

Six Monthly Monitoring Report on
Compliance of conditions Stipulated in Environment Clearance of Parbati HEP-II

(April- 2022 to September-2022)

1	Name of the project	Parbati Hydroelectric Project Stage-II(800 MW)				
2	Type of the project	Hydroelectric project				
3	Clearance Letter(s) OM No. & Date	F. No. J-12011/34/2001-IA-I, dated 04.06.2001 No.8-77/96-FC, dated 04.09.2001 No.8-77/96-FC, dated 17.03.2004				
	a) Environment clearance					
	b) Forest clearance					
4	Locations	Kullu Himachal Pradesh Between 31°- 40’ and 32°-15’ N Between 77°-08’ and 77°-50’ E				
	a) District(s)					
	b) State(s)					
	c) Latitude					
	d) Longitude					
5	Address for Correspondence	Group General Manager, Parbati HEP-II, NHPC, Nagwain, Distt.-Mandi(HP), Pincode-175121 Tel. No.01905-287771, Fax No.01905-287772 Executive Director (Environment and Diversity Management), NHPC Office Complex, Sector-33, Faridabad-121003, (Haryana), Tele:0129-2278014				
	a) Address of concerned Project Head (pin code and Telephone/Fax numbers)					
	b) Address of concerned HOD in Corporate Office (with pin code and Telephone/Fax numbers)					
6	Details of Environment Management Plans	Enclosed as Annex-I.				
7	Break-up of the Project area(Land details)	Break-up of Total Land: 214.0608 ha				
	a) Submergence area (forest & non-forest)	a)Submergence area i) Forest land : 12.4776 ha ii) Non-Forest land : 03.8007 ha				
	b) Others	b) Others i) Forest land : 133.1431 ha ii) Non-forest land : 64.6394 ha				
8	Breakup of the project affected population with enumeration of those losing houses/ dwelling units only, agricultural land only, both dwelling units and agricultural land and land less laborers / artisans a) SC/ST/Tribals b) Others	Break-up details of total nos. of PAFs: 947				
		Type of PAFs	SC	ST	Others	Total
		Fully affected	123	02	314	439
		Partially affected	117	0	391	508
		Total	240	02	705	947
		(a) SC-240, ST-02 (b) Others-705				

9	Financial details	
	a) Project cost as originally planned and subsequent revised estimates and the years of price reference.	a) Rs 3919.59 Crores (at Dec.,2001 Price level)
	b) Actual expenditure incurred on the project so far.	b) Rs 10235.28Crore(Approx.) till Sep.,2022
	c) Allocations made for Environmental Management Plans.	c)Rs 105.74 Crores (as per Annex-I)
	d)Actual expenditure incurred on the environmental management plans so far.	d)Rs78.49 Crores till Sep,2022 (as per Annex-I).
10	Forest land requirements	
	a) Status of approval for diversion of forestland for non-forestry use.	(i) Initially, proposal for diversion of 87.795 ha of forestland was approved by MOEF vide letter dated 4.9.2001. (ii) Revised proposal for diversion of overall requirement of 145.6207 ha (87.795 ha + 57.8257 ha) of forestland was accorded by MOEF vide Letters dated 17.03.2004 (iii) In-principle approval for diversion of 0.354 ha was accorded vide letter dated 30.4.2008.
	b)The status of clear felling of trees in forestland.	8124 Nos. of trees have been felled by HP State Forest Corporation.
11	Status of construction	
	a) Date of commencement (actual and/ planned)	a)September, 2002 (Actual)
	b) Date of completion (actual or planned)	b)December, 2023 (Planned)
12	Reason for the delay if the project is yet to be started.	The Project is under construction.
13	Details of Site visits	Last Meeting held:
	a) By Monitoring committee	17 th meeting of Environment Monitoring Committee (EMC)was held on 29 th July 2022 at the Project.
	b) By Regional Office	Officials from Regional Office (MOEF&CC), Dehradun & IRO, Shimla also visited the project during EMC meeting held on 29 th July 2022 .
14	Brief Note on status of compliance of the conditions stipulated by MOEF	Enclosed as Annexure-II.

Budget allocation Vs expenditure incurred on Environment Management
Plan(EMP) of Parbati-II HEP (till Sep., 2022)

Annexure-I

S.No.	MANAGEMENT PLANS	ALLOCATED FUND (Rs in lakh)	EXPENDITURE (Rs in lakh)
1	Management Plan for biologically rich areas	1741.40	1617.00
2	Fisheries development	73.69	73.69
3	Creation of green belt around reservoir periphery	20.00	1.34
4	Landscaping and restoration of construction areas	185.00	0.47
5	Relocation and rehabilitation of dumping material	2190.64	488.33
6	Catchment Area Treatment Plan	2670.97	2669.26
7	Resettlement & Rehabilitation plan	250.00	304.93
8	Disaster Management Plan	296.00	—
9	Compensatory Afforestation Scheme	109.71	109.71
10	Cost of penal Compensatory afforestation	5.945	5.945
11	Condonation Cost	100.00	100.00
12	Economic Rehabilitation Plan	131.69	83.85
13	Public Health Delivery System	444.60	40.63
14	Payments to HP State Pollution Control Board etc.	254.35	331.27

ADDITIONAL CONDITIONS STIPULATED BY MoEF			
15	Conservation and habitat improvement of endangered species	2100.00	2000.00
16	Check post to regulate movement of forest produce	—	23.48
	Total(Rs in lakh)	10574	7849.91

Status on compliance of conditions stipulated in EC letter

Sr.No.	Conditions (Sl.No. 3, EC)	Status of Compliance
Specific Conditions-A		
i).	Upstream of Pulga dam site on the right bank, a stretch of conglomerate consisting of heterogeneous material exists. It is desirable that a facial treatment of the upstream site is given in this stretch. Provision of Phase treatment in this zone should be made so that stability of the slope is not disturbed. The project authorities have included such measures in that DPR. These should be adopted in toto.	The treatment work of Fossil valley has been completed.
ii).	A total network of 80.75 kms roads are to be constructed in dam complex, Sheelagarh complex, Power House complex. Care should be taken in the construction of roads in general and in Sheelagarh and JiwaNallah area in particular, as these are in the forest.	The construction of roads to various project sites have been completed and the same are under maintenance. Proper care was taken in construction of roads in forest area.
iii).	A socio-economic upliftment plan has been suggested in the EIA report for the people of Parbati and adjacent valleys. This plan should be followed.	<p>Against the budget allocation of Rs.131.69 Lakhs for Economic Rehabilitation Plan, developmental activities amounting to Rs 83.85 lakh have been executed so far. Details are as under:</p> <p>i) Rs. 42.80 Lakhs released to GM, DIC, Kullu, Distt. Kullu (HP) for weaving training of project affected people. 281 persons have been trained so far.</p> <p>ii) Rs. 4.66 Lakhs released to Dr. Y.S. Parmar Horticulture University, Bajoura, Distt.Kullu for farmers' training of project affected people.</p> <p>iii) Rs.2.40 Lakhs released to Kullu Distt. Animal Husbandry Deptt. for purchase of veterinary Medicines for the first year.</p> <p>iv) Rs.12.65 Lakhs released to GM, DIC,Kullu, Distt.Kullu (HP) for ITI training to project affected people. Total 64 candidates imparted ITI training.</p> <p>v) Rs.9.64 Lakhs spent on construction of 2 Nos. veterinary dispensaries.</p>

		<p>vi) Rs 2.64 Lakhs for distribution of 10000 Anar Plants and training programme for Project affected persons(PAPs) of Gram Panchayat Raila.</p> <p>vii) Rs 27,700/- for one day field/demonstration Programme on cultivation and distribution of Medicinal Plants at Manihar, Gram Panchayat Parli.</p> <p>viii) Rs 3,44,400/- for two day training Programme on Anar plants cultivation and for distribution of 15,000 Pomegranate (Anar) Plants for PAPs of Gram Panchayat Raila & Dhogi.</p> <p>ix)Rs. 21,950/- for one day training programme on “Scientific Management of Cattle for the project affected people of gram-panchayat Gadsa area.</p> <p>x) Rs 17,200/- for one day training program on Scientific Management of cattle for Project affected persons of Gram Panchayat- Raila”.</p> <p>xi) Rs 1,05,232/- for one day training program on “Cultivation of Anar Plantation for Project affected persons of gram-panchayat-Garsa” on dated 18.01.2019.</p> <p>xii) Rs 73,453/- one day training programme on Pomegranate(Anar) plantation and scientific management of cattle organized at village Ninu Gram Panchayat Jyeshtha on 29.01.2020.</p> <p>xiii) Rs1,15,368/- for one day training program on apple plantation and scientific management of cattle organized at Parli Gram Panchayat on 24.2.2021 & Gram Shilha on 02.03.2021.</p> <p>xiv) Rs 18750/- 250 nos. of Apple sapling distributed among villagers of Manihar Gram under Parli Panchatyat on 17.3.2021.</p> <p>xv) Rs. 1,81,837/- for one Day training programme on apple plantation and Scientific Management of cattle organized at Village Manihar, Parli Gram Panchayat on 22.02.2022 & Gram Shilha of Barshaini Gram Panchayat on 16.03.2022.</p> <p>Total expenditure = Rs. 83,84,890.00</p>
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iv).	<p>The natural ecosystems between Sheelagarh and Pancha Nallah and Sheelagarh and Manihar Nallah are critical areas of concern. The proposed road activities and trench weirs at both these sites are bound to degrade and disturb these natural ecosystems. To minimize damage to these ecosystems, measures proposed in the Environmental Management Plan (page 19-20) should be followed. Measures mentioned at Page (19-20) of EMP are :</p> <ul style="list-style-type: none"> i. Labourer population will be kept to a minimum to avoid crowding of the area, particularly in the regions in the vicinity of high biodiversity and animal and bird habitats. ii. The labour will be given a one-day orientation training, which will highlight the importance of the critical species of animals and plants and the consequences of bringing any harm to them. Strict penal action will be mentioned to them clearly in this workshop. iii. There will be strict monitoring of the labourers so that they do not indulge in harvesting, poaching or any kind of trade of these critical/endangered species. iv. The labourers will be strictly forbidden to enter the forest area and under no circumstances create any disturbance and necessary provision for fines and termination of labourer services will be enforced to ensure to be compliance. v. The temporary labourers colony will be constructed at Sheelagarh and no such colony will be allowed to come up between Sheelagarh and PanchaNallah. 	<ul style="list-style-type: none"> (i)Labour population has been kept to barest minimum to avoid crowding of the area. (ii)The labour has been thoroughly instructed regularly. (iii)Labour movement is strictly monitored by NHPC officials as well as by forest authorities. (iv)The restrictions are strictly followed. (v)No labour camp is in the forest area.
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	<p>vi. In order to prevent labourers venturing into the forest in search of fuel wood and fodder, necessary arrangements are to be made for providing them subsidized kerosene oil or fuel wood from the depots established for this purpose.</p> <p>vii. Efforts would be made with the help of local administration to ban opening of any roadsides kiosk, shop or any such joint, which will attract concentrated human population. The project authorities would ensure that these pristine habitats remain hands off areas for general public as far as any activity inside these habitats is concerned. Necessary regulatory mechanisms will be put in place to ensure the undisturbed nature of these ecosystems.</p> <p>viii. In case of geotechnical feasibility, it is proposed that wherever possible roads will be avoided and instead small distance tunnels would be constructed. In this manner a lot of disturbance and degradation will be avoided.</p>	<p>(vi)Free fuel supply has been made mandatory on the part of contractors to its workforce as per contract agreement. Lodging as well as boarding facilities are being provided by contractors thus avoiding any scope for any pressure on fuel wood. Details of expenditure incurred by major contractors under free fuel provision attached Annexure -II(a)</p> <p>(vii)No establishments are allowed to come up on the diverted forestland.</p> <p>(viii)This has been taken into consideration.</p>
v).	Noise level during construction should be kept to the minimum and no activity should be carried out at night as the project site is in the close vicinity of natural animal/bird habitats, such as Sheelagarh, Hurla and ManiharNallah where dense forest cover exists.	<p>The same condition has been modified to the extent mentioned below by MoEF vide letter No. J-12011/34/2001-1A-1 dated 21/03/2002.</p> <p><i>“No blasting activity should be carried out at night as the project site is in close vicinity of natural animal/bird habitats such as Sheelagarh, Hurla, Manihar Nallah where dense forest exists.”</i></p> <p>No blasting is done in the open areas during night. Due care is being taken by site-In-charge for implementation of the blasting operations for underground works also.</p>

vi).	No permanent human settlements should be allowed to come up beyond Kalga village in Parbati valley, as the Himalayan Black Bear frequents the area. Similarly, no human activities should be allowed beyond Sheelagarh, Manihar village and in PanchaNallah area.	No settlement is being allowed beyond project area.
vii).	For conservation and preservation of flora & fauna of Parbati valley a conservation cell should be created in accordance with the proposal given in the EMP (page 12-16)	Parvati Valley Conservation Cell (PVCC) has been constituted by GHNP authority vide letter dated 06.12.2017.
viii).	Under the economic rehabilitation plan for Pulga, Kalga, Tulga and Jhuni villages inter cropping system of fruit and non-fruit crop may be considered.	Under economic rehabilitation plan, the details of activities being taken up by the project have been given at condition point no.(iii)above.
ix).	The degraded catchment area shall be treated within 8 years from the start of the project at a cost of Rs. 2569.22. 980 ha has been proposed for biological measures and 2700 ha. for engineering measures in addition 800 Rmts. diversion drains, 2500 retaining walls 600 vegetative spurs will be provided.	<p>An amount of Rs. 2669.26 Lakhs has already been released to HP State Forest Department towards the CAT Plan and in the form of equipment under Additional CAT Plan.</p> <p>Out of total fund deposited for CAT works, progress report of works amounting to Rs.1381.11 Lakhs has been submitted so far by State Forest Deptt.</p> <p>DFO,Parvati Forest Division was requested vide letter dated 22.7.2020 to expedite balance CAT works and submit physical and financial progress after compiling expenditure of works done by all forest divisions. It was also requested to submit Geotagged maps of CA area and complete the balance works as per EC letter.</p> <p>Further, DFO, Parvati Forest Division was requested vide letter dated 28.8.2020 to complete the implementation of CAT Plan well before the onset of operation phase of Project. It was also requested vide letter dated 09.4.2021 & 15.6.2021 to expedite the balance CAT/CA works and submit the physical and financial progress to project.</p> <p>Moreover, DFO, Parvati Forest Division vide letter dated 08.09.2021 was requested to implement protection work in Jigrai Nalla and expedite the</p>

		<p>balance CAT & CA works. The same has been discussed in detail with DFO, Parvati Forest Division, Shamshi on various occasions and he assured to Project for implementation of the same as per available resources.</p> <p>PCCF (HoFF), Shimla, GoHP has been requested vide letter dated 26.09.2022 for implementation of complete CAT plan before completion of project.</p>
	Part-B, General Conditions	
i)	Adequate free fuel arrangement should be made to the labour force engaged in the construction work at the project cost so that indiscriminate felling of trees is prevented. Fuel depot should be open at the site to provide the fuel (Kerosene/wood etc.).	Contractors are required to make adequate fuel arrangements as per the contract agreement. Details of Nos. of labourers, free fuel provided and amount spent are given at Annexure- II(a)
ii)	Medical facilities as well as recreational facilities should be provided to the labourers. All the labourers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing them work permit.	These facilities are being provided by NHPC as well as by all the major contractors. Details are attached as Annexure – II(b) & II(c) , respectively.
iii)	Restoration of construction area including dumping sites of excavated materials at dam site should be ensured by leveling, filling up of burrow pits, landscaping etc. the area should be properly afforested with suitable plantation.	<p>Construction of Project was started in September 2002 and construction work at various locations is still in progress.</p> <p>For the filled up dumping sites, slope stabilization has been undertaken by providing intermediate gabions. Thereafter, necessary afforestation/rehabilitation measures have been implemented at 11 Nos. of closed dumping sites in collaboration with a CSIR Institute named 'Institute of Himalayan Bio-resource Technology, Palampur (Himachal Pradesh). Out of the 11 Nos. of closed dumping sites, 06 dumping sites have been handed over back to the State Forest Deptt.</p> <p>The restoration work of DS-15 has been awarded to State Forest Deptt. DFO,Parvati Forest Division,Shamshi) vide letter dated 01.10.2019 at a total cost of Rs 50.11 Lakh. Restoration work is under progress and DFO has submitted utilization certificate (UC) of fund received from Project through 1st & 2nd installments. The payment for 3rd installment has been</p>

		made to DFO, Parvati Forest Division on 9.4.2021 and restoration work is under progress.
iv)	Downstream of dam, flood-zoning approach should be done. No settlement should be allowed in flood zone.	No settlement has been allowed on the River/Nallah banks. This is also being monitored by District Administration as well as Forest Department. In this context, a letter was also written to Dy. Commissioner Kullu Distt. Kullu (HP) vide No.NH/PHEP-II/GM/06/3620-21 dated 17/10/06, vide which it was requested not to allow people to establish permanent settlements Downstream of Pulga dam site. Caution signboards have been displayed on the banks of Parvati river and main Nallas.
v)	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, at Chandigarh for review.	<p>Six monthly report was regularly submitted to the Ministry and its Regional Office (Dehradun) till May, 2021. Since November, 2021, Six monthly Report is being submitted to Integrated Regional Office, MOEF&CC, Shimla alongwith MOEF&CC, New Delhi.</p> <p>The last six monthly report was submitted vide letter NH/Env &DM/75/64 dated 30.05.2022 as an attachment of e-mail sent to IRO-Shimla (email ID iro.shimla-mefcc@gov.in) and MOEF&CC, Delhi (e Mail ID: yogendra78@nic.in)</p>
4.	Officials of the Regional Office MoEF, Chandigarh would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by project proponents during their inspection.	<p>Periodic inspections are being done by Regional Office, MoEF&CC.</p> <p>On 29/07/2022, the 17th meeting of Environment Monitoring Committee was held at Project wherein the representative of R.O, MOEF&CC Dr K. Mondal, Deputy Director, IRO, MoEF&CC, Dehradun and Dr Anup Kumar Das, Scientist B, IRO, MoEF&CC, Shimla have also participated.</p>
5.	The responsibility of implementation of environmental safeguards rests fully with the National Hydroelectric Power Corporation Ltd.	Environmental safeguards are being implemented.
6.	Incase of change in scope of project, project would require fresh appraisal.	There is no change in the scope of the project.

Annexure – II(a)**Details of expenditure incurred by Major Contractors under Free Fuel Provision**

(From April-2022 to Sep-2022).

Sr. No.	Name of the Contractors	Nos. of Labourers engaged	Expenditure under free fuel provisions (Rs.)
1	M/s Gammon CMC Joint Venture (HRT)	254	Rs 470856.00
2	M/s Gammon Eng. & Contractors Pvt. Ltd (Adit-I Shilah)	216	Rs 389931.00
3	M/S Patel Engineering	32*	Rs 280300.00

*Average per month

Annexure-II (b)**Details of Medical Facilities available at Parbati HE Project Stage-II (NHPC)**

(From April-2022 to Sep-2022).

1. **Dispensaries:** at Nagwain, Garsa, Sainj and Manikaran.
2. Details of Medical and Para-medical Staff:-
 - i. Chief Medical Officer : 02
 - ii. Sr. Deputy Chief Medical Officer : 01
 - iii. Pharmacist : 01
 - iv. Staff Nurses : 01
 - v. Dresser : 01
 - vi. Attendant(Hospital) : 02
3. **Other facilities available:**
ECG, Nebulizer, Oxygen cylinder, S/E Machine, Oxygen concentrator at each location
4. **Ambulances** with drivers are provided at Nagwain & Sainj.
5. Medical facilities are being provided to local people in Project Dispensaries by consultation & providing medicines, details of which for the period Apr to Sep.,2022 are as under:

Month	Nagwain	Sainj	Garsa	Manikaran	Total
Apr., 2022	42	13	13	14	82
May, 2022	56	16	14	05	91
June, 2022	61	16	16	16	109
July, 2022	51	59	17	06	133
Aug., 2022	48	29	28	09	114
Sep., 2022	37	59	19	07	122
Total					651

6. Four nos. of Covid-19 vaccination camps at various sites of project were organized to facilitate vaccination for covid-19 for regular employees and contact workers. Blood donation camp held on 19.10.2022 at Nagwain project hospital. 02 first aid & CPR training camp at TBM & power house organized. Free distribution of mask, gloves and sanitizer under prevention & control of Covid-19. Regular sanitization of all sites of the project has also been done.
7. In addition, medical facilities are also being provided to project affected people at Sainj, Garsa, Manikaran valley through SAHARA NGO in collaboration with CMO,Kullu under the Public Health Delivery System of EMP.
8. Bio Medical Waste Management is done through outsources agency Enviro-Engineers, Shimla.

Annexure-II(c)

Details of Medical Facilities provided by Major Contractors to their labourers (Parbati-II)

(From April-2022 to Sep-2022).

1. M/s Gammon CMC Joint venture(Shilgarh): The following medical facility is being provided:

- a. Dispensary 02 nos. (at Thella and Sheelagarh)
- b. Ambulance 02 nos. (at Thella and Sheelagarh)
- c. OT (at Sheelagarh)
- d. Surgical Kit at Sheelagarh
- e. Complete First Aid Kit (at Thella and Sheelagarh)
- f. Oxygen cylinder 03 nos. (at Thella and Sheelagarh)
- g. Doctor-01
- h. Pharmacists-03 (01 at Thella and 02 at Sheelagarh)

2. M/s Gammon Engineers and Contractors Pvt. Ltd(Shilha): The following medical facility is being provided.

- a) Dispensary -01 at Adit 1 Shilha
- b) Ambulance-01 at Adit 1 Shilha)
- c) Surgical Kit at Adit 1 Shilha
- d) Complete first Aid Kit at Adit 1 Shilha
- e) 02 Pharmacist at Adit 1 Shilha

3. M/s Patel Engineering: Adequate medical facility has been provided to the staff and workers at Barshaini site.

- One full-fledged first aid center at the site and providing free medicines to staff and workers.
- One ambulance is at disposal round the clock.
- Two medical staffs are engaged at first aid center.
- One MMBS doctor is engaged from Private hospital for visiting the site on weekly basis for medical checkup of staff and workers.

- Details of monthly expenditure incurred on medicines from 01.04.2022 to 30.09.2022 are as under:

S. No.	Month	Expenditure (Rs.)
1.	Apr., 2022	3300.00
2.	May, 2022	2700.00
3.	June, 2022	3000.00
4.	July, 2022	2800.00
5.	Aug., 2022	3000.00
6.	Sep., 2022	3800.00
Total		18600.00
