

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA**



ORIGINAL APPLICATION No. 74/2017

IN THE MATTER OF:

Tai Maya.....Applicants(s)

Versus

Union of India & Ors.....Respondents(s)

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Respondent No.4

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA**

ORIGINAL APPLICATION No. 74/2017



IN THE MATTER OF:

Tai Maya.....Applicants(s)

Versus

Union of India & Ors.....Respondents(s)

**AFFIDAVIT ON BEHALF OF RESPONDENT NO. 4, ARUNACHAL PRADESH STATE
POLLUTION CONTROL BOARD IN COMPLIANCE OF ORDER DATED 04.03.2025.**

1. I, Smt. Koj Rinya, IFS daughter of Late Koj Tajang, aged about 45 years working as Member Secretary, Arunachal Pradesh State Pollution Control Board, and am duly authorized by competent authority to make this reply on behalf of the Respondent No-4, Arunachal Pradesh State Pollution Control Board, and here by solemnly state and affirm as follows :-
2. That I have gone through the order dated 04.03.2025 passed by Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata and understood the contents there in. I have been duly authorized by the competent authority to swear this affidavit on behalf of Respondent No-04. Further, it is stated that I have gone through the relevant files and records.
3. The present Affidavit is being filed in pursuance and compliance of the direction issued by Hon'ble Tribunal in its order dated 04.03.2025 whereby, the replies are as below:

Reply on Merits:

<p>Pagee No.14(5)</p>	:	<p>1) The Joint Committee constituted by the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata held a meeting on 14th & 16th May, 2025 to decide upon the final Environmental Compensation Charges to be levied against the Respondent No.6, NHIDCL. The Environmental Compensation Charges is as per Central Pollution Control Board guidelines.</p>
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**Member Secretary
APSPCB, Nlg.**

**Executive Magistrate
Law, Legislative & Justice Deptt.
Civil Secretariat, Itanagar
Arunachal Pradesh**



2) The Environmental Compensation Charges of Rs.5,10,18,750/- (Rupees Five Crores Ten Lakhs Eighteen Thousand Seven Hundred Fifty only) shall be levied against Respondent No.6, NHIDCL as per Hon'ble NGT, Eastern Zone Bench, Kolkata order dated 04.03.2025 at Page 13.

Copy of the minutes of the meeting of Joint Committee held on 14th & 16th May, 2025 is marked and annexed as **ANNEXURE-A**.

Copy of the Environmental Compensation Charges determined by the Joint Committee is marked and annexed as **ANNEXURE-B**.

3) The Respondent No.6, NHIDCL has been levied Environmental Compensation Charges of Rs.5,10,18,750/- (Rupees Five Crores Ten Lakhs Eighteen Thousand Seven Hundred Fifty only)/. The copy of the letter is marked and enclosed herewith as **ANNEXURE-C**.

4) The Joint Committee approved the mitigation plan submitted by the CCF, Central Arunachal Circle, Pasighat for the stretch of Akajan-Likabali-Bam Road with a total cost of Rs.6.40 Crore (This is after deduction of amount meant for compensation of farmers for affected agricultural land, WRC field etc) for Along Forest Division and Likabali Forest Division. The mitigation plan submitted by CCF, Central Arunachal Circle, Pasighat is marked and enclosed herewith as **ANNEXURE-D**.

That the statements made in forgoing paragraphs are true to the best of my knowledge and belief.


Executive Magistrate
Law, Legislative & Justice Deptt
Civil Secretariat, Itanagar
Arunachal Pradesh


Member Secretary
Arunachal Pradesh SPCB

**Member Secretary
APSPCB, Nlg.**



19th

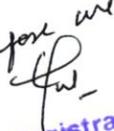
VERIFICATION:

I the deponent above named do hereby verified at Naharlagun on this..... day of May, 2025 that the contents of my reply affidavit are true and correct to the best of my knowledge and belief. No part of the same is false and no material has been concealed therefrom.


Member Secretary
Arunachal Pradesh SPCB

**Member Secretary
APSPCB, Nlg.**

Sworn before me

Executed before me

**Executive Magistrate
Law Legislative & Justice Deptt
Civil Secretariat, Itanagar
Arunachal Pradesh**



GOVERNMENT OF ARUNACHAL PRADESH
ARUNACHAL PRADESH STATE POLLUTION CONTROL BOARD
PARYAVARAN BHAWAN, PAPU HILL, YUPIA ROAD
NAHARLAGUN



No. APSPCB-150/2017/MCK/DSPL/NGT/Part/959-65

Dated 14/05/2025

MINUTES OF MEETING

The second meeting (Hybrid Mode) of Joint Committee in O.A No.74/2017 was held under chairmanship of Shri. P Subramanyam, Ld. PCCF & HoFF (EF & CC), Government of Arunachal Pradesh on 14th May, 2025 in VC Hall of the PCCF & HoFF, Itanagar.

The following members attended the meeting:

1. Shri P. Subramanyam, IFS, PCCF & HoFF
2. Shri N. Tam, IFS, PCCF (WL)
3. Shri P. Ringu, IFS, CCF, CAC, Pasighat
4. Shri T. Riba, IFS, CCF, WAC, Banderdewa
5. Dr Shantanu Dutta, Regional Director, CPCB, Shillong
6. Smt. Koj Rinya, IFS, Member Secretary, APSPCB
7. Shri Hemant Hazarika, Scientist-E, IRO Guwahati

The meeting agenda was as per the directions of HNGT order dated 04.03.2025.

- 1) Finalization of Environmental Compensation Charges to be levied against respondent No.6, NHIDCL in O.A No. 74/2017.
- 2) Placing of the Mitigation Plan for consideration and approval of the committee.

Record of Discussion:

1. The committee examined the Mitigation Plan submitted by Shri P. Ringu, CCF, Central Arunachal Circle, Pasighat, in respect of (1) Akajan-Likabali-Bam Road (2) Pasighat-Pangin Road and (3) Pasighat-Mariang-Yingkiong Road for restoration of the damage caused to the environment due to illegal muck dumping by the contractors engaged by the user agency.
2. CCF, Central Arunachal Circle, Pasighat while highlighting the main aspects of the mitigation plan also informed that the areas affected by the muck dumping falls under the jurisdiction of Along Forest Division and hence, no plan has been proposed against Likabali Forest Division.
3. PCCF (WL) suggested that mitigation plan may also include the other three road stretches as per the Joint Committee Report (iv) Papu-Yupia Road (Wildlife Zone), (v) Police HQ, Chimpu Road and (vi) Chimpu-Hollongi Road.
4. Member Secretary, APSPCB informed that the user agency, NHIDCL has deposited interim Environmental Compensation Charges (ECC) of Rs.3.00 Crore vide letter No.NHIDCL/Legal/TaiMaya/NGT/2017/43010949 dated 13.03.2025 with APSPCB.


Member Secretary
APSPCB, Nlg.



She also informed that a committee is already constituted in compliance to HNGT, Principal Bench, in OA no.976/2019 in order dated 21.10.22 for scrutiny and approval of projects/proposals to be executed through utilisation of Environmental Compensation Charges fund. Further, she requested that the expenditure incurred for preparation of Mitigation Plan be submitted to APSPCB for processing and reimbursement.

5. Regional Director, CPCB stated that the Environmental Compensation Charges may be calculated as per the formula notified by the Central Pollution Control Board.
6. Member Secretary, SPCB informed that Environmental Compensation Charges were levied against the erring contractors employed by the user agency in January, 2022.

After detailed deliberations on the agenda items, the following decisions were taken.

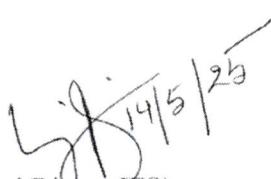
1. The committee approved the Mitigation Plan submitted by the CCF, CAC, Pasighat. Further, the committee recommended for incorporation of granular details on the proposed plan including the types and no. of structures, location, cost break- up etc to facilitate objective execution and monitoring. The CCF (CAC) can present the expenditure incurred against the preparation of the plan to the SPCB for examination and payment from out of the money deposited by the concerned user agency for this purpose.
2. For the three road stretches i) Papu-Yupia Road (Wildlife Zone), ii) Police HQ, Chimpu Road and (iii) Chimpu-Hollongi Road, the concerned user agency at its own cost shall make provisions for garland drainage and compaction of muck dumping sites.
3. The final Environmental Compensation Charges shall be calculated as per the CPCB guidelines with the days of violation to be taken from 1st Dec, 2017, i.e. the date of first inspection till the date of decision i.e. 14th May, 2025. The EC amount levied and deposited to the SPCB earlier shall be deducted from the total amount calculated.
4. The final Environment Compensation Charges shall be levied against the concerned user agency responsible.

Sd/-
P.Subramanyam
(PCCF & HoFF)

Copy to:

1. PS to PCCF & HoFF (EF & CC), Government of Arunachal Pradesh for kind information.
2. All the Joint Committee members.
3. Office copy.


**Member Secretary
APSPCB, Nlg.**


(Koj Rinya, IFS)
Member Secretary



No. APSPCB-150/2017/MCK/DSPL/NGT/Part/959-65

Dated 16/05/2025

MINUTES OF MEETING

The third meeting (Hybrid Mode) of Joint Committee in O.A No.74/2017 was held under chairmanship of Shri. P Subramanyam, Ld. PCCF & HoFF (EF & CC), Government of Arunachal Pradesh on 16th May, 2025 in VC Hall of the PCCF & HoFF, Itanagar.

The following members attended the meeting:

1. Shri P. Subramanyam, IFS, PCCF & HoFF
2. Shri P. Ringu, IFS, CCF, CAC, Pasighat
3. Dr Shantanu Dutta, Regional Director, CPCB, Shillong
4. Smt. Koj Rinya, IFS, Member Secretary, APSPCB
5. Dr. Hemant Hazarika, Scientist-E, IRO , Guwahati

The meeting agenda was as per the directions of HNGT order dated 04.03.2025.

- 1) Finalization of Environmental Compensation Charges to be levied against respondent No.6, NHIDCL in O.A No. 74/2017.
- 2) Placing of the Modified Mitigation Plan for consideration and approval of the committee.

Record of Discussion:

1. The committee examined the modified Mitigation Plan submitted by CCF, Central Arunachal Circle, Pasighat, in respect of (1) Akajan-Likabali-Bam Road (2) Pasighat-Pangin Road and (3) Pasighat-Mariang-Yingkiong Road for restoration of the damage caused to the environment due to illegal muck dumping by the contractors engaged by the user agency. The plan is attached as Annexure-A.
2. CCF, Central Arunachal Circle, Pasighat proposed that the biological and engineering structures including slope treatment may be executed by the user agency. The Forest department may monitor implementation and conduct awareness programs with the local communities.
3. Regional Director, CPCB, Shillong observed that the item of work in the Mitigation plan for compensating to farmers for affected agriculture, WRC field etc. may not be feasible when work is already executed.
4. Member Secretary presented the Environmental Compensation Charges calculated as per the CPCB guidelines for the Akajan-Likabali-Bame road. Detail is attached as Annexure-B.


Member Secretary
APSPCB, Nig.



5. Regional Director, CPCB, Shillong proposed that the Environmental Compensation Charges for the biological, engineering measures, slope treatment may be ring-fenced for the purpose. The user agency may draw the amount from SPCB and execute the works.

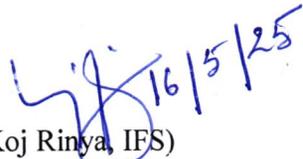
After detailed deliberations on the agenda items, the following decisions were taken.

1. In terms of the directions of Hon'ble NGT regarding respondent no.6, NHIDCL, the committee approved the Mitigation Plan submitted by the CCF, CAC, Pasihat for the stretch of Akajan-Likabali-Bame in toto, except item for compensating to farmers for affected agriculture, WRC fields, costing to Rs. 6.40 Crore.
2. The committee approved that all civil works proposed in the Mitigation Plan including engineering structures, slope treatment and biological measures shall be undertaken by the user agency. The user agency shall execute the works by utilisation of ECC to be deposited with the APSPCB.
3. The committee approved the final Environmental Compensation Charges for the Akajan-Likabali-Bame at Rs. 5,10,18,750/- (Rupees Five Crore Ten Lakhs Eighteen Thousand Seven Hundred Fifty) only.

Sd/-
P.Subramanyam
(PCCF & HoFF)

Copy to:

1. PS to PCCF & HoFF (EF & CC), Government of Arunachal Pradesh for kind information.
2. All the Joint Committee members.
3. Office copy.


(Koj Rinya, IFS)
Member Secretary


Member Secretary
APSPCB, Nlg.

FINAL ENVIRONMENTAL COMPENSATION CHARGES ON USER AGENCY

The Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata in its order dated 04.03.2025 in O.A No.74/2017 has directed the Joint Committee to determine the final Environmental compensation to be paid by User Agency.

The Joint Committee in its meeting held on 14th May, 2025 has decided to determine the final Environmental Compensation Charges as per the guidelines prepared by CPCB.

Accordingly, Environmental Compensation Charges (ECC) is determined as below:

$$EC = PI \times N \times R \times S \times LF$$

Where:

PI = Pollution Index of Industrial unit (80 for Red, 50 for Orange and 30 for Green).

N = Number of days of violation.

R = Rupees is taken as 250 for EC

S = Factor for scale of operation (0.5 for micro, 1.0 for small and 1.5 for large)

L = Location factor is taken as 1.0

The new highway construction project comes under Orange category of industry, so, "PI" is taken as 50. The number of days of violation is taken from 1st December, 2017, i.e the date of first inspection till the date of decision i.e 14th May, 2025. Therefore, "N" is 2,721 days. The Rupees (R) is taken as 250. The factor of scale of operation is large, so "S" is taken as 1.5. The location factor (population of town/city) is below one million, so "L" is taken as 1.0.

A) Alkujan-Litabali-Bam Road (User Agency - NHIDCL)

$$EC = PI \times N \times R \times S \times LF$$

$$= 50 \times 2721 \times 250 \times 1.5 \times 1.0$$

$$= \text{Rs. } 5,10,18,750/- \text{ (Rupees Five Crore Ten Lakhs Eighteen Thousand Seven Hundred Fifty) only}$$

Shri P. Subramanyam, PCCF & HoFF

Shri P. Ringu, CCF, CAC, Pasighat

Member Secretary
APSPCB, Nig.

Smt. Koj Rinya, MS, SPCB

Shri T. Riba, CCF, WAC, Banderdewa

Dr. Shantanu Datta, RD, CPCB

Dr. Hemant Huzarika, Scientist-E



GOVERNMENT OF ARUNACHAL PRADESH
ARUNACHAL PRADESH STATE POLLUTION CONTROL BOARD
PARYAVARAN BHAWAN, PAPU HILL, YUPIA ROAD
NAHARLAGUN



No.APSPCB-150/2017/MCK/DSPL/NGT/Part/983

Date: 19.05.2025

ORDER

Sub: Levying of Environmental Compensation Charges on Respondent No.6, NHIDCL for violation of environmental norms while executing the 2-laning of Akajan Likabali-Bam Road, Arunachal Pradesh-reg.

WHEREAS, the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata in its order dated 04.03.2025 directed the Joint Committee to determine the final Environmental Compensation Charges to be levied against Respondent No.6, NHIDCL.

WHEREAS, the Joint Committee held a meeting on 14th May, 2025 at the VC Hall of the PCCF & HoFF to determine the final Environmental Compensation Charges to be levied against Respondent No.6, NHIDCL.

WHEREAS, the Joint Committee determined the Environmental Compensation Charges to be levied against Respondent No.6, NHIDCL for Rs.5,10,18,750/- (Rupees Five Crore Ten Lakh Eighteen Thousand Seven Hundred Fifty only).

NOW THEREFORE, in exercise of power under section 33 (A) of Water (Prevention and Control of Pollution) Act,1974, section 37 of Air (Prevention and Control of Pollution) Act, 1981 and section 5 of Environment(Protection) Act,1986 respectively, read with directions of Hon'ble NGT in O.A 74/2017, Respondent No.6, NHIDCL is hereby directed to deposit Rs.5,10,18,750/- (Rupees Five Crore Ten Lakh Eighteen Thousand Seven Hundred Fifty only) within a period of one month.

The Environmental Compensation Charges may be deposited by way of Demand Draft in favour of Member Secretary, APSPCB or by RTGS in the given account details:

(a)	Name of the payee (As approved in passbook)	Arunachal Pradesh State Pollution Control Board
(b)	Bank Account Number	38919510543
(c)	Bank	State Bank of India (SBI)
(d)	Branch	Naharlagun
(e)	IFSC Code	SBIN0003232

**Member Secretary
APSPCB, Nig.**

(Koj Rinya, IFS)
Member Secretary

To,

Shri Pranjal P. Borgohain
General Manager (Admin & LA)
RO-Itanagar, NHIDCL
Arunachal Pradesh

Submission of Mitigation Plan for Muck Disposal Plan of Akajan – Likabali – Basar – Bame (under Likabali and Along Forest Divisions), Pasighat – Pangin & Pasighat – Mariyang – Yingkiong (under Pasighat and Yingkiong Forest Divisions) as per the Order of the Hon'ble National Green Tribunal vide their Order for Original Application No. 74/2017/EZ vide IA No/02/2025/EZ and I.A. No. 32/2025/EZ falling under the control of Chief Conservator of Forest, Central Arunachal Circle, Pasighat.

Introduction: -After the receipt of the order of the Hon'ble National Green Tribunal for preparation of Mitigation Plan dated 04/03/25 vide O.A.74/2017 the matter was taken up with NHIDCL and the Executive Engineer Arunachal Pradesh Public Work Department (Highways), Pasighat for submission of muck disposal plan of (a) Likabali- Basar- Bam, (b) Pasighat- Pangin and (c) Pasighat- Mariyang- Yingkiong Roads along with taking and handing over of Pasighat- Pangin Road in between the APPWD Highways and NHIDCL vide this Office No.1. CAC/15/FCC/2025/2984-92 dated 17th April 2025, 2. CAC/15/FCC/2025/2913-18 dated 10th April 2025 and the Member Secretary, Arunachal Pradesh State Pollution Control Board was also requested to provide the fund for the expenditure to be incurred during the preparation of comprehensive Mitigation Plans of the roads Vide No. 1. CAC/15/FCC/2025/2869-70 dated 08/04/2025. 2. CAC/15/FCC/2025/2913-18 dated 10/04/2025. 3. CAC/15/FCC/2025/2984-92 dated 17/04/2025 as per by the order of Hon'ble NGT to provide the necessary fund vide serial No. IV(4) & VI(6) at their order at page 14. (Copy enclosed for ready reference).

However, till date no response neither from National Highways and Infrastructure Development Corporation (NHIDCL) nor from the Arunachal Pradesh State Pollution Control Board (APSPCB) were forthcoming. As per the earlier experience and travel along the different portion of road, the Mitigation Plan has been prepared. Three(3) out of four (4) DFOs who were present during the inspection have either retired from Govt. Service or has been transferred. There has been no less of blockage of landslides, both during the heavy rainfall as well as harsh dry summer condition which have become hotter by making the soil more brittle along with raising in horticulture cultivation by the local people. As per records available, the areas which have been double laned were neither had been a part of Reserved Forest, Wildlife Sanctuary, Village Reserved Forest, Anchal Reserved Forest, Preliminary Village Reserved Forest, Preliminary Anchal Reserved Forest or Protected Forest as such, the people had occupied the stabilised landfills growing Agro- Horticulture crops thereby stabilizing and constructed some small OBT and MIBT, Gomti's and Tea-stalls thereby enhancing their economic situation. The phase of the road which had been stabilized was also not handed over the User Agency by the Forest Department.

In view of this, it will be difficult to define the area where the local people have raised Agro-Forestry and set up MBT and MIBT Gomti's and Tea-stalls to be designated as forest land. The Mitigation Plan for the segments of the road from Likabali to Sikinala 53km falling under Likabali Forest Division and Sikinala to Bame falling under Along Forest Division, Pasighat to Pangin falling under both Pasighat and yingkiong Forest Division and Pasighat – Mariyang-Yingkiong falling under both Pasighat and Yingkiong Forest Division are being prepared along with the cost component as 1,2, 3. The overall monitoring and inspection requiring the visit of the representative of Arunachal Pradesh State Pollution Control Board (NE) Shillong, Integrated Regional Office- North East Region and this office is being put under Serial No. 4.


Member Secretary
APSPCB, Nlg.



1. Mitigation Plan for Environmental Damage due to Haphazard Muck Dumping during construction of Akajan-Likabali-Bam road under Likabali Forest Division and 2. Along Forest Division, Arunachal Pradesh



Two Laning of Akajan-Likabali-Bam Road

Background:

MORTH is the Government Organization to develop the National Highways and other important Roads of India, by way of planning, preparation of feasibility reports, detailed project reports and execution. National Highways Infrastructural Development Corporation Limited (NHIDCL) has been created as an autonomous body under MORTH to develop roads in North Eastern States and other hilly states. SARDP-NE Program is a Special Accelerated Road Development Program, a major road development program for North Eastern States. The Akajan-Likabali-Bam road falls in state roads of Arunachal Pradesh package of the program, which comprises total 2319 km, including 1472 km of NHs and 847 Km of state roads and strategic roads. Akajan-Likabali-Bam Road is part of SARDP-NE project, which starts from NH-52 at Akajan in Assam and enters in to Arunachal Pradesh at Likabali, traverses through district West Siang of the state. The road project connects important towns such as Silapathar in Assam to Likabali, Basar, Aalo etc.

The construction of the Akajan-Likabali-Bam road represents significant infrastructure development in this remote area, intended to improve connectivity and foster economic growth. However, a critical environmental concern has arisen from this project due to the indiscriminate disposal of excavated material, commonly referred to as muck. The severity of the environmental damage and the apparent inadequacy of existing oversight mechanisms

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Member Secretary
APSPCB, Nilg.

have prompted the intervention of the National Green Tribunal (NGT). The NGT's involvement underscores the seriousness of the environmental violations and has led to judicial scrutiny of the project's environmental compliance. The Tribunal's order for the deposit of interim compensation and the formation of a Joint Committee to investigate the matter further emphasize the urgency and importance of developing and implementing a comprehensive mitigation plan to address the environmental degradation in the Along Forest Division.

Overview:



The document outlines a comprehensive mitigation plan to address environmental damage caused by improper muck dumping during road construction in the Along Forest Division of Arunachal Pradesh, emphasizing the need for regulatory compliance and ecological restoration.

The presence of Kane Wildlife Sanctuary and Elephant corridor in the vicinity of the Akajan-Likabali-Bam road projects further underscores the conservation importance of these regions. The disturbances such as haphazard muck dumping could potentially compromise their ecological integrity through habitat fragmentation, pollution runoff and the disruption of crucial wildlife corridors.

This mitigation plan has been developed with careful consideration of the relevant rules, regulations, and guidelines established by the Arunachal Pradesh State Pollution Control Board. The proposed measures for proper muck disposal are consistent with the Construction and Demolition Waste Management Rules, 2016, which mandate scientific handling and disposal of such waste. The plan also takes into account the APSPCB's emphasis on adhering to the guidelines of the Ministry of Environment, Forests & Climate Change regarding muck disposal.

Member Secretary
APSPCB, Nlg.



Specific Ecological Damages Observed During Inspections:

The inspections revealed significant ecological damages, including habitat destruction, water pollution, and disruption of agricultural activities. These findings highlight the urgent need for proper muck disposal and environmental restoration measures.

The Key observations includes :

1. **Deforestation & Loss of Vegetation:**
 - Destruction of natural vegetation, including trees, shrubs, and grasses, due to unscientific muck dumping.
 - Uprooting of plants and damage to aquatic life in rivers.
2. **Siltation and Sedimentation:**
 - Increased sedimentation in riverbeds, particularly in the Kidi river & Ego river & nearby streams due to muck rolling down slopes.
 - Raised riverbeds altered the natural course of rivers, leading to flooding and destruction of agricultural fields.
3. **Blocked Natural Drainage:**
 - Natural nallahs (streams) were obstructed by muck and debris, causing erosion and destruction of slopes.
4. **Damage to Agricultural Fields:**
 - Fertile agricultural fields were destroyed due to muck deposition, reducing productivity and affecting livelihoods.
 - In Nyigam and Siji area, muck dumping caused streams to overflow into fields during heavy rains, leading to crop loss.
5. **Impact on Aquatic Life:**
 - Rivers and streams once rich in biodiversity became barren due to sedimentation and pollution.
 - Aquatic life downstream was severely affected, with fish populations declining.
6. **Unscientific Disposal Practices:**
 - Muck was disposed of haphazardly, rolling down hill slopes and valleys, causing deforestation and loss of nutrients in topsoil.
 - In Akajan-Likabali-Bam road, muck disposal choked natural rivers and streams, destroying agricultural crops.
7. **Increased Risk of Landslides:**
 - Road cutting without scientific study triggered landslides, especially during the rainy season.
 - Lack of benching patterns in hill slopes exacerbated soil erosion and instability.
8. **Air and Water Pollution:**

Dust from muck disposal affected air quality, while sedimentation polluted water bodies, impacting both human health and ecosystems
9. **Impact on Local Communities:**
 - Agricultural fields are damaged due to muck dumping.
 - Streams and irrigation systems are blocked, affecting livelihoods.
 - Increased risk of flooding due to altered river courses

Member Secretary
APSPCB, Nlg.



Mitigation Measures to counter Environmental damage:

1. *Biological Measures:*

- **Plantation of Indigenous Species:** Planting native trees, shrubs, and grasses to stabilize soil and prevent erosion.
- **Hydroseeding:** Spraying a mixture of seeds, mulch, and water to promote vegetation growth on slopes.
- **Seed Ball Spreading:** Distributing seed balls to encourage vegetation in hard-to-reach areas.
- **Turfing:** Laying grass turf to cover exposed soil and reduce erosion.

2. *Engineering Measures:*

- **Gabion Walls:** Constructing walls made of wire mesh filled with stones to stabilize slopes and prevent soil movement.
- **Retaining Walls:** Building structures to hold back soil and prevent landslides.
- **Toe Walls:** Constructing walls at the base of slopes to prevent soil erosion.
- **Sedimentation Pits:** Creating pits to trap sediment and prevent it from entering water bodies.

3. *Surface Treatment:*

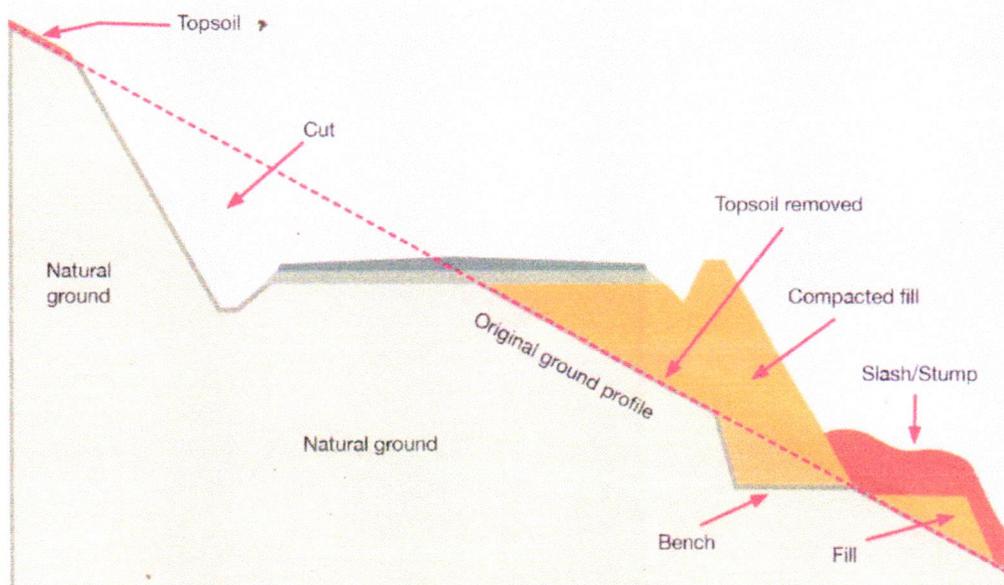
- **Compaction:** Compacting soil to increase its stability and reduce erosion.
- **Coir Mats or Aluminum Mats:** Using mats to cover slopes and protect soil from erosion.
- **Soil Treatment:** Applying soil-binding agents to improve soil cohesion and reduce erosion.

4. *Drainage Management:*

- **Garland Drains:** Installing drains around muck disposal sites to prevent runoff and soil erosion.
- **Check Dams and Nallah Bunds:** Constructing small dams to reduce water velocity and prevent soil washing.

5. *Slope Management:*

- **Benching Pattern:** Cutting slopes in a step-like pattern to reduce erosion and improve stability.




 Member Secretary
 APSPCB, Nlg.



- **Slope Angle Reduction:** Reducing the steepness of slopes to minimize soil movement.
- 6. **Muck Disposal:**
 - Dispose of muck at designated sites with proper stabilization measures.
 - Compact muck disposal sites and provide garland drains to prevent runoff.
 -
- 7. **Monitoring and Compliance:**
 - Conduct regular air and water quality checks in affected areas.
 - Monitor muck disposal sites quarterly to assess environmental damage.
 - Ensure compliance with Environmental Clearance (EC) and Forest Clearance (FC) conditions.
- 8. **Community Compensation:**
 - Compensate affected farmers for crop damage based on rates recommended by District Agriculture/Horticulture Officers.
 - Restore agricultural fields and riverbeds affected by muck dumping.
- 9. **Standard Operating Procedures (SOPs):**
 - Develop SOPs for contractors to ensure scientific slope cutting and prevent landslides.
 - Enforce guidelines for muck disposal and construction practices.
- 10. **Awareness and Public Engagement:**
 - Conduct public hearings to address grievances and involve local communities in decision-making.
 - Engage local communities in restoration efforts, leveraging their traditional knowledge and fostering ownership of the environment
 - Educate contractors and workers on sustainable construction practices.
- 11. **Funding and Accountability:**
 - User agencies to fund mitigation measures and deposit interim penalties forenvironmental damage.

Recommendations:

1. **Immediate Actions:**
 - Stabilize muck disposal sites using biological and engineering measures.
 - Restore natural watercourses and drainage systems.
 - Compensate affected communities for agricultural losses.
2. **Long-Term Measures:**
 - Enforce stringent monitoring mechanisms for ongoing road construction projects.
 - Promote sustainable construction practices to minimize ecological impact.
 - Ensure compliance with environmental laws and obtain necessary clearances.

Fund required for implementation of mitigation plan:

The mitigation plan emphasizes the need for immediate and long-term measures to address environmental damage caused by Akajan-Likabali-Bam road construction. By

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implementing biological and engineering solutions, restoring natural ecosystems, and compensating affected communities, the plan aims to ensure sustainable development while preserving the environment. Regular monitoring and strict enforcement of environmental norms are critical to achieving these goals.

i. Summary of cost for Likabali Forest Division: The affected area lies in between Likabali 0.00 Km to Siki Nallah 57.0 Km:

S.No	Particulars of Work	Amount (Rs crores)
1	Biological measures (Hydro seeding, plantation of indigenous species, Seeding and Mulching, turfing, aboriculture etc.)	0.50
2	Engineering Measures (i.e construction of Gabion structure,check dam, retaining wall sedimentation pits etc)	1.50
3	Slope treatment which includes bench cutting, slope angle reduction etc.	0.50
4	Compensation to farmers for affected Agriculture land, WRC field etc.)	0.50
5	Awareness & public engagement	0.10
6	Monitoring	0.10
	Total Amount Rs.	3.20 Crores

ii. Summary of cost for Siki Nallah 0.57 Km to Basar – Bam Road

Summary of costs

S.No	Particulars of Work	Amount (Rs crores)
1	Biological measures (Hydro seeding, plantation of indigenous species, Seeding and Mulching, turfing, aboriculture etc.)	2.00
2	Engineering Measures (i.e construction of Gabion structure,check dam, retaining wall sedimentation pits etc)	1.00
3	Slope treatment which includes bench cutting, slope angle reduction etc.	0.50
4	Compensation to farmers for affected Agriculture land, WRC field etc.)	1.00
5	Awareness & public engagement	0.10
6	Monitoring	0.10
	Total Amount Rs.	4.70 Crores

2. Mitigation Plan for Environmental Damage due to Haphazard Muck Dumping during construction of Yingkiong-Mariyang- Pasighat (Ribi Korong) road (0.00 – 130.384 Km) and Pasighat- Pangin(20-76 Km) Road under Yingkiong Forest Division, Arunachal Pradesh

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Two Laning of Yingkiang-Mariyang- Pasighat & Pasighat - Pangin Road

Background:

MORTH is the Government Organization to develop the National Highways and other important Roads of India, by way of planning, preparation of feasibility reports, detailed project reports and execution. National Highways Infrastructural Development Corporation Limited (NHIDCL) has been created as an autonomous body under MORTH to develop roads in North Eastern States and other hilly states. SARDP-NE Program is a Special Accelerated Road Development Program, a major road development program for North Eastern States. The Yingkiang-Mariyang- Pasighat & Pasighat - Pangin Road falls in state roads of Arunachal Pradesh package of the program, which comprises total 2319 km, including 1472 km of NHs and 847 Km of state roads and strategic roads. Yingkiang-Mariyang- Pasighat & Pasighat - Pangin Road is part of SARDP-NE project, which starts from NH-515 at Akajan in Assam and enters in to Arunachal Pradesh at Ruksin, traverses through district East Siang of the state. The road project connects important towns such as Jonai in Assam to Ruksin, Pasighat, etc.

The construction of the Yingkiang-Mariyang- Pasighat & Pasighat - Pangin Road represents significant infrastructure development in this remote area, intended to improve connectivity and foster economic growth. However, a critical environmental concern has arisen from this project due to the indiscriminate disposal of excavated material, commonly referred to as muck. The severity of the environmental damage and the apparent inadequacy of existing oversight mechanisms have prompted the intervention of the National Green Tribunal (NGT). The NGT's involvement underscores the seriousness of the environmental violations and has led to judicial scrutiny of the project's environmental compliance. The Tribunal's order for the deposit of interim compensation and the formation of a Joint Committee to investigate the matter further emphasize the urgency and importance of

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developing and implementing a comprehensive mitigation plan to address the environmental degradation in the Yingkiong Forest Division.



Fund required for implementation of mitigation plan:

The mitigation plan emphasizes the need for immediate and long-term measures to address environmental damage caused by Yingkiong-Mariyang- Pasighat & Pasighat - Pangin Road construction. The Pasighat – Pangin road which has been handed over to the NHIDLC is other than at Rottung area is more or less stabilized and the road between Pasighat – Mariyang – Pangin other than at 17 kms upwards of Gobuk towards Yingkiong is more or less stabilized. Accordingly, the budget of the requirement has been now presented. By implementing biological and engineering solutions, restoring natural ecosystems, and compensating affected communities, the plan aims to ensure sustainable development while preserving the environment. Regular monitoring and strict enforcement of environmental norms are critical to achieving these goals.

i. Pasighat – Pangin and Pasighat – Mariyang road (Pasighat portion)

S.No	Particulars of Work	Amount (Rs crores)
1	Biological measures (Hydro seeding, plantation of indigenous species, Seeding and Mulching, turfing, aboriculture etc.)	0.50
2	Engineering Measures (i.e construction of Gabion structure, check dam, retaining wall sedimentation pits etc)	1.00
3	Slope treatment which includes bench cutting, slope angle reduction etc.	0.50
4	Monitoring & administration	0.20
	Total Amount Rs.	2.20

ii. Pasighat – Mariyang – Yingkiong road portion

Summary of costs

S.No	Particulars of Work	Amount (Rs crores)
1	Biological measures (Hydro seeding, plantation of indigenous species, Seeding and Mulching, turfing, aboriculture etc.)	1.00
2	Engineering Measures (i.e construction of Gabion structure, check dam, retaining wall sedimentation pits etc)	1.00
3	Slope treatment which includes bench cutting, slope angle reduction etc.	0.50
4	Compensation to farmers for affected Agriculture land, WRC field etc.)	1.50
5	Awareness & public engagement	0.10
6	Monitoring	0.10
	Total Amount Rs.	4.20 Crores

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3. Overhead expenditure of the Office of Chief Conservator of Forests, Central Arunachal Circle, Pasighat for monitoring alongwith meeting the expenditure of representative of CPCB (NE) Shillong and IRO etc.

a. Cost of monitoring vehicle and POL and maint:	Rs 0.40 Cr
b. Cost of TE / DA:	Rs 0.10 Cr
c. Cost of office stationeries et.	<u>Rs 0.10 Cr</u>
	Rs 0.60 Cr

4. Total requirement of funds for the Mitigation Measure: -

1. Likabali-Basar-Bam road	a. Likabali Forest Division:	Rs 3.20 Crores
	b. Along Forest Division:	Rs 4.70 Crores
2 Pangin-Pasighat-Yingkiong road:	a. Pasighat Forest Division:	Rs 2.20 Crores
	b. Yingkiong Forest Division	Rs 4.20 Cr
3. CCF office (Monitoring etc)		<u>Rs 0.60 Cr</u>
	Grand Total :	Rs 14.90 Cr

(Rupees Fourteen Crores and Ninety Lakhs only)

Enclosed: As stated.

CAC/15/FCC/2025/ 3493-3496

Dated Pasighat the 15th May 2025

Submitted to: -

1. P.S. to The PCCF & HoFF,(E,F& CC) Govt. Of A.P, Itanagar for his consideration and approval please. This refer the online meeting of dated Itanagar 14th May' 2025 where necessary references were asked for in the meeting of joint committee members.
2. All members concerned.
3. The Member Secretary, Arunachal Pradesh State Pollution Control Board, Papu Nallah Naharlagun 791110 for information please.
4. The DFOs concerned.

(P. Ringu) IFS
Chief Conservator of Forests
Central Circle:: Pasighat

Member Secretary
APSPCB, Nlg.