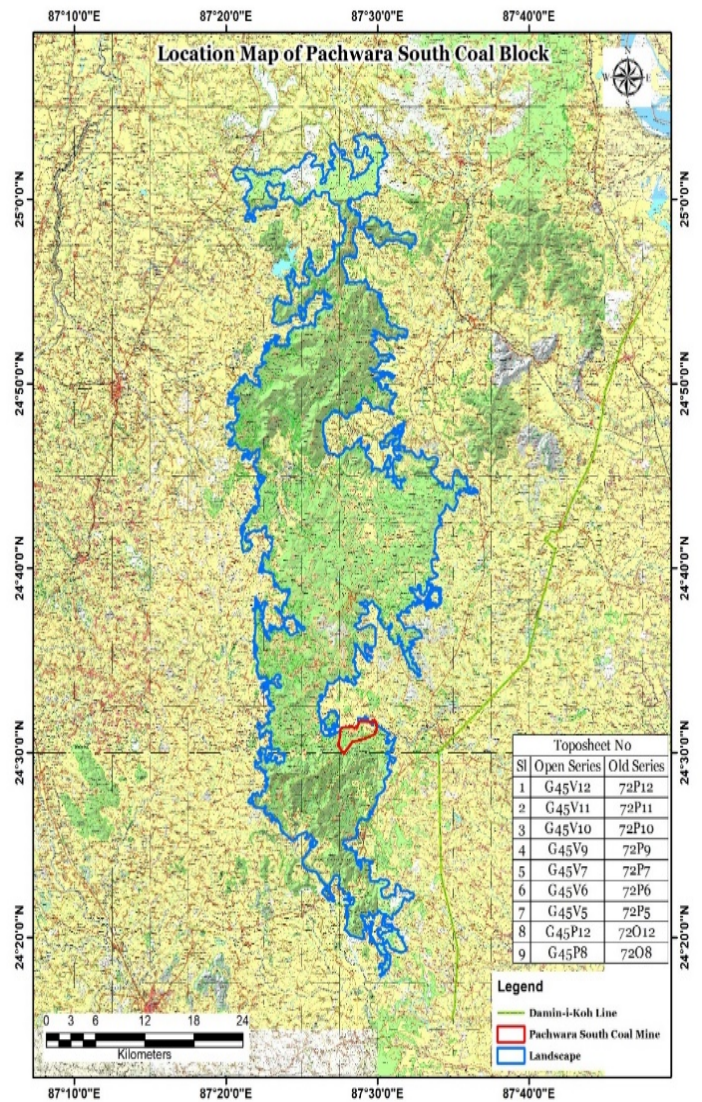


SPECIFIC RECOMMENDATIONS

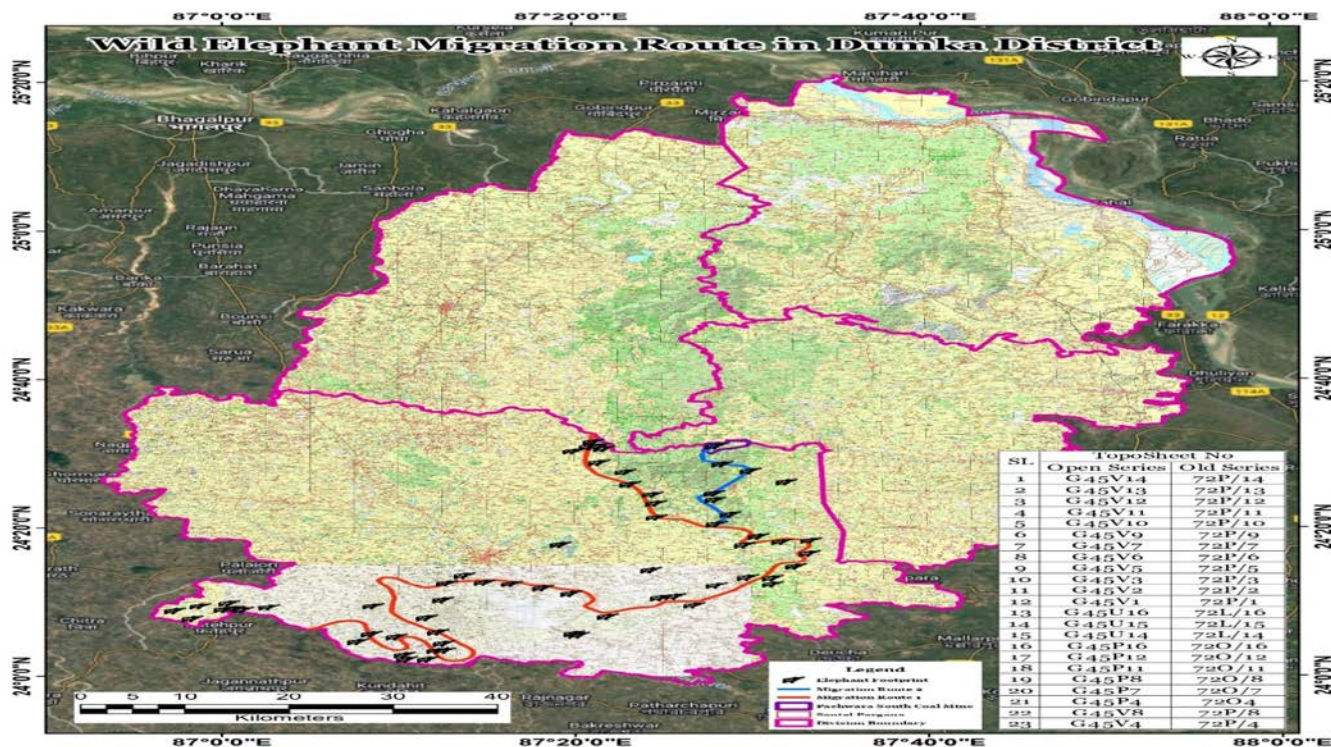
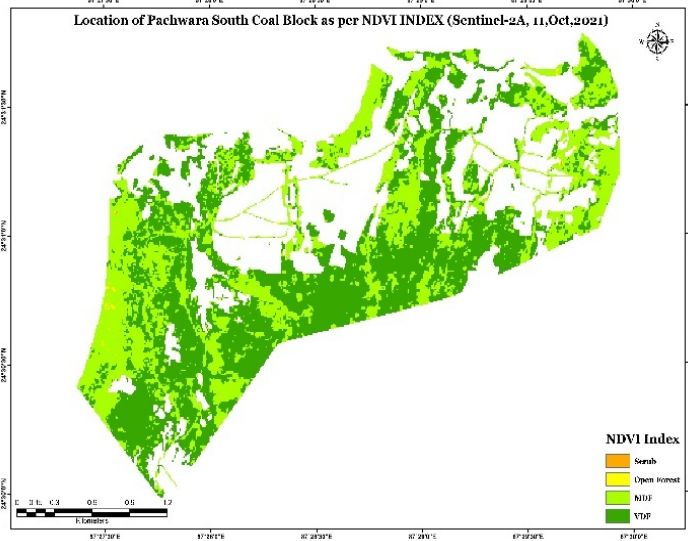
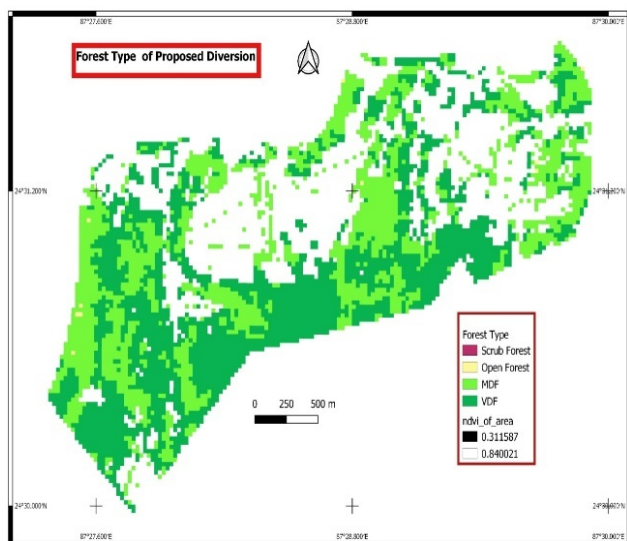
Pachwara South Coal Block of m/s Neyveli Uttar Pradesh Power Ltd. (NUPPL) - 455.1108 Ha.

Proposal No: FP/JH/MIN/59823/2020

The proposed Pachwara South Coal Block Mining Project is situated in one of the important landscapes of the Santhal Pargana region in the state of Jharkhand. The majority of the area in this landscape is a vast tract of the contiguous notified forest situated within the Damin-i-Koh estate (meaning the Skirt of Hills) and is spread over approximately 900 sq. km. area in Dumka, Godda, Pakur & Sahibganj districts of Jharkhand. The landscape is significant in terms of ecological and hydrological functions since it is an important habitat for wildlife (including habitat for wild elephants), and also the migratory route for wild Elephants. Besides, it is an ecologically significant watershed that is interlaced with numerous streams, rivulets, and nalas that drain into perennial rivers such as Bansloi, Lada & Gubani. Thus, the landscape is important from the Water Security perspective as well. (General overview of the landscape is depicted in the map below.)



The forest diversion site proposed is spread in 03 Mouzas namely *Chirudih, Kundapahari, Mahuldabar* in the Gopikander administrative block of Dumka District. The proposed Pachwara South Coal Block Project is spread over 714.8553 Ha. comprising 455.1108 Ha. of notified forest area and 259.7445 Ha. of non-forest area. The proposed area is at the intersection of the old reserved forest block (situated towards the southern limit of the 'Damin-i Koh') and the Bansloi River (which essentially separates existing Pachwara Central & Pachwara North blocks projects in Pakur district from the proposed Pachwara South Block in Dumka District). Thus, the advent of open cast mining in the Dumka Forest Division shall further enhance the ecological degradation of the already fragile landscape. Further, the proposed diversion site is situated within an upland tract of the central ridge at the intersection of the Gopikandar & Kathikund Forests (biggest forest block, the Old Reserve Block) with the Sundarpahari Forests (of Godda Forest Division) and Aamrapara Forest (of Pakur Forest Division) on the confluence of Bansloi River (as depicted in the map) is very rich in terms of biodiversity both flora and fauna. The proposed area has dense Tropical Dry Deciduous Forest vegetation with an average canopy density of approximately 0.7 (Very Dense Forest) with Site Quality III, having a predominance of *Shorea robusta*/Sal and its associates. The tree enumeration of 90228 Trees in the proposed forest area of the diversion site depicts a large pool of Carbon Stock in Gopikandar/Kathikund Forests along with an ecologically significant tract of Forest.



By thoroughly analyzing the cost-benefit analysis of the project vis-a-vis the landscape dynamics, to balance the trade-off between ecological security and energy security while ensuring that both the interests go hand in hand in a sustainable manner, the proposal submitted by NEYVELI UTTAR PRADESH POWER LIMITED (NUPPL) for the diversion of 455.1108 Ha. Forest land under Forest Conservation Act, 1980 for the Coal Mining may be recommended in the larger public interest with the following specific conditions:-

Opencast mining operation shall undermine the functional capacity of the Bansloi river and also cause irrevocable damage to the riverine ecosystem. Since the water availability in Bansloi is enhanced only by the perennial streams arising from the forests of the area, due to the advent of open cast mining many perennial streams arising from the central ridge of the old reserve block, will be compromised in entirety. Hence, a ***Comprehensive Bansloi Catchment Area Treatment Plan*** from the perspective of *Water Security, Ecological Restoration, Post-Reclamation*, must be prepared and implemented to mitigate the adverse impacts of open cast mining. Since more mines would come up in the future leading to cluster mining in the area, thus *post-reclamation* on the principle of restoration of entire habitat apart from restoration of soil must be an integral component of the CAT Plan. *Ecological Restoration too* must also be taken into consideration for maintaining the landscape integrity of the existing forest tract. As a crucial component of the *Bansloi CAT plan*, the Bansloi River should be further protected by identifying and developing dense multirow plantations of indigenous species up to 250 meters on both side of the river across the entire stretch to prevent adverse impacts of sediment deposition and congestion of streams due to overburden dump and opencast mining operations. The preparation of the *Bansloi CAT Plan* must commence well before the commencement of mining operations.

2. The open-cast mining and associated activities will also cause serious problems of land degradation, dust generation, and cause deterioration in the environmental quality. Besides, it would involve activities like breaking of land and removal of the earth in the area and beyond, thus the entire landscape will be vulnerable to soil erosion and sedimentation. Therefore, a ***Comprehensive Soil and Moisture Conservation Plan*** should be prepared and implemented treating the entire landscape to ensure that the detrimental impact of opencast coal mining on the adjacent vast expanse of forests shall be minimized
3. The Forest area proposed for diversion is having a canopy density of approximately 0.7 and also that it is rich in species composition, thus efforts should be made to preserve the germplasm of the area by conducting proper *biodiversity studies and ethnobotanical research* before initiating

mining activities and specific guidelines towards the eco-restoration plan, biodiversity conservation plan, and reclamation plan may be issued precociously.

4. The Forest area proposed for diversion is situated within the Elephant Migration route along the contiguous landscape of Damin-i-Koh from Gopikandar & Kathikund Forests (biggest forest block, the Old Reserve Block) to the Sundarpahri Forests (of Godda Forest Division) and Amrapara Forest (of Pakur Forest Division) at the confluence of Bansloi River. The proposed diversion shall be causing hindrance to the free movement of elephants from one forest tract to another. The advent of Open Cast Mining would not only further disturb the ecological stability and landscape continuity but also lead to the dissection of contiguous patches. Thus, there should be adequate measures to safeguard the traditional migration route of wild elephants. In order to minimize man-animal conflict in general and man-elephant conflict in particular, along with furthering the cause of conservation of elephant and its associated habitat, while maintaining the structural and functional integrity of the eco-system, it is very much necessary to protect the precious habitat from fragmentation, degradation, and destruction. Hence a ***Comprehensive Integrated Wildlife Management Plan***, to mitigate the conservation concerns due to the dissection of contiguous habitat patches is recommended.
5. Looking into the significant role of the area in terms of richness of biodiversity both in flora and fauna, and the occurrence of ecologically significant habitat, further it is recommended that there should be a study concerning *Wildlife Habitat Vulnerability & Ecological Habitat Restoration* by the *Wildlife Institute of India* before the commencement of Open Cast Mining Operations.
6. Besides, it is also recommended that a significant share (at least one-third) of Corporate Social Responsibility (CSR) / Community Development funds should be earmarked for *Environmental Restoration and Habitat Development*.
7. Diversion of forest land for open cast mining activities threaten the ecological balance of the area and causes irreparable damage to the local forest biodiversity thus greatly affecting the indigenous tribe dependent on the forest for minor forest produce/ non timber forest produce and forest-based livelihood. A ***livelihood security plan*** for the future of the indigenous community should also be prepared and adhered to.
8. Institutionalise a ***Concurrent Monitoring and Evaluation Cell*** with "Subject Matter Specialists / Technical Experts " to monitor the implementation of the ***compensating mitigation measures*** in the Pachwara South Coal Block Open Cast Mining Project -:
 - ***Comprehensive Integrated Wildlife Management Plan***
 - ***Comprehensive Bansloi Catchment Area Treatment Plan***
 - ***Comprehensive Soil and Moisture Conservation Plan***
 - while evaluating various studies to be conducted in the area specifically concerning *Wildlife Habitat Vulnerability & Ecological Habitat Restoration, biodiversity studies and ethnobotanical research, soil erosion & land reclamation, water conservation, surface carbon & carbon stock depletion, integrated valuation of ecosystem services*, and other activities proposed by the MoEF&CC from time to time.

The ***Concurrent Monitoring and Evaluation Cell*** would be submitting the reports to the Jharkhand Forest Department. The entire cost for the study, monitoring, and logistics should be borne by the user agency.


Divisional Forest Officer,
Dumka Forest Division, Dumka.