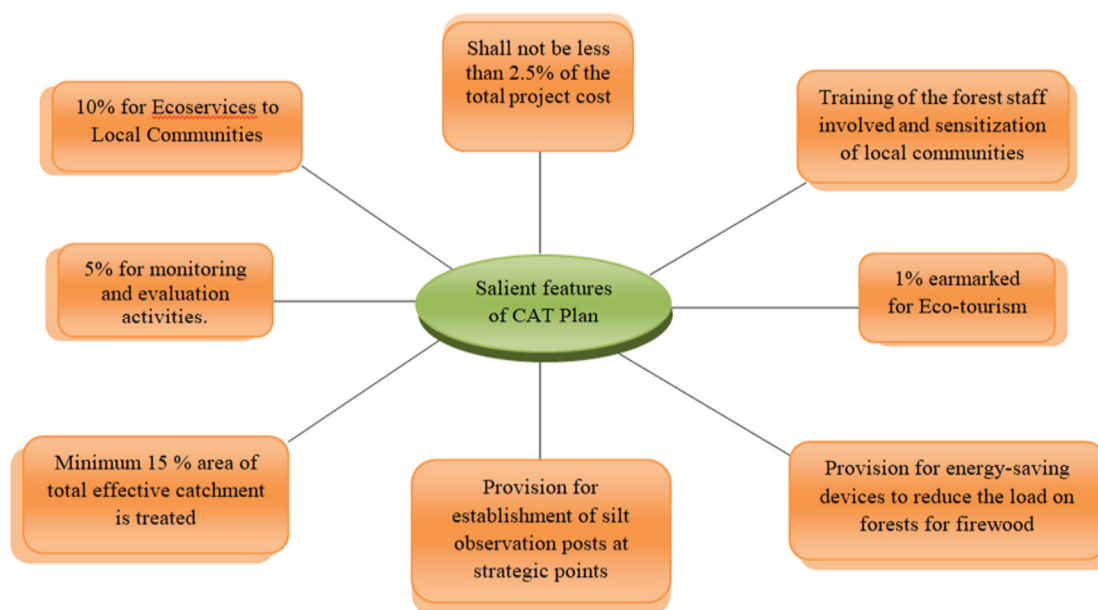
Catchment Area Treatment (CAT) Plans

5.1 CAT plans

In terms of Para 9.2 of the Handbook of Guidelines of FCA, a proposal for diversion of forest land for Irrigation/ Hydro-electric projects (HEPs) shall invariably be accompanied by a detailed CAT plan except in respect of small hydel projects (maximum up to 10 MW capacity), which are either canal head or run-of the river projects and do not involve impounding of water/submergence of forest land.

The CAT plan is an important and essential plan for enhancing and maintaining the ecological health of the catchment area of the proposed irrigation/ hydroelectric project through site-specific biological and engineering measures for conservation of soil and moisture and management of water regime. Among other provisions, the measures should focus on arresting soil erosion, improving effective drainage in the area and rejuvenation of the degraded eco system in the catchment. CAT plan shall be approved by the PCCF (HoFF), or any other officer authorised by him for the purpose.

Chart 5.1: Salient Features of CAT plans



Source: HP Forest Manual Vol. I

5.2 Status of CAT plans in the State

A list of 30 CAT plans operational in the State was provided by the Chief Executive Officer, HP State Authority in November 2021. The status of expenditure incurred there against was not supplied to Audit despite several reminders. It was stated that the information regarding the deposits and expenditure thereagainst has been called from the

field offices for reconciliation of figures related to funds deposited and expenditure incurred. This clearly indicates that the complete State-level information is not available with the Nodal officer. Non-availability/maintenance of centralised data of CAT plans at the Nodal Officer level shows lack of internal control and poor monitoring mechanism in the department.

5.3 Short recovery of funds under CAT plans due to poor monitoring

(i) The Additional Chief Secretary (Forests) to the Government of Himachal Pradesh notified (September 2009) that the CAT plan size should be based on the actual extent of works to be done in the catchment but shall not be less than 2.5 *per cent* of the total project cost. The CAT plan size would cover the outlay for all components/treatment measures, provisions for offsetting cost escalation, and other special provisions viz. Payments for Environmental Services (PES), Eco-Battalion, Monitoring & Evaluation, Eco-tourism etc. Total Project Cost shall be the cost of the project proposal mentioned in the Techno-Economic Clearance¹ (TEC).

Audit approached the Directorate of Energy, Government of Himachal Pradesh for the information about the HEPs in the state, as the Directorate is their controlling authority, and they provided a list of 25 HEPs. Audit scrutinised list of 25 projects and records of HP State CAMPA and noted that the project cost of HEPs as per revised Techno-Economic Clearance (TEC) increased substantially in 14 HEPs and in one case, the details were not available. The CAT plans were to be revised based on the increased project cost as per the revised TEC and additional funds demanded from the UAs. It was noticed that the Department was not aware of the increase in project cost of HEPs as per revised TEC and thus failed to demand additional funds from UAs as well as revise the CAT plans accordingly.

This resulted in non-realisation of additional funds to the extent of a minimum of ₹ 198.73 crore as detailed in **Appendix 5.1** in 14 HEPs from the UAs as well as loss of environment value in catchment due to non-revision of CAT plans.

The Department stated (September 2022) that the information regarding non-revision of CAT plans and deposit of funds was requisitioned from UAs and field offices and Audit will be apprised accordingly. The DFO Kullu also stated that the matter regarding deposit of additional amount of ₹ 16.90 crore (w.r.t. one UA) has been taken up with Allain Duhagan Hydro Power Ltd. (UA).

From the above, it is evident that despite there being huge financial implications, the Department was not even aware of the revision in the project cost of HEPs and failed to demand funds for revision of CAT plans accordingly.

(ii) As per FCA rules and notification (November 2001), proposals for diversion of forest land for HEPs shall invariably be accompanied by a detailed CAT plan. However, in respect of small hydel projects (maximum up to 10 MW capacity), which are either

¹ Techno Economic Clearance is granted to HEPs by Central Electricity Authority in case the project cost is above ₹ 1,000 crore and by Directorate of Energy below the above amount.

canal head or run-of the river projects without involving impounding of water/submergence of forest land, CAT plan will not be insisted upon.

Audit noticed that final approval for diversion of forest land for non-forest purpose was granted by MoEF&CC in favour of three UAs for construction of HEPs², whose installed capacity was less than 10 MW (at the time of grant of final approval) during the period January 2011 to June 2012. Scrutiny of information collected from the Directorate of Energy, GoHP revealed that the revised TEC in respect of above three HEPs was accorded by Director of Energy and the installed capacity of these HEPs increased to more than 10 MW subsequently (before commissioning of HEPs). However, the Forest Department was not aware of the increased capacity of these HEPs and consequently no effort was made for formulation of CAT plans. Further, funds to the extent of a minimum of ₹ 8.48 crore as detailed in **Appendix 5.2** in this regard were also not demanded from the UAs. This is a clear indication of absence of coordination between various authorities involved in the process of granting approvals for HEPs.

Non-formulation of CAT plans of HEPs having capacity more than 10 MW was contrary to the provisions of FCA and State Government notification and resulted in non-realisation of CAT plan funds to the above extent. Besides, environment loss in the catchment could also not be prevented due to non-preparation of CAT plans.

The Department stated (September 2022) that the information regarding non-formulation of CAT plans and deposit of funds was requisitioned from UAs and field offices and Audit would be apprised accordingly.

The reply is inadmissible as it is amply clear that the Department was not aware of the HEPs which increased their capacity to above 10 MW after obtaining final approval under FCA and consequently failed to demand funds and ensure formulation of CAT plans against these HEPs.

Further reply is awaited (February 2024).

5.4 Case study of Bajoli Holi CAT plan

In order to derive an assurance from the implementation of CAT plans, Audit selected one CAT plan for 360-degree analysis. For this purpose, Bajoli Holi Hydro Electric Project was selected for the study.

5.4.1 Introduction

Approval for diversion of 75.304 ha of forest area for implementation of 180 MW Bajoli Hydro Electric Project (HEP) in favour of GMR Bajoli Holi Hydro Pvt. Ltd. (UA) in Bharmour forest Division was granted by MoEFCC in October 2012.

² Raura HEP UA – M/S DLI Power (India) Pvt. Ltd. (eight MW Kinnaur Division TEC – ₹ 94.91 crore CAT plan cost @ 2.5 per cent of TEC - ₹ 2.37 crore); Rala HEP – M/S Taranda Hydro Power Ltd. (nine MW Kinnaur Division ₹ 95.79 crore CAT plan cost @ 2.5 per cent of TEC - ₹ 2.39 crore) and Kuwarsi HEP – M/S V B Hydro Projects Ltd. (five MW Bharmour Division TEC - ₹ 148.50 crore CAT plan cost @ 2.5 per cent of TEC - ₹ 3.71 crore).



Construction Site of GMR Bajoli Holi Hydro Power Pvt. Ltd.

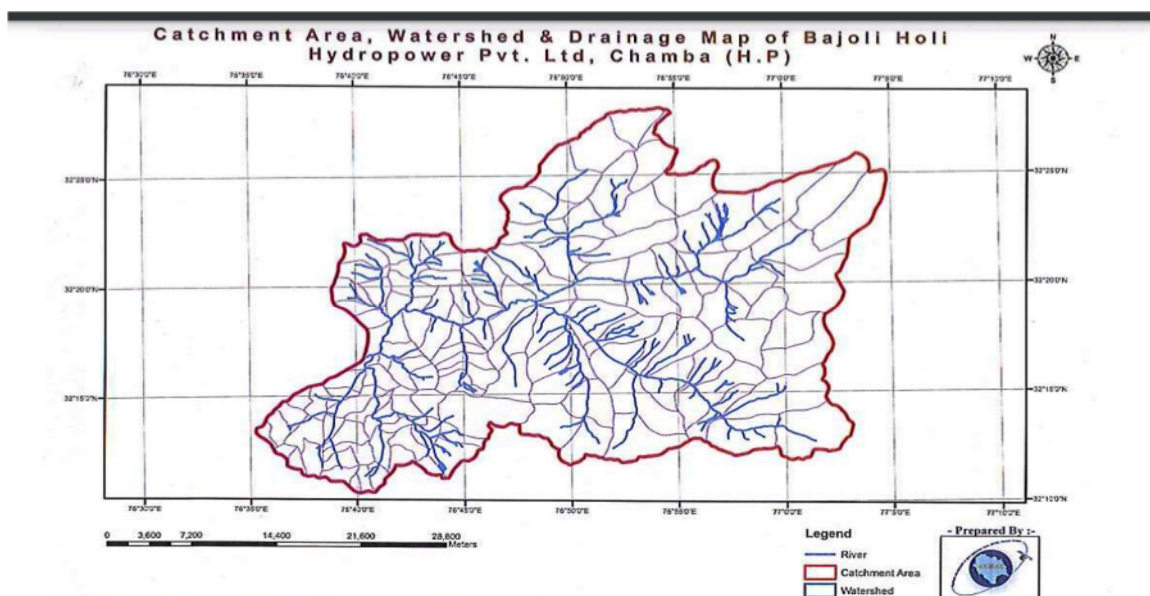
In accordance with the FCA rules and notification (November 2001), a detailed CAT plan costing ₹ 43 crore³ was prepared on the basis of site-specific requirements and the guidelines laid by the Forest Department. The CAT plan provides an account of degraded forest areas in the free drainage catchment of the project and suggests various measures for their treatment. The main objective of CAT plan is to mitigate and reduce various degradation processes, thereby minimising soil erosion in the free draining catchment of the proposed project in order to reduce silt in the Ravi river water. The plan also aims at treating and stabilising various degraded areas in the catchment with activities to reduce pressure on forests with active participation of human population dwelling in the area and undertaking biological and engineering treatment measures for prevention of soil erosion. It provides an insight into the quantum and variety of activities to be undertaken in the programme as per the proposed plan to prevent catchment degradation and soil erosion in the Ravi river basin. The physical and financial targets have been spread over a period of 11 years (2013-14 to 2024-25). A brief description of the project is given in **Table 5.1**.

Table 5.1: Details of CAT plan for detailed scrutiny

Name of CAT plan	GMR Bajoli Holi (180 MW)
District	Chamba
Division	Bharmour
River	Ravi
Catchment area	902 km ²
Amount of CAT plan	₹ 43 crore

Source: Bajoli Holi CAT plan

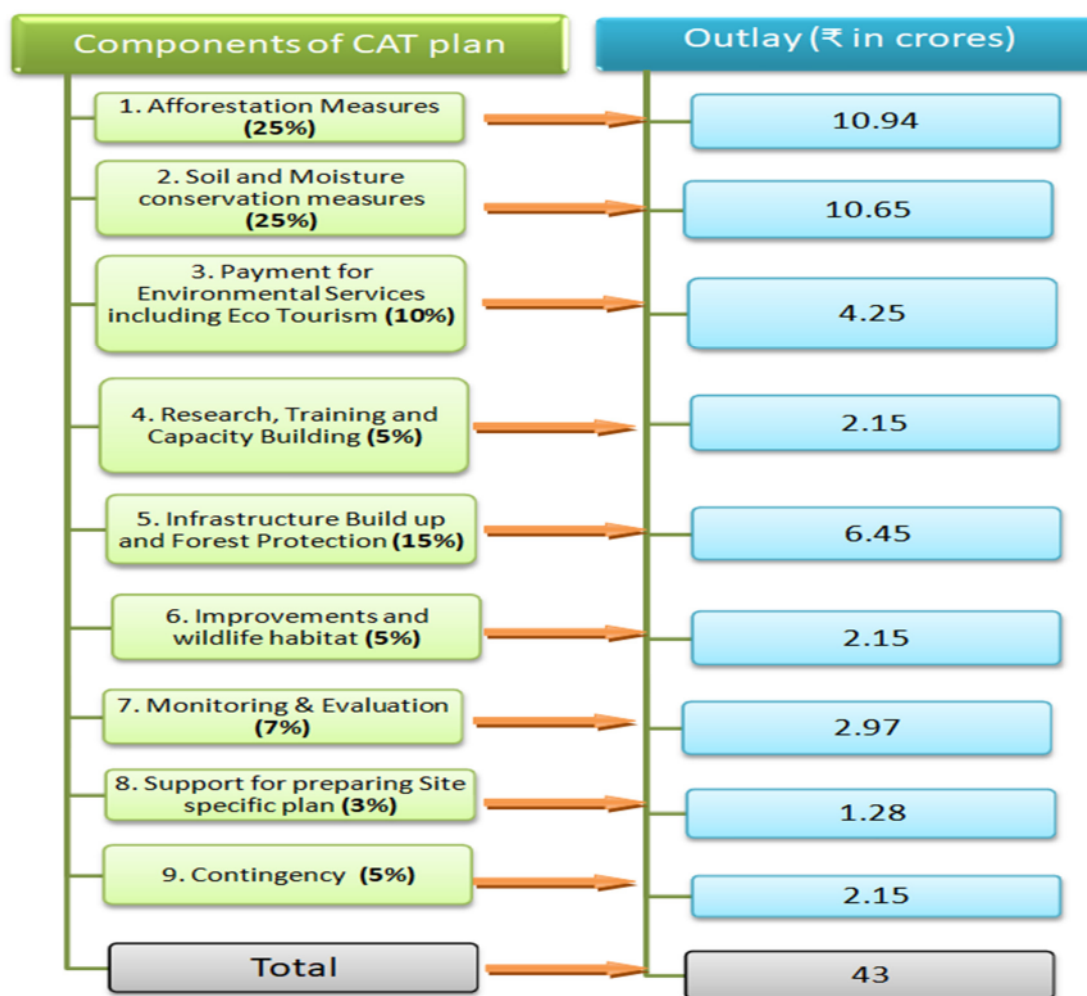
³ Total project cost was ₹ 1,693.93 crore and CAT plan @ 2.5 per cent of the total project cost amounting to ₹ 43 crore was prepared.



Source: Bajoli Holi CAT plan

5.4.2 Overview of CAT plan

Chart 5.2: Details of components of Bajoli Holi CAT plan



Source: Bajoli Holi CAT plan

5.4.3 Afforestation measures

A total amount of ₹ 10.94 crore as detailed in the **Table 5.2** was kept for afforestation measures. The following types of areas were proposed for afforestation:

- (i) Evergreen forest blank detected through remote sensing.
- (ii) Heavily grazed areas around habitations.
- (iii) Blank area fit for bringing in vegetation and draining directly in the vicinity of diversion dam storage.

Table 5.2: Details of projected expenditure

Sr. No.	Activities	Amount (₹ in lakh)
1	Afforestation & maintenance	496.16 ⁴
2	Energy plantation	270.30
3	Enrichment plantation & maintenance	88.75
4	Nursery development	89.30
5	Subsidy Silviculture	52.50
6	Pasture management	97.00
	Total	1,094.01

Source: Bajoli Holi CAT plan

5.4.3.1 Shortfalls in achievement of targets

As per the CAT plan physical and financial targets were fixed for each component, which were to be achieved as per the timeline prescribed in the CAT plan. As is evident from the following observations, there have been shortfalls in carrying out the targets stipulated in the CAT plans, thus defeating the very purpose of inclusion of these components in the CAT plans. Thus, the objectives envisaged in the CAT plans could not be achieved.

(i) Afforestation and Maintenance

Afforestation was to be done on 694 ha forest area w.e.f. 2nd year of the CAT plan implementation i.e., from 2014-15 and completed by 2017-18. A provision for maintenance of plantations for five years was made.

Scrutiny of records revealed that against the total target of afforestation of 694 hectares costing ₹ 3.41 crore to be completed by 2017-18, afforestation in only 349 hectares (50 per cent) had been done as of September 2021 at a cost of ₹ 1.83 crore (54 per cent). There was a shortfall of 345 hectares (50 per cent) in afforestation and an amount of ₹ 1.58 crore (46 per cent) was lying unutilised in CAMPA. Delay in carrying out afforestation resulted in additional requirement of funds to the tune of ₹ 3.29 crore⁵ to carry out plantation and maintenance in the balance area of 345 ha as a result of enhancement in the cost of plantation.

The DFO, while accepting the audit observation (November 2022), stated that the shortfall in plantations was due to shortage of field staff and the same would be achieved in due course of time.

⁴ Cost of plantation – ₹ 3.41 crore + cost of maintenance – ₹ 1.55 crore = Total cost of plantation and maintenance – ₹ 4.96 crore.

⁵ Cost of plantation – ₹ 2.24 crore and cost of maintenance – ₹ 1.05 crore.

The reply is not acceptable as the objective of carrying out of plantations within the stipulated period under the provisions of the CAT plan was not achieved, besides resulting in substantial cost escalation for carrying out balance plantations.

Further, specific sites were suggested and the location of the plantation was also indicated in the CAT plan. Deviation from these sites was to be done in case of absolutely necessary circumstances by the DFO after spot inspection.

Audit noticed that the plantations under the component were carried out at places which were not proposed under the CAT plan. No spot inspection was carried out by the DFO while effecting the change in areas which was contrary to the CAT plan provisions. The details of cases of deviation of plantation sites are detailed below in **Table 5.3**.

Table 5.3: Details of expenditure on afforestation

Name of component	Total area of plantation (in ha)	Plantation carried out (in ha)	Area in which deviation noticed (in ha)	Expenditure incurred (₹ in lakh)
Afforestation	694	349	112 (32)	67.92

Source: Bajoli Holi CAT plan and divisional records, Figure in bracket shows percentage

The DFO accepted (November 2022) the above audit observations.

(ii) Enrichment Plantation⁶

Enrichment plantation was to be carried out in a total of 270 ha⁷ of degraded forest area in the catchment area at a cost of ₹ 88.75 lakh (including five-year maintenance cost of ₹ 30.23 lakh). The plantations were to be carried out from 2015-16 and completed by 2018-19.

It was noticed that plantations in only 130 ha⁸ (48 *per cent*) were carried out at a cost of ₹ 58.31 lakh (65 *per cent*) as of September 2021. Besides, an expenditure of ₹ 12.67 lakh was incurred on the maintenance of the above plantations. Thus, due to incurring expenditure way over and above the norms prescribed under the CAT plan, only ₹ 17.77 lakh (20 *per cent*) are available under the component of enrichment plantation for carrying out the balance plantation in 140 ha (52 *per cent*). Further, for carrying out enrichment plantation and its maintenance in the remaining 140 ha at the norms of 2021-22, an additional amount of ₹ 1.08 crore⁹ would be required by the Department.

The DFO, while accepting the audit observation (November 2022), stated that the shortfall in plantations was due to shortage of field staff and the same would be achieved in due course of time.

⁶ Enrichment plantation is carried out in degraded forest area to increase stocking in already existing open forest and 800 plants per ha are planted under this component.

⁷ Block –Barabancho; four beats – Bajol (five areas – 80 ha), Nayagram (six areas – 110 ha), Yada (one area – 15 ha) and Surehi (three areas – 65 ha).

⁸ 2015-16 (Area – 30 ha, cost - ₹ 12.03 lakh); 2017-18 (Area – 20 ha, cost – ₹ 9.39 lakh); 2018-19 (Area – 10 ha, cost – ₹ 4.12 lakh); 2019-20 (Area – 45 ha, cost – ₹ 20.37 lakh and 2020-21 (Area – 25 ha, cost – ₹ 12.40 lakh).

⁹ Cost of plantation - ₹ 0.76 crore and cost of maintenance - ₹ 0.32 crore.

The reply is not acceptable as not carrying out of plantations within the stipulated period was contrary to the provisions of the CAT plan, besides resulting in substantial cost escalation for carrying out the balance plantations.

Audit also noticed that the plantations under the component were carried out at places which were not proposed under the CAT plan. No spot inspection was carried out by the DFO while effecting the change in areas which was contrary to the CAT plan provisions. The details of cases of deviation of plantation sites are detailed in **Table 5.4**.

Table 5.4: Details of expenditure on enrichment plantation

Name of component	Total area of plantation (in ha)	Plantation carried out (in ha)	Area in which deviation noticed (in ha)	Expenditure incurred (₹ in lakh)
Enrichment plantation	270	130	42 (32)	21.15

Source: Bajoli Holi CAT plan and divisional records, Figure in bracket shows percentage

The DFO accepted (November 2022) the above audit observations.

(iii) Energy Plantation

Energy plantations over 240 ha¹⁰ land in the vicinity of the habitations were to be carried out during the period 2014-15 to 2019-20 to fulfil the wood and fodder requirements of the local people at a total cost of ₹ 2.70 crore.

Audit noticed that energy plantation in only 12 ha area (five *per cent*) was carried out during 2020-21 at a cost of ₹ 7.08 lakh (three *per cent*). Thus, there was a shortfall of 228 ha (95 *per cent*) in respect of energy plantation and an amount of ₹ 2.63 crore (97 *per cent*) under the component was lying unutilised at the level of State CAMPA. Failure to carry out energy plantation was not only contrary to the provisions of the CAT plan, but also deprived the local people of wood and fodder requirements besides putting additional pressure on the surrounding forests.

The DFO, while accepting the audit observation (November 2022), stated that the plantations will be done in due course of time.

The reply is not acceptable as non-carrying out of energy plantations deprived the local population of the intended benefits proposed in the CAT plan.

Further reply is awaited (February 2024).

(iv) Nursery development

Six new nurseries in the project vicinity were to be developed and maintained under the CAT plan at a total cost of ₹ 89.30 lakh.

Audit noticed that an expenditure of ₹ 71.42 lakh was incurred during the period 2013-14 to 2020-21 under the component 'Nursery development'. However, none of the proposed six new nurseries was developed by the Department, which was irregular and contrary to the provisions of the CAT plan.

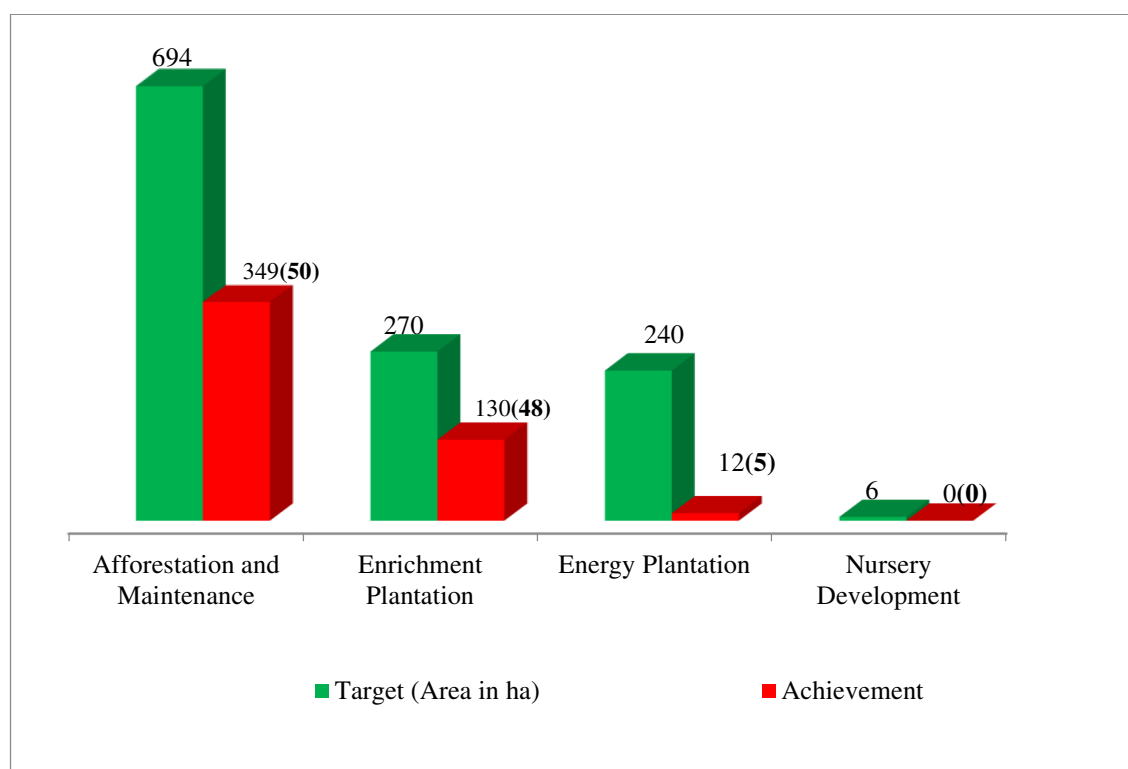
¹⁰ At 20 designated sites in the catchment.

The DFO, while accepting the audit observation, stated (November 2022) that new nurseries were not created as there were sufficient nurseries to supply the plants.

The reply is not acceptable as the provisions of CAT plan were not adhered to; besides the details of expenditure incurred on existing nurseries, though called for, was not supplied to Audit.

To summarise, the targets and achievements under the components – Afforestation and Maintenance, Enrichment plantation, Energy plantation and Nursery development are depicted in **Chart 5.3**.

Chart 5.3: Target vs. achievement



Source: Bajoli Holi CAT plan and divisional records; Figures in bracket show percentage

5.4.4 Non-conducting of study for Payment for Environmental services and excess allocation of funds for Eco-tourism

As per HP Government notification (September 2009), a provision of 10 *per cent* of the total CAT plan outlay is to be earmarked for Payment for Environmental Services (PES) to the local communities and one *per cent* of the CAT plan budget should be earmarked for Eco-tourism. The PES is a tool to incentivise the local communities for sustainable and environmentally friendly use of the catchment. The PES mechanism for the Bajoli Holi HEP catchment area was to be identified by conducting a study on the issue and identify the most appropriate routes and activities under PES. The study was to be carried out in the first two years of the project and was to be approved by the Forest Department before implementation. The actual implementation of the PES mechanisms, so identified by the approved study, was to begin from the 5th year of implementation of the CAT plan (i.e., from 2018-19). The interventions under the Eco-tourism head would also be defined

through the PES study. The CAT plan also highlighted the ecotourism potential in Barabanchho valley in the catchment area. A study was proposed to be carried out in the first two years of the project to assess the eco-tourism potential and requirements of the area and to suggest a modus operandi for operationalising eco-tourism. A total provision of ₹ 4.26 crore was earmarked for PES¹¹ and Eco-tourism.

Audit noticed that no study was conducted to identify the PES mechanisms suitable for Bajoli Holi HEP catchment area as well as to assess the eco-tourism potential and requirements of the area. The entire amount of ₹ one crore for conducting PES was lying unutilised with State CAMPA. It was further noticed that a provision of ₹ 3.25 crore was kept against Eco-tourism instead of ₹ 0.43 crore¹², which resulted in excess provision of ₹ 2.82 crore (655 *per cent*). An expenditure of ₹ 0.75 crore was incurred on eco-tourism, which resulted in excess expenditure of ₹ 32.81 lakh (76 *per cent*) over the stipulated allocation under the above component of CAT plan.

Further, the entire expenditure on eco-tourism was incurred on sites outside the Barabanchho valley. Thus, the Department not only failed to carry out any study to assess the eco-tourism potential in the above valley but instead incurred expenditure over and above the stipulated allocation on sites, which were outside the area identified under the CAT plan for development of Eco-tourism.

The DFO accepted the audit observation and stated that no studies on PES and eco-tourism were conducted. It was also stated that provision in excess of one *per cent* of the CAT plan under eco-tourism was made as the area had high potential for eco-tourism.

The reply is not acceptable as firstly no study was carried out to assess the potential of the valley highlighted in the CAT plan. Secondly, the eco-tourism activities were carried out outside the area identified in the CAT plan and excess expenditure over and above the fixed norms was incurred, which was contrary to the Government notification and prescriptions of the CAT plan.

Further reply is awaited (February 2024).

5.4.5 Research, Training & Capacity build-up

The Research, Training and Capacity build-up component has items such as General Awareness/Publicity, Training and Participatory Action Research.

5.4.5.1 General Awareness/ Publicity

Mass awareness and education programme in the project area villages is a must to reduce anthropogenic pressure. Activities like opening of biodiversity register in every village and promotion of traditional farming, advertisement of hazardous effect of fire through media, sign boards and public meetings are the important activities under this component. A provision of ₹ 66 lakh was kept for General Awareness and Publicity for the total period of implementation of the CAT plan with a lump-sum provision of ₹ six lakh per

¹¹ PES study - ₹ one crore and Eco tourism - ₹ 3.25 crore

¹² (One *per cent* funds of CAT – one *per cent* of ₹ 43 crore = ₹ 0.43 crore)

year against Biodiversity education, Community awareness, sign boards and public meetings.

It was noticed that the entire allocation under the component was utilised during the first three years of the plan period i.e., during 2013-14 to 2015-16 instead of carrying out the activities during the entire duration of the plan (₹ six lakh * 11 years) which was contrary to the provisions of the CAT plan. Further, the details of activities conducted including trainings were not provided to Audit, in the absence of which the authenticity of expenditure incurred under the component could not be verified.

Response from the Government is awaited (February 2024).

5.4.5.2 Non-imparting of Training to Forest Officers/ Officials and Community

A provision of ₹ 89 lakh for providing specialised training and study tours for forest officials/ officers, who are executing the plan was kept in the CAT plan. The objective of this training component was to provide training to the officers and the staff to augment their skills, professional knowledge, and capacity building to be effective and efficient. Training for staff was to be organised at the Forest Training Institutes of HP Forest Department by utilising services of resource persons from specialised institutions/ organisations in the field of soil and water conservation, Information Technology, Environment, Socio- economic issues etc.

It was noticed that an expenditure of only ₹ 1.00 lakh has been incurred under the component during 2020-21 and no training has been provided to field staff for effective and efficient implementation of the CAT plan even after a period of eight years.

The DFO accepted the audit observation.

5.4.5.3 Non-conducting of Participatory Action Research for Minimizing Negative Impact of Transhumance¹³

Chamba district is characterised by presence of transhumant groups¹⁴ viz.- *Gaddis* and *Gujjars*, due to the presence of high-altitude pastures. These groups follow a routine of moving from place to place with the change of season, in a customary usage pattern, with their flocks. Regulations on grazing lands, size of flocks permitted to graze in defined pastures, grazing rights, etc. are some of the problems frequently encountered in the area, relating to migratory grazers. For in-depth understanding of the real issues involved, Participatory Action Research was to be carried out to provide workable solutions to the problems. A provision of ₹ 60 lakh was made for undertaking Participatory Action Research (PAR) for minimising the negative impact of transhumance in the catchment and then implementing the good practices emerging out of this research. ₹ 10 lakh was to be expended on this purpose during the first year (i.e. 2013-14) and the balance ₹ 50 lakh was to be expended during the course of the remaining 10 years @ ₹ five lakh per year.

¹³ The action or practice of moving livestock from one grazing ground to another in a seasonal cycle, typically to lowlands in winter and highlands in summer.

¹⁴ Human groups practicing transhumance.

No effort was made to conduct PAR to minimise the negative impact of transhumance and the entire amount remained unutilised as of November 2022.

The DFO, while accepting the audit observation, stated (November 2022) that the research will be carried out in due course of time. The fact remains that no research has been carried out so far.

Further reply is awaited (February 2024).

5.4.6 Infrastructural build-up and forest protection

A total provision of ₹ 6.45 crore was made under the heads ‘Infrastructural build up’ and ‘forest protection measures’.

5.4.6.1 Non-carrying out of repair of boundary pillars

As per the CAT plan, the boundary pillars (BPs) of most of the DPFs¹⁵ were erected randomly. At some places there were rows of BPs, while at other places the BPs were too distantly placed. A plan was to be prepared for construction of large and intermediate BPs in all forests. All the BPs along the cultivation were to be taken due care of and constructed with used Railway graders with GPS reading. A sum of ₹ 64.00 lakh was kept under the component for the same.

It was noticed that against the proposed construction of 2,185 boundary pillars¹⁶ (RF¹⁷ – 150, DPF – 2,035) of the Division, no boundary pillars were constructed/maintained by the Department and the entire amount of ₹ 64.00 lakh was lying unutilised even after eight years which was contrary to the provisions of the CAT plan, besides making the forest area more prone to encroachments. This is also corroborated by the findings as a result of geo spatial studies carried out by the Aryabhata Geo-informatics & Space Application Centre (AGiSAC)¹⁸ as indicated in subsequent Chapter on Geo spatial studies.

The DFO stated (November 2022) that the repair of boundary pillars will be proposed in the new working plan which was being prepared in the Division. The fact remains that no boundary pillars have been repaired in the Division.

Further reply is awaited (February 2024).

5.4.6.2 Fire protection – Non-construction of fire lines

Where necessary, fire protection and control will be entrusted to village level user groups/SHGs¹⁹ and they would be incentivised by making suitable provision of monetary award for the work. Fire lines of length 39 km at a total cost of ₹ 58.50 lakh were to be created under the component. A provision of ₹ 74.34 lakh has been made for the first five years of the project under the component.

¹⁵ Demarcated Protected Forest

¹⁶ In four beats of Barabanchho block

¹⁷ Reserved forest

¹⁸ A Centre functioning under the aegis of Himachal Pradesh Council for Science Technology and Environment, Government of Himachal Pradesh.

¹⁹ Self Help Groups

Audit noticed that during the first five years of the plan (2013-14 to 2017-18), a sum of only ₹ 10.32 lakh was utilised under the component and ₹ 8.46 lakh was utilised during the subsequent three years (2018-19 to 2020-21). The balance funds of ₹ 55.56 lakh could not be used by the Department (September 2021) under the component though more than three years had lapsed since the proposed date of utilisation of funds. It was further noticed that even after incurring an expenditure of ₹ 18.78 lakh, not even a single km of fire line could be created in the block which was not only contrary to the provisions of the CAT plan but also points towards ill-preparedness of the Division in dealing with forest fires. The details of components/activities under which the expenditure of ₹ 18.78 lakh was incurred was not provided to Audit.

The DFO stated (November 2022) that provision for construction of fire lines will be made in the new working plan as per requirement. The fact remains that no fire lines as per the provisions of CAT plan have been constructed in the Division.

Further reply is awaited (February 2024).

5.4.6.3 Infrastructure development

A total provision of ₹ 6.45 crore was made under the following heads for forest protection measures.

(i) Irregular expenditure on buildings

Keeping in view the necessity of some more inspection huts and living quarters for field staff and the dilapidated condition of field staff huts and forest rest houses, a provision of ₹ 1.80 crore was kept for construction of new buildings and maintenance/furnishing of existing buildings.

Audit noticed that 26 buildings outside the CAT plan area were constructed/repared at a cost of ₹ 49.35 lakh instead of those which were proposed to be constructed in the catchment area in violation of the CAT plan prescriptions.

Response of the Government is awaited (February 2024).

(ii) Construction/repair of Roads, Paths and Bridges outside the catchment area

No motorable road would be constructed in the catchment area as it would lead to increased siltation. Only bridle paths, inspection paths and foot bridges shall be constructed/maintained for which an amount of ₹ 91.15 lakh was kept. No major road shall be constructed in the scheme.

It was noticed that 131 number of roads, paths and bridges outside the CAT plan area were constructed/repared at a cost of ₹ 1.31 crore instead of those which were proposed to be constructed in the catchment area, in violation of the CAT plan. Besides, an excess expenditure of ₹ 39.63 lakh was incurred under the component.

The DFO, while accepting the audit observation, stated (November 2022) that constructions were carried outside the CAT plan area keeping in view of needs and requirement of the local population. The reply is inadmissible as the constructions were to be carried out as per the prescriptions of CAT plan.

Further reply is awaited (February 2024).

(iii) Shortfall in operational support

For efficient management of forest resources, a budget provision of ₹ 117 lakh was made under the following components:

Table 5.5: Details of operational support expenditure

Sr. No	Description	Amount (₹ in lakh)
1	Field vehicle/ Inspection vehicles	41
2	Computers with printer and fax machine, photocopy machine, scanner etc.	18
3	GPS, Differential GPS	6
4	Misc. office furniture almirahs, file racks etc	5
5	Fire equipment	2
6	Binoculars, Digital Camera, Forest Book	5
7	R&M of vehicles and machinery for 5 years @ ₹ eight lakh per year	40
	Total	117

Source: Bajoli Holi CAT plan

Audit noticed that against the budget provision of ₹ 1.17 crore, an amount of ₹ 14.16 lakh has been expended as of September 2021. No inspection vehicle was purchased for field visits during the implementation of the plan. The details of expenditure of ₹ 14.16 lakh were not provided to Audit. Non-purchase of essential equipment may hamper the smooth operationalisation of the CAT plan.

The DFO accepted (November 2022) the audit observation.

(iv) Non-distribution of Energy Saving Devices

In order to address the monitoring problem of energy scarcity and its immediate adverse fall out on the forests, the local people were to be provided energy-efficient alternatives. Under the CAT plan, provision was made for distribution of energy saving devices to the BPL and weaker section families on a cost sharing pattern. Under this component, LPG connections, pressure cookers, fuel-efficient tandoors etc. were to be made available to the catchment dwellers, to reduce the pressure on the adjoining forest and to inculcate a culture of energy efficiency and environmentally friendly approaches. A provision of ₹ 50 lakh was made for the purpose.

Audit noticed that no effort was made to provide energy saving devices to the BPL families and weaker sections to the inhabitants of the catchment area and the entire amount of ₹ 50 lakh was lying unutilised in the CAMPA account even after eight years. Non-providing of energy saving devices defeated the purposes incorporated under the above component of the CAT plan as well as deprived the beneficiaries of the intended benefits.

The DFO stated (November 2022) that energy devices were not provided as there was no demand from the local population. The reply is not acceptable as no beneficiary survey to identify beneficiaries (catchment dwellers) was carried out by the Division.

Further reply is awaited (February 2024).

(v) Non-construction of Silt Observation Posts

Two silt observation locations for regular monitoring of silt load coming into tributaries of sub-watersheds falling under high and very high categories were proposed under the

CAT plan. The intention was to ensure monitoring of efficacy of implementation of various treatments measures suggested in the CAT plan. Monitoring would be undertaken for a period of five years and total provision under the component was ₹ 69 lakh. The entire setup of silt observation posts was to be completed by the year 2017-18. The project estimates as per the CAT plan are given below:

- a. Cost of two laboratories - ₹ 10 lakh for silt analysis per laboratory = ₹ 20 lakh
- b. One hut at each site (@ ₹ five lakh) = ₹ 10 lakh
- c. Cost of hiring services of persons (@ one person at each site) (Average salary - ₹ 0.10 lakh for the next five years) = ₹ 12 lakh
- d. Cost for hiring services of supervisor (one person for all the sites) (Average salary ₹ 0.15 lakh for next five years) = ₹ nine lakh
- e. Consumables for the measurement ₹ two lakh per year for next five years = ₹ 10 lakh
- f. Training and up gradation of Data Collection, Software & Maintenance of Automatic Silt Observatory = ₹ eight lakh.

Audit noticed that the Department failed to set up any silt observation posts as of September 2021 which resulted in non-monitoring of silt load coming into sub-watersheds and no data could be collected about the efficacy of various treatment measures prescribed in the CAT plan and their implementation.

The DFO, while accepting the audit observation, stated (November 2022) that silt observation posts will be constructed in due course of time. The reply is inadmissible as the fact is that no posts were constructed due to which monitoring of silt load and collection of data for efficacy of various treatments could not be carried out.

5.4.7 Non-carrying out of Monitoring and Evaluation

Under the CAT plan, Monitoring and Evaluation was to be developed as an in-built part of the project management for self-evaluation at specified intervals of time to ensure the field worthiness and efficacy of the CAT plan. The emphasis was to be on monitoring and impact studies of the works done under the CAT plan. This was to be done in the 6th year of the implementation of the CAT plan (i.e., 2018-19), in order to apply the findings/lessons learnt in the revision/ recasting of the CAT Action Plan in the remaining years. A provision of ₹ 2.97 crore was kept for monitoring and evaluation. Under this component, independent consultants or third-party evaluation was to be done to make Base Line Survey, Mid-Term Survey and end of project survey/evaluation to find out effectiveness of CAT plan activities in the catchment area.

Audit noticed that no monitoring and evaluation studies were carried out as of September 2021 for self-evaluation and mid-course correction and the entire amount remained unutilised with the State CAMPA.

The DFO stated (November 2022) that third party monitoring in the Division was carried out by Himalayan Forest Research Institute. The reply is not acceptable as the third-party

monitoring was to be done specifically to ensure efficacy of the CAT plan, whereas monitoring was carried out generally for the whole Division.

Further reply is awaited (February 2024).

5.5 Conclusion

The CAT plan is an important and essential plan for enhancing and maintaining the ecological health of the catchment area of the proposed irrigation/hydroelectric project. The data pertaining to operational CAT plans in the State in terms of funds due from UAs, funds actually deposited, and expenditure incurred there against was not maintained by the Department which shows lack of monitoring mechanism. The Department was also unaware of the changes in the HEP project cost and capacity after the grant of final approval and consequently failed to demand funds for revision/formulation of CAT plans, indicating a lack of coordination between various authorities involved in the approval process.

In respect of CAT plan Bajoli Holi, the Division failed to achieve targets under the various components of afforestation within the stipulated time period, which will result in considerable cost escalation in carrying out plantations in subsequent years. Further, plantation sites were changed without conducting site inspection. The Division did not conduct studies prescribed under the CAT plan. Excess expenditure was incurred on eco-tourism that too, outside the area proposed under the CAT plan without conducting any study. Important infrastructure works prescribed under CAT plan such as repair of boundary pillars, construction of fire lines, distribution of energy saving devices and construction of silt observation posts were not even started by the Division. Besides, no monitoring and evaluation of the CAT plan implementation was carried out.

5.6 Recommendations

The Department may consider:

- *Maintenance of a centralised database of CAT plans in the State in terms of funds due from UAs, funds actually deposited, and expenditure incurred there against for regular monitoring.*
- *Coordinating with other authorities to ensure monitoring of HEPs after grant of final approval to ascertain changes in project cost and capacity to ensure timely formulation/ revision of CAT plans.*
- *Regular monitoring and evaluation of CAT plans to ensure that the prescriptions of the CAT plans are followed strictly and within the stipulated time period.*