

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)**

ORIGINAL APPLICATION NO. 181 OF 2024

In the matter of:

Tribunal on its own motion SUO MOTU based on the News Item in 'The Times of India', Chennai Edition dt: 20.05.2024, "Work on Checkdam in Kerala stokes TN farmers' fears".

-VS-

The Chief Secretary to Govt. of Tamil Nadu, Chennai and Ors.

----Respondent(s)

REPORT FILED BY CHIEF ENGINEER, KERALA WATER AUTHORITY/

3RD RESPONDENT

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Dated at Chennai on this the 22nd day of July, 2024.


M/s. E.K. KUMARESAN

Standing Counsel for State Government of Kerala - NGT(SZ) Chennai Bench

**Jal Jeevan Mission (JJM)-JJM CWSS to Vattavada panchayath in idukki
district- Construction of RCC Weir across Chilandhiyar river at Chilandhiyar in
Vattavada Panchayath**

The matter has been taken up by the Honourable National Green Tribunal and directed to furnish clarification regarding eight points. The details of each points are as follows.

1. NECESSITY OF THE PROJECT

The Jal Jeevan Mission aims to provide safe and adequate drinking water through individual household tap connections to all rural households in India. The mission's goal is not only to provide tap water connections but also to ensure that every home receives drinking water in adequate quantity and prescribed quality on a regular and long-term basis. Therefore, selecting a sustainable water source is essential for these projects.

This JJM project aims to provide functional household tap connections to 617 households in the first phase in Vattavada Panchayat, and subsequently to all households (2850 families) in Vattavada Panchayat. Administrative sanction for the proposed project has been accorded vide AS No. G.O.(Rt)No.134/2022/WRD Dated, Thiruvananthapuram, 23-02-2022. Copy of the sanction is attached as Annexure I.

The proposal for the Project is to construct a weir in the Silandhiyar to ensure a stable and sufficient supply of raw water for the proposed 3 MLD water treatment plant at Silandhiyar Karuppasamy Temple.

Vattavada Panachayath is lying in the eastern side of Western Ghats. Height varies from 1450m to 2695m above mean Sea level Even though the panchayath is lying on the eastern side of Western ghats, no perennial streams and rivers are flowing across the Panchayath. The ground water potential is also very low, acute scarcity of drinking water is felt in all seasons.

Silandhiyar is the only perennial stream available in Vattavada Panchayat. So KWA proposed a treated water facility for the people residing in Ward 1 (Koodallarkudy), 9 (Vattavada South), 10 (Vattavada North), 11 (Pazhathottam), 12 (Silandhiyar), 13 (Swamiyaralakkudi) as 1st Phase.

Muthuvans (Scheduled Tribe Aadhivasis) are the major community residing in Vattavada Panchayath. The Muthuvans are independent and reluctant to interact with the outside world. The word 'Muthuvar' in Tamil is used to denote the same community in Tamil Nadu. Muthuvans is scheduled Tribe who inhabit mainly on the mountain valleys of the western ghats in Idukki. Muthuvans residing closer to the state of Tamilnadu are less assimilated into the culture of the main stream communities, and Muthuvan dialects consist of more Tamil elements.

In the envisaged project area, there is no protected water sources and piped water facilities. As the Project aims to collect the raw water from the weir and it will be pumped to the proposed WTP and treated water will be distributed to the entire project area through various sizes of pipes. Thus treated water will be provided to each house holds through FHTCs.

Collecting raw water for treatment requires ensuring sufficient quantity at the point of extraction. Therefore, constructing a weir is necessary to create a ponding effect, stabilizing the water level and facilitating uninterrupted water extraction. The claim that the state is constructing a dam across the river is incorrect. While both a dam and a weir are structures built across a river, they serve different purposes and have different designs. A dam is a large structure that creates a reservoir by stopping the flow of water, whereas a weir is a small barrier that alters the water level and flow. The present construction of weir is having a height of 1.0M and 45M in length and the water spread area is only 1800 sqm. It allows water to flow over the top (crest) or underneath some sections. Weirs control the water flow using specially designed openings, accelerating the water flow in the stream while increasing the water level upstream. This structure will not reduce the downstream flow unless the stream is dried up or experiencing very lean flow conditions.

The objective of the JJM project to provide water to every household in Vattavada Panchayat cannot be achieved without this component. The project has been approved by the State Level Technical Committee, chaired by the Chief Secretary, and the National Mission. All packages in the project have been tendered, and work has already started on several packages. All scheme components have been designed based on the hydraulics of providing raw water from this source. Any obstruction to the already initiated construction of the weir will only stall the entire project and cause hardship to the general public, who have been deprived of the basic necessity of drinking water.

Moreover as per the Gazette of India: ExtraOrdinary No. 373 Part II- Sec. 3(ii) dated 19.02.2013 Notification, the State of Kerala has been allocated a total share of 30 TMC, the distribution of which in different tributary basins is as under:

- (i) Kabini sub-basin - 21 TMC
- (ii) Bhavani sub-basin - 6 TMC
- (iii) Pambar sub-basin - 3 TMC

The Allocation of water in Pambar sub-basin as per CWDT is as below:-

S.No	PAMBAR BASIN	Allotment as per the Final Order of CWDT (in TMC)
1	Thalayar	0.78
2	Evaporation loss of Pambar HEP	0.10
3	Chengalar	0.80
4	Vattavada	0.52
5	Chambakkad	0.03
6	Minor Irrigation & Lift Irrigation	0.44

7	Domestic Water supply	0.02
8	Industrial Uses	0.01
9	Emergency requirement for plantation crops	0.10
10	Reservoir loss	0.18
11	Share in balance water	0.15
	Total	3.13 Say 3 TMC

The Pambar (tributary of Cauvery) is joined by several tributaries within Kerala before it enters Tamil Nadu. Vattavada river, which originates in Kerala and after flowing for about 13 km within the State, enters Tamil Nadu where it is known as Tennar. Pambar and Tennar join within Tamil Nadu to form Amaravathy river. The yield of Pambar according to Kerala is 15 TMC. The basin area of Pambar in Kerala is 384 km². The altitude varies from 440 m to 2560 m in a short distance of 29 Km. Chilanthyar is a stream originates from Vattavada Panchayath.,

The proposed project area comes under Pambar Sub Basin, where we have a right to use 3 TMC of water. The present project is taking only 0.0386 TMC annually.

Kerala Water Authority is constructing a weir of size 45m in length and 1.0m in height, across Chilanthyar, under Jal Jeevan Mission Scheme, for their drinking water supply scheme of 3 MLD capacity(0.0386 TMC annually). Hence, considering consumptive use of 20%, the proposed annual utilization is 0.00733 TMC, which is well within the domestic water allocation of 0.02 TMC in Pambar sub basin of Kerala.

As per Clause-XIV of CWDT award ,the water diverted from any reservoir by a State for its own use during any water year shall be reckoned as use by that State in that water year.

The measurement for domestic and municipal water supply, shall be made in the manner indicated below:-

“Measurement is by 20 per cent of the quantity of water supply diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.”

As the proposed annual utilisation is 0.00733TMC, it is well within the the domestic water allocation of 0.02 TMC in Pambar sub basin of Kerala. Hence, any objection raised by Tamil Nadu in this regard, is devoid of merit.

It may also be ascertained whether NGT has a mandate to intervene on a water dispute issue, involving two states and the issue has been settled by a tribunal and by the Honourable Supreme Court. (Refer : Annexure II & III)

2. ENVIRONMENTAL CLEARANCE

The Environmental Impact Assessment (EIA) Notification of 2006, does not specify the requirement of a Detailed Environmental Impact Assessment study for the Civil structures like small weir to be constructed for collecting raw water as part of drinking water purpose. However a Quick EIA study has been conducted and the report is attached as Annexure IV

3. NATIONAL BOARD OF WILDLIFE CLEARANCE

The project was found to comply with Chapter 2, Clause 3(F) of the Forest Rights Act (FRA) 2006. Hence, Wildlife Clearance for diversion of Forest land has been issued by the Wildlife Warden of Vattavada Wildlife Division. Based on this mandate, Application for necessary clearance had submitted to the Forest and Wild life Department.

The Copy of the said application mentioning the construction weir in Form A and subsequent Wildlife Sanction Clearance dated 18.12.2023 from the Wild Life Warden are attached as Annexure V & VI respectively.

4. OTHER STATUTORY CLEARANCE

There is no other statutory clearance involved for the project

5. STUDY REPORT ON THE PROJECT

Detailed Engineering report and Soil investigation report for the work site is attached as Annexure VII and Annexure VIII

6. INTERSTATE BOUNDARY WITH WATER FLOW STUDY

Detailed will be submitted by Chief Engineer, Irrigation, WRD.

7. EXACT LOCATION OF THE PROJECT ALONG WITH COLOR MAP

The site is located in Chilanthiyar at Vattavada in Idukki District. The location for weir was identified by project authorities. The proposed location is just upstream of Chilanthiyar waterfalls.

Location Details:

Taluk : Devikulam

Village: Vattavada

Consistuecy : Devikulam

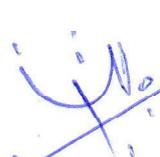
Panchayath : Vattavada

District : Idukki

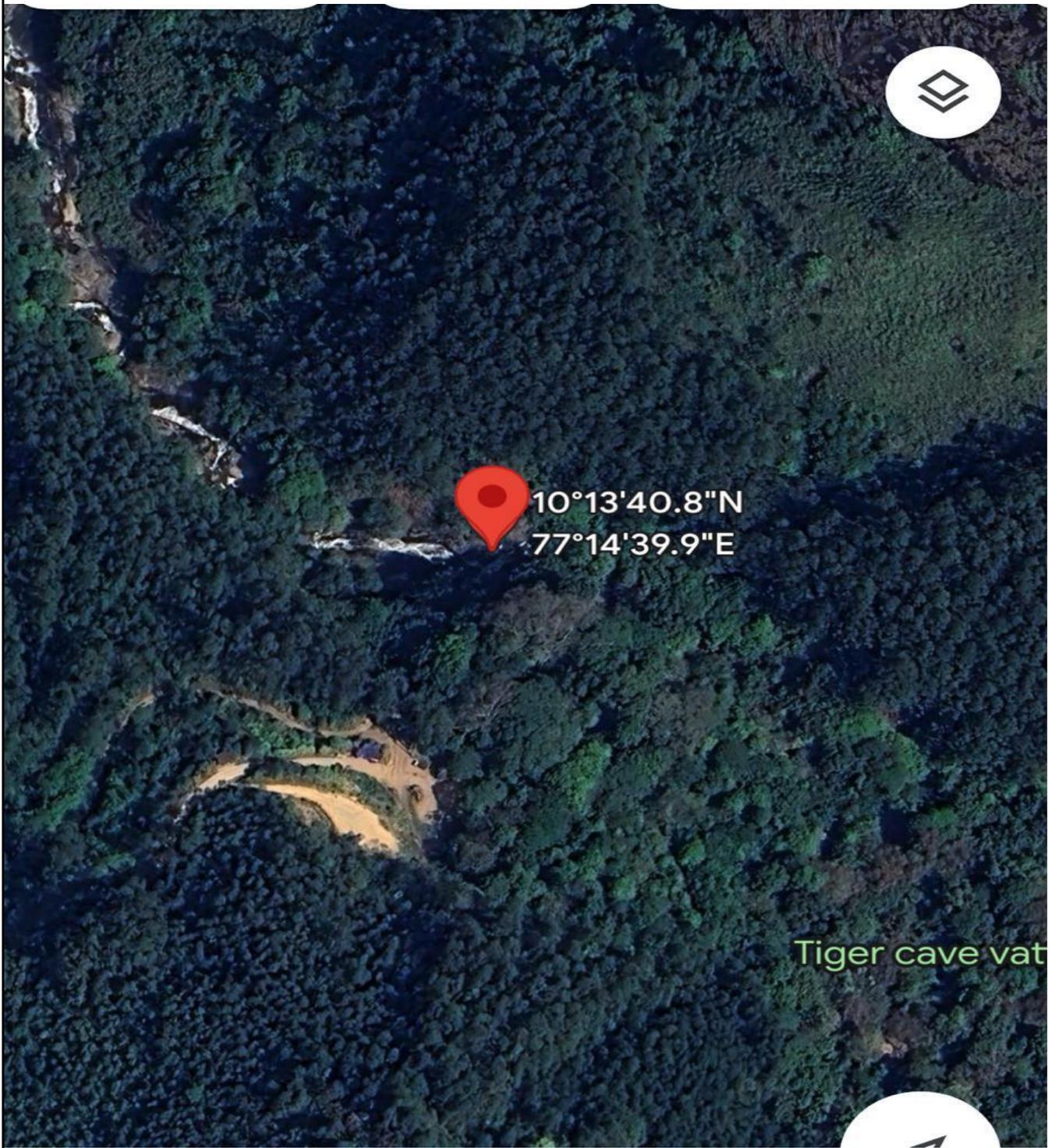
Color map is attached as Annexure IX

8. PRESENT COLOR PHOTOS OF THE PROJECT SITE

Colour photo of project site is attached as Annexure X.


**CHIEF ENGINEER
 KERALA WATER AUTHORITY
 CENTRAL REGION
 KOCHI-11**

COLOR MAP OF THE LOCATION (Annexure IX)



Present Color photos of the project Site- (Annexure X)





Google

GPS Map Camera

Kottakamboor, , India
Kottakamboor, 685615, India
Lat 10.202339°
Long 77.238154°
01/04/24 08:18 AM GMT +05:30

List of Annexures:

- I. AS No: G.O(Rt)No.134/2022/WRD Dated:23/02/2022 of Water Resources Department, Govt. of Kerala
- II. Gazette of India: ExtraOrdinary No. 373 Part II- Sec. 3(ii) dated 19.02.2013 Notification
- III. Judgement of the Hon. Supreme court of India for Civil Appeal no: 2453,2454 2456 of 2007
- IV. Quick Environmental Impact Assessment Report
- V. Form A
- VI. Wildlife Sanction Clearance dated 18.12.2023 from the Wild Life Warden
- VII. Detailed Engineering Report
- VIII. Soil investigation report for the work site
- IX. Color map
- X. Colour photo of project site


CHIEF ENGINEER
KERALA WATER AUTHORITY
CENTRAL REGION
KOCHI-11

STATEMENT OF FACTS SUBMITTED TO THE NATIONAL GREEN TRIBUNAL, SOUTHERN ZONE, CHENNAI - OA 181/2024

1. It is respectfully submitted that the construction of an RCC weir across the Chilandiyar river in Vattavada Panchayat is solely intended to provide clean drinking water to the local community – to the tribal settlement of Muthuvans - , and not intended to obstruct or divert the natural flow of water to the Amaravati river. The project's design and implementation prioritize the needs of the people, ensuring uninterrupted water supply for their basic needs. It is crucial to clarify that the allegations suggesting otherwise are entirely misconceived, lacking merit, and stem from a misunderstanding of the project's objectives. The weir is designed to harness the river's water without disrupting its natural flow, and its construction will not harm the downstream water supply or affect the Amaravati river's water levels. The project's primary goal is to provide a basic human right - access to clean drinking water - to the community, and it is essential to recognize and support this endeavor rather than perpetuating unfounded concerns."
2. The Suo Moto order issued by this Honorable Tribunal, based on the news published in "The Times of India" under the caption "Work on Checkdam in Kerala Stokes Tamil Nadu Farmers' Fears," is predicated on allegations that are not aligned with the facts. The article has misrepresented Kerala State's intentions and plans. Contrary to the claims made, Kerala State has no intention of building any check dams that would affect the flow of water to the Amaravati River. The actual plan involves constructing a mere one-meter-high weir at Chilandiyar, designed solely to regulate the water level. This modest structure is intended to ensure a stable supply of drinking water to local communities without causing any disruption to the flow of water to the Amaravati River. Unfortunately, the order was issued without considering these real facts or providing Kerala State an opportunity to present its case. Such due process is essential to ensure a fair and accurate understanding of the situation, thereby avoiding unwarranted fears and conflicts.
3. It may further be humbly stated that I am submitting the following detailed information for a better understanding of the construction of the weir at Chilanthiyar:

I. NECESSITY OF THE PROJECT

The Jal Jeevan Mission aims to provide safe and adequate drinking water through individualhousehold tap connections to all rural households in India. The mission's goal is not only to provide tap water connections but also to ensure that every home receives drinking water in adequate quantity and



prescribed quality on a regular and long-term basis. Therefore, selecting a sustainable water source is essential for these projects.

*This JJM project aims to provide functional household tap connections to 617 households in the first phase in Vattavada Panchayat especially for tribal community, Muthuvans. Administrative sanction for the proposed project has been accorded vide AS No. G.O.(Rt)No.134/2022/WRD Dated, Thiruvananthapuram, 23-02-2022. Copy of the sanction is attached as **Annexure I**. The proposal for the Project is to construct a weir in the Silandhiyar to ensure a stable and sufficient supply of raw water for the proposed 3 MLD water treatment plant at Silandhiyar Karuppasamy Temple. Vattavada Panachayath is lying in the eastern side of Western Ghats. Height varies from 1450m to 2695m above mean Sea level Even though the panchayath is lying on the eastern side of Western ghats, no perennial streams and rivers are flowing across the Panchayath. The ground water potential is also very low, acute scarcity of drinking water is felt in all seasons.*

Silandhiyar is the only perennial stream available in Vattavada Panchayat. So KWA proposed a treated water facility for the people residing in Ward 1 (Koodallarkudy), 9 (Vattavada South), 10 Vattavada North), 11 (Pazhathottam), 12 (Silandhiyar), 13 (Swamiyaralakkudi) as 1st Phase.

Muthuvans (Scheduled Tribe Aadhivasis) are the major community residing in VattavadaPanchayath. The Muthuvans are independent and reluctant to interact with the outside world. The word 'Muthuvar' in Tamil is used to denote the same community in Tamil Nadu. Muthuvans is a scheduled Tribe who inhabit mainly on the mountain valleys of the western ghats in Idukki. Muthuvans residing closer to the state of Tamilnadu are less assimilated into the culture of the main stream communities, and Muthuvan dialects consist of more Tamil elements.

In the envisaged project area, there is no protected water sources and piped water facilities. As the Project aims to collect the raw water from the weir and it will be pumped to the proposed WTP and treated water will be distributed to the entire project area through various sizes of pipes. Thus treated water will be provided to each house holds through FHTCs.

Collecting raw water for treatment requires ensuring sufficient quantity at the point of extraction. Therefore, constructing a weir is necessary to create a ponding effect, stabilizing the water level and facilitating uninterrupted water extraction. The claim that the state is constructing a dam across the river is incorrect. While both a dam and a weir are structures built across a river, they serve different purposes and have different designs. A dam is a large structure that creates a reservoir by stopping the flow of water, whereas a weir is a small barrier that alters the water level and flow.



The present construction of weir is having a height of 1.0M and 45M in length and the waterspread area is only 1800 sqm. It allows water to flow over the top (crest) or underneath some sections. Weirs control the water flow using specially designed openings, accelerating the water flow in the stream while increasing the water level upstream. This structure will not reduce the downstream flow unless the stream is dried up or experiencing very lean flow conditions.

The objective of the JJM project to provide water to every household in Vattavada Panchayat cannot be achieved without this component. The project has been approved by the State Level Technical Committee, chaired by the Chief Secretary, and the National Mission. All packages in the project have been tendered, and work has already started on several packages. All scheme components have been designed based on the hydraulics of providing raw water from this source. Any obstruction to the already initiated construction of the weir will only stall the entire project and cause hardship to the general public, who have been deprived of the basic necessity of drinking water.

II. ENVIRONMENTAL CLEARANCE

The Environmental Impact Assessment (EIA) Notification of 2006, has listed the projects and activities in the schedule of the notification which requires prior environmental clearance from the concerned regulatory authority. Clause 2 of The Environmental Impact Assessment (EIA) Notification of 2006, is as follows.

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

- (i) All new projects or activities listed in the Schedule to this notification;
- (ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;
- (iii) Any change in product - mix in an existing manufacturing unit included in Schedule beyond the specified range.

The schedule included in The Environmental Impact Assessment (EIA) Notification of 2006 does not specify Civil structures like small weir to be constructed for



collecting raw water as part of drinking water purpose. However a Quick EIA study has been conducted and the report is attached as **Annexure II**.

III. NATIONAL BOARD OF WILDLIFE CLEARANCE

The project was found to comply with Chapter 2, Clause 3(F) of the Forest Rights Act (FRA)2006. Hence, Wildlife Clearance for diversion of Forest land has been issued by the Wildlife Warden of Vattavada Wildlife Division. Based on this mandate, Application for necessary clearance had submitted to the Forest and Wildlife Department. The Copy of the said application mentioning the construction weir in Form A and subsequent Wildlife Sanction Clearance dated 18.12.2023 from the Wild Life Warden are attached as **Annexure III& IV** respectively.

IV. OTHER STATUTORY CLEARANCE

This project is being implemented as part of JAL JEEVAN MISSION, which aims in providing drinking water to all rural house holds in India. Administrative sanction for the JJM project in vattavada was obtained from the water resource department, Governement of Kerala. The copy of the administrative sanction is attached as Annexure I. Also The technical sanction for this project was obtained from the Chief Engineer, Central region, Kerala water authority.

V. STUDY REPORT ON THE PROJECT

Detailed Engineering report prepared by Kerala water authority is attached as **Annexure V** and The soil investigation report for the work site conducted by the Kerala Engineeering Research Institute, Peechi is attached as **Annexure VI**

VI INTERSTATE BOUNDARY WITH WATER FLOW STUDY

As per the Gazette of India: ExtraOrdinary No. 373 Part II- Sec. 3(ii) dated 19.02.2013 Notification, the State of Kerala has been allocated a total share of 30 TMC, the distribution of which in different tributary basins is as under:

- (i) Kabini sub-basin - 21 TMC
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The Allocation of water in Pambar sub-basin as per CWDT is as below:-

S.No	PAMBAR BASIN	Allotment as per the Final Order of CWDT (in TMC)
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The Pambar (tributary of Cauvery) is joined by several tributaries within Kerala before it enters Tamil Nadu. Vattavada river, which originates in Kerala and after flowing for about 13 km within the State, enters Tamil Nadu where it is known as Tennar. Pambar and Tennar join within Tamil Nadu to form Amaravathy river. The yield of Pambar according to Kerala is 15 TMC. The basin area of Pambar in Kerala is 384 km². The altitude varies from 440 m to 2560 m in a short distance of 29 Km. Chilanthyar is a stream originates from Vattavada Panchayath.,

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As per Clause-XIV of CWDT award ,the water diverted from any reservoir by a State for its own use during any water year shall be reckoned as use by that State in that water year.

The measurement for domestic and municipal water supply, shall be made in the manner indicated below:-

“Measurement is by 20 per cent of the quantity of water supply diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.”

As the proposed annual utilisation is 0.00733TMC, it is well within the the domestic water allocation of 0.02 TMC in Pambar sub basin of Kerala. Hence, any objection raised by Tamil Nadu in this regard, is devoid of merit.

It may also be ascertained whether NGT has a mandate to intervene on a water dispute issue, involving two states and the issue has been settled by a tribunal and by the Honourable Supreme Court. (Refer : Annexure VII & VIII)

4. Based on the above facts submitted, it is very evident that constructing a one-meter-high weir in Chilandiyar for the benefit of providing drinking water to the people in Vattavada Panchayat under the Jal Jeevan Mission will not cause any hindrances to the flow of water to the Amaravati River. This modest infrastructure is designed solely to ensure the local population's access to drinking water without altering the natural course or volume of water flowing downstream. Consequently, it will not impact the irrigation systems or water availability in Tamil Nadu. The construction of this weir is a responsible measure aimed at addressing local needs without compromising the water rights or agricultural interests of our neighboring state.
5. It may humbly submit that as stated above the clearance for the project for construction in the area has been obtained from the Wild Life Warder on Wild Life Division. Application for separation environmental clearance has not been sought as the project is not included in the schedule of project requiring environmental clearance as per Environmental Impact Assessment



notification 2016. However, as directed by the Hon'ble NGT and further endorsement from Department of Forest and Wild Life, application has been made for environmental clearance separately and is under process.

6. It is very unfortunate that this Honorable Tribunal issued such an order without fully examining the details of the construction of the weir, which is intended solely to meet the drinking water needs of the people in Vattavada Panchayat. This project, conducted under the Jal Jeevan Mission, falls within the legitimate purview of a federal state's authority. The necessary approvals were duly obtained, and the construction work commenced in accordance with established procedures and regulations. The weir, with a modest height of one meter, is designed to provide a critical resource—drinking water—without affecting the downstream flow to the Amaravati River or impacting irrigation in Tamil Nadu. We respectfully submit that a thorough review of the project's details will clearly demonstrate its minimal environmental impact and its essential role in addressing the urgent water needs of the local population.
7. Based on the true and detailed facts submitted, it is respectfully requested that the Suo Moto order issued in this regard be repealed. The construction of the weir under the Jal Jeevan Mission project, aimed at fulfilling the drinking water needs of the common people in Vattavada Panchayath, stands justified on the Amaravati River's flow and Tamil Nadu's irrigation systems. This project has been undertaken with due diligence, securing all necessary approvals and adhering to regulatory guidelines. Repealing the order will enable the continuation of a crucial initiative to provide safe drinking water, essential for the health and well-being of the local population. We trust that this tribunal will consider the welfare of the communities involved and support the lawful implementation of projects that serve public interest while maintaining environmental and interstate harmony.



List of Annexures:

- I. AS No: G.O(Rt)No.134/2022/WRD Dated:23/02/2022 of Water Resources Department, Govt. of Kerala
- II. Quick Environmental Impact Assessment Report
- III. Form A
- IV. Wildlife Sanction Clearance dated 18.12.2023, 22.04.2024 from the Wild Life Warden
- V. Detailed Engineering Report
- VI. Soil investigation report for the work site
- VII. Gazette of India: ExtraOrdinary No. 373 Part II- Sec. 3(ii) dated 19.02.2013 Notification
- VIII. Judgement of the Hon. Supreme court of India for Civil Appeal no: 2453,2454,2456 of 2007
- IX. English translation of Annexure IV





GOVERNMENT OF KERALA

Abstract

Water Resources Department- Jal Jeevan Mission - additional proposals for the works during 2021-2022 -Administrative Sanction accorded - Orders issued.

WATER RESOURCES (WS-C)DEPARTMENT

G.O.(Rt)No.134/2022/WRD Dated,Thiruvananthapuram, 23-02-2022

1 G.O. (MS) No. 37/2020/WRD dated 08.06.2020.

Read

2 G.O. (Rt) No. 489/2021/WRD dated 18/09/2021.

3 Minutes of the 4th State Level Scheme Sanctioning Committee (SLSSC) Meeting of Jal Jeevan Mission held on 14.12.2021.

4 Minutes of the 5th State Level Scheme Sanctioning Committee (SLSSC) Meeting of Jal Jeevan Mission held on 31.12.2021.

5 Minutes of the 4th State Water and Sanitation Mission (SWSM) Apex Body Meeting of Jal Jeevan Mission held on 21.01.2022.

ORDER

As per the Government Order read as 1st paper above, Government have accorded sanction for executing Jala Jeevan Mission (JJM) aimed at providing Functional Household Tap Connections (FHTCs) for all rural households of Kerala within 5 years time (2019-2024).

2) As per the reference read as 3rd paper above, the 4th State Level Scheme Sanctioning Committee (SLSSC) meeting held on 14.12.2021 permitted to add the

already approved amount of Rs. 84.46 crores for providing 7868 Nos. of FHTCs in Ajanur panchayat of Kasargod District along with the proposals in the 5th SLSSC. The committee also accorded approval for the re - appropriation proposal in two items, i.e, Procurement of Equipments/instruments and Modernization/up-gradation of labs under WQM&S activities without changing the total amount already approved.

3) As per the reference read as 4th paper above, the 5th State Level Scheme Sanctioning Committee (SLSSC) meeting held on 31.12.2021 accorded approval for the projects submitted through the District Water & Sanitation Missions to provide 17,70,119 Functional Household Tap Connections (FHTCs) in 665 Grama Panchayaths amounting to Rs. 21894.62 Cr. Including LSGD road restoration charges. The Committee also accorded in-principle sanctions to the proposals for providing 150 FHTCs in Chaliyar Panchayat amounting to Rs. 149.60 lakhs and providing 326 FHTCs in Irikkur Panchayat amounting to Rs. 150.40 lakhs subject to obtaining DWSM approval.

4) As per the reference read as 5th Paper above, the 4th State Water & Sanitation Mission Apex Committee accorded sanction for the proposals for providing 11,50,829 FHTCs in 521 Grama Panchayaths amounting to Rs. 13087.88 Cr including LSGD road restoration charges. The Committee also approved the Jananidhi proposals to provide 476 FHTCs amounting to 3.00 crores in Chaliyar & Irikkur Panchayat, including LSGD road restoration charges. The Committee decided that balance proposals approved in 5th SLSSC meeting held on 31/12/2021 for which Panchayats expressed concern over high cost may be deferred for reappraisal. The Committee ratified the decision of 4th SLSSC committee meeting to add the already approved amount of Rs. 84.46 crores for providing 7868 Nos. of FHTCs in Ajanur panchayat of Kasargod District along with the proposals in the 5th SLSSC. The committee also ratified the decision of 4th SLSSC committee to approve the re-appropriation proposal in two items, i.e, Procurement of Equipments/instruments and Modernization/up-gradation of labs under WQM&S activities without changing the total amount already approved.

5) Government have examined the matter in detail and are pleased to accord Administrative Sanction for the proposals for providing 11,51,305 Functional Household Tap Connections (FHTCs) in 522 Grama panchayaths amounting to Rs. 13,090.88 Cr including already approved amount for Ajanur Panchayath, for the implementation of Jal Jeevan Mission in the State for the FY 2021-2022 as approved by the State Water and Sanitation Mission Apex Committee.

6) Sanction is also accorded for re -appropriation in two items, i.e, Procurement of Equipments/instruments and Modernization/up-gradation of labs under WQM&S activities without changing the total amount already approved.

Approved list of proposals for providing Functional Household Tap Connections	Annexure 1.
Scheme wise split up of approved list	Annexure 2
Re-appropriation approval under WQM&S activities	Annexure 3.

7) The implementing agencies should ensure that each and every project sanctioned should be verified properly before giving technical sanction in a cost effective and optimal manner. They should also publish weekly progress report in their websites.

(By order of the Governor)

T K JOSE

ADDITIONAL CHIEF SECRETARY

To:

The Additional Chief Secretary, Local Self Government Department

The Additional Chief Secretary, Finance Department

The Additional Chief Secretary, Planning & Economic Affairs Department

The Principal Secretary, Health & Family Welfare Dept

The Principal Secretary, PWD Dept

The Principal Secretary, General Education Dept.

The Mission Director (Jal Jeevan Mission) and Managing Director, Kerala Water Authority, Thiruvananthapuram

The Executive Director, KRWSA, Thiruvananthapuram

The Principal Accountant General (Audit/ A&E)Kerala, Thiruvananthapuram

All District Collectors

The Director of Treasuries, Thiruvananthapuram

The Director, Ground Water Department, Thiruvananthapuram

The Director Panchayaths, Thiruvananthapuram

Finance (PU-C) Department

Local Self Government (FM) Department

Information & Public Relations Department (Web & New Media)

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Signed by Sudhila L

Date: 23-02-2022 14:08:20

Section Officer

Copy to :

PS to Minister (Water Resources Department)

Special Secretary to Chief Secretary

PA to Additional Chief Secretary, Finance Department

PA to Additional Chief Secretary, Water Resources Department

PA to Additional Chief Secretary, Local Self Government Department

PA to Secretary, Water Resources Department

CA to Additional Secretary, Water Resources Department



भारत का राजपत्र

The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 373]

नई दिल्ली, मंगलवार, फरवरी 19, 2013/माघ 30, 1934

No. 373]

NEW DELHI, TUESDAY, FEBRUARY 19, 2013/MAGHA 30, 1934

जल संसाधन मंत्रालय

अधिसूचना

नई दिल्ली, 19 फरवरी, 2013

का.आ. 404(अ).—केन्द्रीय सरकार ने, अन्तर्राज्यीय जल विवाद अधिनियम, 1956 (1956 का 33) (जिसे इसमें इसके पश्चात् “अधिनियम” कहा गया है) की धारा 4 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, अन्तर्राज्यीय नदी कावेरी के विषय में जल विवाद के अधिनिर्णयन हेतु तारीख 2 जून, 1990 की अधिसूचना संख्या का.आ. 437(अ) द्वारा कावेरी नदी विवाद अधिकरण (सीडब्ल्यूडीटी) (जिसे इसमें इसके पश्चात् “अधिकरण” कहा गया है) का गठन किया था;

और जबकि, अधिकरण ने 1990 की सिविल प्रकीर्ण याचिका संख्या 4, 5 और 9 के संबंध में 5 फरवरी, 2007 को अंतिम आदेश (जिसे इसमें इसके पश्चात् “आदेश” कहा गया है) पारित किया है और इसे अग्रिम अपेक्षित कार्रवाई हेतु केन्द्र सरकार को अग्रेषित किया है;

और जबकि, उच्चतम न्यायालय ने 4 फरवरी, 2013 को निदेश दिया है कि :

“अन्तर्राज्यीय नदी जल विवाद अधिनियम, 1956 की धारा 6 में, अधिकरण के निर्णय को राजपत्र में प्रकाशित करने का कार्य केन्द्रीय सरकार को सौंपा गया है। यद्यपि अधिकरण के ऐसे निर्णय को प्रकाशित करने के लिए कोई समय-सीमा निर्धारित नहीं की गई है, किन्तु इसके न होने पर, इसका प्रकाशन समुचित समय के भीतर किया जाना है। चूंकि 5 वर्ष से अधिक की अवधि बीत चुकी है, हम केन्द्रीय सरकार को कावेरी जल विवाद अधिकरण के 5 फरवरी, 2007 के अंतिम निर्णय को राजपत्र में यथासंभव शीघ्र और किसी भी स्थिति में 20 फरवरी, 2013 से पहले प्रकाशित करने का निदेश देते हैं। यह कहने की आवश्यकता नहीं है कि राजपत्र में कावेरी जल विवाद अधिकरण के अंतिम निर्णय का प्रकाशन लम्बित कार्यवाहियों पर बिना किसी प्रतिकूल प्रभाव के होगा”।

अतः अब उक्त अधिनियम की धारा 6 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए केन्द्रीय सरकार एतद्द्वारा अधिकरण का उपर्युक्त आदेश प्रकाशित करती है।

तमिलनाडु, कर्नाटक, केरल और केन्द्र शासित प्रदेश पुदुच्चेरी सरकार के बीच जल विवाद अर्थात् अन्तर्राज्यीय नदी कावेरी और उससे संबंधित नदी घाटी के मामले में 1990 की सिविल विविध याचिका संख्या 4, 5 और 9 के विषय में कावेरी जल विवाद अधिकरण का आदेश।

खंड-I.-

यह आदेश समय-समय पर संशोधित अन्तर्राज्यीय जल विवाद अधिनियम, 1956 की धारा 6 के तहत राजपत्र में न्यायाधिकरण के फैसले के प्रकाशन की तारीख से प्रभावी होगा।

MINISTRY OF WATER RESOURCES

NOTIFICATION

New Delhi, the 19th February, 2013

S.O. 404(E).—Whereas the Central Government, in exercise of the powers conferred upon it by section 4 of the Inter-State Water Disputes Act, 1956 (33 of 1956) (hereinafter referred to as “the Act”), had constituted by notification number S.O. 437(E), dated the 2nd June, 1990, the Cauvery Water Disputes Tribunal (CWDT) (hereinafter referred to as “the Tribunal”) to adjudicate upon the water dispute regarding the inter-State river Cauvery;

And whereas, the Tribunal has given final order on the 5th February, 2007 in Civil Miscellaneous Petition Nos. 4, 5 and 9 of 1990 (hereinafter referred as “the Order”) and forwarded the same to the Central Government for further necessary action;

And whereas, the Supreme Court has given its direction on 4th February, 2013 which reads as under:

“Section 6 of the Inter State River Water Disputes Act, 1956 mandates the Central Government to publish the decision of the Tribunal in the Official Gazette. Although no time frame is provided for publication of such decision by the Tribunal, but in absence thereof, publication has to be done within reasonable time.

Since more than five years have already elapsed, we direct the Central Government to publish in Official Gazette the final decision given by Cauvery Water Disputes Tribunal dated the 5th February, 2007 as early as may be possible and in no case later than the 20th February, 2013. Needless to say that publication of the final decision of CWDT in Official Gazette shall be without prejudice to the pending proceedings.”

Now, therefore, in exercise of the powers conferred by section 6 of the said Act, the Central Government hereby publishes the aforesaid Order of the Tribunal.

ORDER OF CAUVERY WATER DISPUTES TRIBUNAL IN

CIVIL MISCELLANEOUS PETITION NOS, 4, 5 AND 9 OF 1990 IN THE MATTER OF

(Water dispute amongst the State Government of Tamil Nadu, Karnataka, Kerala and Union Territory of Pondicherry, viz dispute regarding the Inter-State river Cauvery and the river valley thereof)

Clause-I .-

This Order shall come into operation on the date of the publication of the decision of this Tribunal in the Official Gazette under section 6 of the Inter-State Water Disputes Act, 1956 as amended from time to time.

Clause-II .-

Agreements of the years 1892 and 1924: The Agreements of the years 1892 and 1924 which were executed between the then State Governments of Mysore and Madras cannot be held to be invalid, especially after a lapse of about more than 110 and 80 years respectively. Before the execution of the two agreements, there was full consultation between the then State Governments of Madras and Mysore. However, the agreement of 1924 provides for review of some of the clauses after 1974.

Accordingly, we have reviewed and re-examined various provisions of the agreement on the principles of just and equitable apportionment.

Clause-III .-

This Order shall supersede – (i) The agreement of 1892 between the then State Government of Madras and the Government of Mysore so far as it related to the Cauvery river system. ii) The agreement of 1924 between the then State Government of Madras and the Government of Mysore so far as it related to the Cauvery river system.

Clause-IV .-

The Tribunal hereby determines that the utilisable quantum of waters of the Cauvery at Lower Coleroon Anicut site on the basis of 50 percent dependability to be 740 thousand million cubic feet-TMC (20,954 M.cu.m.).

Clause-V .-

A. The Tribunal hereby orders that the waters of the river Cauvery be allocated in three States of Kerala, Karnataka and Tamil Nadu and Union Territory of Pondicherry for their beneficial uses as mentioned hereunder:-

(i) the State of Kerala -	30 TMC
(ii) the State of Karnataka -	270 TMC
(iii) the State of Tamil Nadu -	419 TMC
(iv) the Union Territory of Pondicherry -	<u>7 TMC</u>
	<u>726 TMC</u>

B. In addition, we reserve some quantity of water for (i) environmental protection and (ii) inevitable escapages into the sea as under:-

(i) Quantity reserved for environmental protection.	-	10 TMC
(ii) Quantity determined for inevitable escapages into the sea.	-	<u>4TMC</u>
		<u>14 TMC</u>

Total (726 + 14) 740 TMC

Clause-VI.-

The State of Kerala has been allocated a total share of 30 TMC, the distribution of which in different tributary basins is as under:

(i) Kabini sub-basin -	21 TMC
(ii) Bhavani sub-basin -	6 TMC
(iii) Pambar sub-basin -	3 TMC

Clause-VII.-

In case the yield of Cauvery basin is less in a distress year, the allocated shares shall be proportionately reduced among the States of Kerala, Karnataka, Tamil Nadu and Union Territory of Pondicherry.

676 GZ/12

Clause-VIII.-

The following inter-State contact points are identified for monitoring the water deliveries:

(i) Between Kerala and Karnataka : Kabini reservoir site

(ii) Between Kerala and Tamil Nadu

(a) For Bhavani sub-basin : Chavadiyoor G.D.site

It is reported that Chavadiyoor G.D. Site was being earlier operated by the State of Kerala which could be revived for inter-State observations.

(b) For Pambar sub-basin : Amaravathy reservoir site

(iii) Between Karnataka and : Billigundulu G.D.site or any
Tamil Nadu other site on common border

(iv) Between Tamil Nadu and: Seven contact points as already in operation
Pondicherry

Clause-IX.-

A. Since the major shareholders in the Cauvery waters are the States of Karnataka and Tamil Nadu, we order the tentative monthly deliveries during a normal year to be made available by the State of Karnataka at the inter-State contact point presently identified as Billigundulu gauge and discharge station located on the common border as under:-

<u>Month</u>	<u>TMC</u>	<u>Month</u>	<u>TMC</u>
June	10	December	8
July	34	January	3
August	50	February	2.5
September	40	March	2.5
October	22	April	2.5
November	15	May	2.5
			<u>192 TMC</u>

B. The above quantum of 192 TMC of water comprises of 182 TMC from the allocated share of Tamil Nadu and 10 TMC of water allocated for environmental purposes.

C. The above monthly releases shall be broken in 10 daily intervals by the Regulatory Authority.

D. The Authority shall properly monitor the working of monthly schedule with the help of the concerned States and Central Water Commission for a period of five years and if any modification/adjustment is needed in the schedule thereafter, it may be worked out in consultation with the party States and help of Central Water Commission for future adoption without changing the annual allocation amongst the parties.

Clause -X.-

The available utilisable waters during a water year will include the waters carried over from the previous water year as assessed on the 1st of June on the basis of stored waters available on that date in all the reservoirs with effective storage capacity of 3 TMC and above.

Clause-XI.-

Any upper riparian State shall not take any action so as to affect the scheduled deliveries of water to the lower riparian States. However, the States concerned can by mutual agreement and in consultation with the Regulatory Authority make any amendment in the pattern of water deliveries.

Clause-XII.-

- A. The use of underground waters by any riparian State and Union Territory of Pondicherry shall not be reckoned as use of the water of the river Cauvery.
- B. The above declaration shall not in any way alter the rights, if any, under the law for the time being in force, of any private individuals, bodies or authorities.

Clause-XIII.-

The States of Karnataka and Tamil Nadu brought to our notice that a few hydro-power projects in the common reach boundary are being negotiated with the National Hydro-Power Corporation (NHPC). In this connection, we have only to observe that whenever any such hydro-power project is constructed and Cauvery waters are stored in the reservoir, the pattern of downstream releases should be consistent with our order so that the irrigation requirements are not jeopardized.

Clause-XIV.-

The use of water shall be measured by the extent of its depletion of the waters of the river Cauvery including its tributaries in any manner whatsoever; the depletion would also include the evaporation losses from the reservoirs. The storage in any reservoir across any stream of the Cauvery river system except the annual evaporation losses shall form part of the available water. The water diverted from any reservoir by a State for its own use during any water year shall be reckoned as use by that State in that water year. The measurement for domestic and municipal water supply, as also the industrial use shall be made in the manner indicated below:-

Use	Measurement
Domestic and municipal Water supply	By 20 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.
Industrial use	By 2.5 per cent of the quantity of water diverted or lifted from the river or any of its tributaries or from any reservoir, storage or canal.

Clause-XV.-

If any riparian State or Union Territory of Pondicherry is not able to make use of any portion of its allocated share during any month in a particular water year and requests for its storage in the designated reservoirs, it shall be at liberty to make use of its unutilized share in any other subsequent month during the same water year provided this arrangement is approved by the Implementing Authority.

Clause-XVI.-

The inability of any State to make use of some portion of the water allocated to it during any water year shall not constitute forfeiture or abandonment of its share of water in any subsequent water year nor shall it increase the share of other State in the subsequent year if such State has used that water.

Clause-XVII.-

In addition, note shall be taken of all such orders, directions, recommendations, suggestions etc, which have been detailed earlier in different chapters/volumes of the report with decision for appropriate action.

Clause XVIII.-

Nothing in the order of this Tribunal shall impair the right or power or authority of any State to regulate within its boundaries the use of water, or to enjoy the benefit of waters within that State in a manner not inconsistent with the order of this Tribunal.

Clause-XIX.-

In this order,

- (a) "Normal year" shall mean a year in which the total yield of the Cauvery basin is 740 TMC;
- (b) Use of the water of the river Cauvery by any person or entity of any nature whatsoever, within the territories of a State shall be reckoned as use by that State;
- (c) The expression "water year" shall mean the year commencing on 1st June and ending on the 31st May;
- (d) The "irrigation season" shall mean the season commencing on 1st June and ending on the 31st January of the next year;
- (e) The expression "Cauvery river" includes the main stream of the Cauvery river, all its tributaries and all other streams contributing water directly or indirectly to the Cauvery river;
- (f) The expression "TMC" means thousand million cubic feet of water;

Clause-XX.-

Nothing contained herein shall prevent the alteration, amendment or modification of all or any of the foregoing clauses by agreement between the parties.

Clause-XXI.-

The State Governments of Kerala, Karnataka, Tamil Nadu and Union Territory of Pondicherry shall bear the expenses of the Tribunal in the ratio of 15:40:40:5. However, these parties shall bear their own costs before this Tribunal.

New Delhi
The 5th February 2007

Sd/- N. P. Singh; Chairman
Sd/- Sudhir Narain; Member
Sd/- N. S. Rao; Member

[F.No. 3/5/2007-BM/Vol.-II]

Dr. S. K. SARKAR, Secy.

IN THE SUPREME COURT OF INDIA

CIVIL APPELLATE JURISDICTION

CIVIL APPEAL NO. 2453 OF 2007

The State of Karnataka by its Chief Secretary ... Appellant(s)

Versus

State of Tamil Nadu by its Chief Secretary & Ors. ... Respondent(s)

WITH

CIVIL APPEAL NO. 2454 of 2007

State of Kerala through the Chief Secretary ...Appellant(s)
to Government

Versus

State of Tamil Nadu through the Chief Secretary ...Respondent(s)
to Government and others

CIVIL APPEAL NO. 2456 OF 2007

State of Tamil Nadu through the Secretary ...Appellant(s)
Public Works Department

Versus

State of Karnataka by its Chief Secretary ...Respondent(s)
Government of Karnataka & Ors.

Validity unknown

Digitally signed by
CHETAN KUMAR
Date: 2013.02.16
13:09:51
Reason:

framing the scheme is exclusively for implementation of the award. The authorities cited by Mr. Ranjit Kumar, we are afraid, are of no assistance in the present context. It needs no special emphasis to state that the purpose of Section 6A is to act in the manner in which the award determines the allocation and decides the dispute with regard to allocation or sharing of water. Keeping that in view, we direct that a scheme shall be framed by the Central Government within a span of six weeks from today so that the authorities under the scheme can see to it that the present decision which has modified the award passed by the Tribunal is smoothly made functional and the rights of the States as determined by us are appositely carried out. When we say so, we also categorically convey that the need based monthly release has to be respected. It is hereby made clear that no extension shall be granted for framing of the scheme on any ground.

Z. The conclusions in seriatim

404. In view of our aforesaid analysis we record our conclusions in seriatim:-

- (i) After coming into force of the 1947 Act, the doctrine of paramountcy has no room for application as the Government of India became the full sovereign authority. The two agreements of 1892 and 1924 had neither any political arrangement nor touched any facet of sovereignty of India. Per contra, the agreements cover the areas of larger public interest which do not have any political element and in this backdrop, the agreements are neither inoperative nor completely extinct.
- (ii) The issues in this case have no connection, whatsoever, with the concepts of sovereignty and integrity of India and, therefore, the bar under Article 363 of the Constitution of India is not attracted.
- (iii) Even if we accept the contention that the State of Karnataka did not have any bargaining power at the time of entering into the agreements, but, the State of Karnataka acquired the said bargaining power after the 1947 Act, and definitely after coming into force the Constitution of India. Regardless of the same, the State of Karnataka chose not to denounce the said agreements. Therefore, the said agreements cannot be said to be unconscionable.

- (iv) The newly formed States never belied the agreements of 1892 and 1924 after the Reorganization Act, 1956. Ergo, both the agreements remained in force despite coming into effect of the Reorganization Act, 1956.
- (v) A scrutinized perusal of the 1924 Agreement reveals that the said Agreement was never intended to be of permanent character. On the contrary, it contemplated a fixed term of 50 years. Therefore, the said agreement expired after 50 years in the year 1974.
- (vi) The Tribunal in its approach primarily referred to Helsinki Rules, 1966 which rejected the Harmon doctrine and laid stress on equitable utilization of international rivers. We are of the opinion that the Tribunal was correct in its approach. For determining reasonable and equitable shares, relevant factors have to be considered together, in reaching a conclusion. Keeping in view the various intricacies involved in the case at hand and the duty ordained upon this Court by the Constitution of India, the matter deserved to be adjudicated on the bedrock of equal status of the states and doctrine of equitability. Resultantly, the submission that the

complaint of the State of Tamil Nadu did not warrant any adjudication, does not commend any acceptance.

- (vii) This Court in ***In Re: Presidential Reference (Cauvery Water Disputes Tribunal)*** has held that waters of an inter-state river passing through corridors of the riparian states constitute a national asset and no single State can claim exclusive ownership of its water. In this context, the principle of equitable apportionment internationally recognized by the Helsinki Rules, Compione Rules and Berlin Rules which have also been incorporated in the 1987 to 2002 National Water Policies, have been regarded to be the guiding factor for resolving disputes qua apportionment of water of an inter-state river.
- (viii) After considering all relevant materials brought on record, we are of the view that having regard to imperative of economy of consumption of water, the final determination of irrigated area arrived at by the Tribunal for Tamil Nadu, cannot be declared incorrect or fallacious.

- (ix) We do not find any perversity of approach in the Tribunal's findings with regard to the allocation of water for domestic and industrial purposes in the State of Tamil Nadu. Hence, the same requires no interference.
- (x) Drinking water requirement of the overall population of all the States has to be placed on a higher pedestal as we treat it as a hierarchically fundamental principle of equitable distribution
- (xi) The rejection of the stand of Kerala seeking trans-basin diversion for hydro-power projects by the Tribunal is justified. The Tribunal has allocated a total of 30 TMC of water towards the overall needs of the State of Kerala and we concur with the said conclusion of the Tribunal.
- (xii) We concur with the Tribunal's findings that the Union Territory of Puducherry is entitled for a "second crop", having regard to its unique geographical position and its irrigated area being approximately 43,000 acres.
- (xiii) The allocation of water in favour of Union Territory of Puducherry does not require any further enhancement.
- (xiv) The admission of facts along with the confirmatory empirical data suggests that around 20 TMC of groundwater is available

beneath the surface in Tamil Nadu which the Tribunal has not taken into account citing it as a conjecture. We, while keeping in mind the risks associated with over extraction of underground water, deem it fit that 10 TMC of the said available groundwater in Tamil Nadu can, in the facts and circumstances of the present case, be accounted for in the final determination of its share.

- (xv) The Tribunal had drastically reduced the share of Karnataka towards Domestic and Industrial purpose for the reason being that only 1/3rd of the city of Bangaluru falls within the river basin and also on the presumption that 50% of the drinking water requirement would be met from ground water supply. The said view taken by the Tribunal ignores the basic principle pertaining to drinking water and is, thus unsustainable. Keeping in mind the global status that the city has attained, an addition of 4.75 TMC is awarded to Karnataka.
- (xvi) The perspective of the Tribunal to assign 10 TMC of water for environmental protection does not require to be revisited, for such a revisit may result in unwarranted pollution and defeat the conception of sustained environmental purity.

(xvii) In totality, we deem it appropriate to award to the State of Karnataka an additional 14.75 TMC of water, i.e., 10 TMC (on account of availability of ground water in Tamil Nadu) + 4.75 TMC (for drinking and domestic purposes including such need for the whole city of Bengaluru).

(xviii) In view of the allocation of additional 14.75 TMC of water to Karnataka, the State of Karnataka would now be required to release 177.25 TMC of water at the inter-state border with Tamil Nadu, i.e., at Billigundulu.

(xix) The argument of the Union of India that Section 6A of the 1956 Act by employing the word "may" has left room for discretion to the Central Government for the purpose of framing a scheme does not stand to reason and further it does not meet the substance test. Accordingly, the said submission stands repelled. That apart, the framing of the scheme is exclusively meant for implementation of the award or as the same gets modified by this Court.

(xx) It is made clear that subject to the scheme to be formulated under Section 6A of the 1956 Act, in terms of the present adjudication, the recommendations/directives of the Tribunal

with regard to the monthly releases and not inconsistent with anything decided herein, are hereby endorsed for the present for a period of 15 (fifteen) years hence.

405. It is obligatory to clearly state that in view of the acute scarcity of the water resources and the intensely contested claims of the States, it is expected that the allocations hereby made would be utilized for the purposes earmarked and accepted and no deviancy is shown in carrying out the verdict of this Court.

406. Before parting with the case, we record our unreserved and uninhibited appreciation for Mr. Fali S. Nariman, Mr. S.S. Javali, Mr. A.S. Nambiar, Mr. Rakesh Dwivedi, Mr. Shekhar Naphade, Mr. Shyam Divan, Mr. Jaideep Gupta, learned senior counsel, Mr. Ranjit Kumar, learned Solicitor General of India, Mr. Mohan V. Katarki, Mr. G. Umapathy, Mr. M.R. Naik and Mr. S.C. Sharma learned counsel for their able assistance without which it would have been extremely difficult on our part to write this judgment.

407. In the ultimate analysis, Civil Appeal No. 2453 of 2007 filed by the State of Karnataka is partly allowed and all others Appeals stand disposed of accordingly. There shall be no order as to costs.

.....CJI
(Dipak Misra)

.....J.
(Amitava Roy)

.....J.
(A.M. Khanwilkar)

New Delhi;
February 16, 2018

Quick Environmental Impact Assessment Report

Project Component: Construction of a Weir Across a Small River

Location: Vattavada Grama Panchayat, Idukki District, Kerala, India

Project Proponent: Jal Jeevan Mission (JJM)

Objective: To provide safe and adequate drinking water through individual household tap connections to all rural households in Vattavada Panchayat.

1. INTRODUCTION

The Jal Jeevan Mission (JJM) aims to ensure that every rural household in India receives adequate and safe drinking water through household tap connections. The construction of a weir in the Chiladiyar is part of the JJM project initiated to address the acute drinking water crisis in Vattavada Grama Panchayat. Vattavada Panchayat is in the southern part of Idukki district in Devikulam Taluk. This project component involves constructing a weir across a small river in Vattavada Grama Panchayat to stabilize and manage the water supply for the proposed water treatment plant.

2. PROJECT COMPONENT DESCRIPTION

Scope of Work:

- Construction of a weir across the river near Chilanthiyar Waterfalls.
- Creation of a ponding effect to stabilize water levels for uninterrupted extraction.
- Extraction of raw water to the treatment plant and further distribution of treated water to households in Vattavada Panchayat.

Key Components:

- A small barrier (weir) to alter the water level and flow.
- Associated infrastructure for water extraction and treatment.

3. ENVIRONMENTAL IMPACT ASSESSMENT

3.1 Hydrology and Water Resources

Impact: Minimal. The weir will create a ponding effect to stabilize the water level.

Mitigation: The design ensures that downstream flow is not significantly affected.

3.2 Flora and Fauna

Impact: Nil. The construction site has no significant and valuable flora and fauna that would be disturbed.

Mitigation: Regular monitoring to ensure minimal disruption to the local ecosystem.

3.3 Soil and Land Use

Impact: Negligible. The construction involves minimal land use changes.

Mitigation: Erosion control measures will be implemented during construction.

3.4 Water Quality

Impact: Negligible. The weir construction will not significantly affect water quality.

Mitigation: Regular monitoring of water quality during and after construction.

3.5 Socio-Economic Impact

Impact: Positive. Improved water supply will benefit the local community, particularly the tribal population.

Mitigation: Ensure transparent communication and involvement of the local community.

4. CONCLUSION

The construction of the weir is a low-impact project with significant socio-economic benefits. The anticipated environmental impacts are minimal and do not necessitate a detailed Environmental Impact Assessment. The project has been designed to ensure sustainable and adequate water supply without adversely affecting the environment.

5. RECOMMENDATIONS

- Implement erosion control and water quality monitoring during construction.
- Ensure continuous community engagement and transparency.
- Regularly monitor the ecological balance and water flow to mitigate any unforeseen impacts.

This report indicates that the environmental impacts of the weir construction are negligible, and a detailed EIA is not required.



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PROJECT DIVISION
KERALA WATER AUTHORITY
KATTAPPANA

Mitigation: Regular monitoring to ensure minimal disruption to the local ecosystem.

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KERALA WATER AUTHORITY

No. AEE/JJM/Vattavada/2021-2022 (II)

Dated: 27.12.2022

From

The Executive Engineer

To

The Wild life warden

Munnar

Sub:- Jal Jeevan Mission-WSS to Vattavada panchayath-Diversion of forest land for providing water supply facility to Scehdulde tribes in Valsapettikudi settlement area in Vattavada Panchayath- reg:-

Ref:- 1.AS No GO(Rt) No.134/2022/WRD dtd 23.02.2022

Kind attention is invited to the subject matter. Jal Jeevan mission aims to provide functional house hold tap connection in India by 2024. The Water supply scheme to Vattavada Panchayath in Idukki District has been sanctioned under Jal Jeevan mission for providing FHTCs in Vattavada Panchayath. Water supply scheme from Chilanthiyar water fall is proposed for the above project. The subject scheme aims to provide water supply in part of Vattavada and Devikulam Panchayath

This scheme is proposed to collect water from Chilanthiyar water falls by constructing a weir and well cum pump house near chilanthiyar water falls and purify in the proposed water treatment plant near karuppasami temple. The treated water is transmitted to various proposed service reservoirs and distributed through distribution network which has to be laid in various places of Vattavada panchayath. The proposed service reservoir, weir and well cum pump house aims to provide water supply in Parassikadavukudi tribal settlement area and the above lands comes under forest area. The transmission mains to theses reservoirs and distribution network in this area are to be laid in the forest land. This proposal was presented in the oorukootam committee in Valsapettikudi, Parassikadavukudi, and Vayaltharakudi tribal settlement area and they have decided to requested the forest officials to divert the forest land for providing water supply facilities to them. The total land to be diverted is 0.365 hectares in Valsapettikudi tribal settlements. So I am submitting herewith the request form for diversion of forest land for providing water supply facility in Valsapettikudi tribal settlement area with necessary documents and request that necessary action may be taken to divert the land for implementation of the project at the earliest. I also



inform that if directed the application will be submitted for diversion of the forest land in parivesh portal.

Yours faithfully,

Sudheer.M .

Executive Engineer

Encl:

1. Form A
2. Map in 1:50000 scale
3. Google Map (marked the required land)
4. Oorukuttam Minutes
5. Schematic Diagram of the proposed Water supply scheme

Received Copy
Sudheer
29/12/2022



APPENDIX

Form for seeking prior approval diversion of forest land for non-forest purpose for the facilities managed by the Government under sub-section (2) of Section 3 of the Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

FORM - A

[See para 2.2(i)]

(To be filled up by the User Agency)

1. Project details:

(i). Short narrative of the proposed project / scheme for which the forest land is required

:- **Water Supply scheme to Vattavada Panchayath**

(ii). Details of the land required (two options to be indicated)

Location-Survey No./ Compartment No.-

Parassikadavukudi tribal settlement

Extent of the area (in hectare)

Total in hectare=0.365

Map showing the required forest land, boundary of adjoining forest on a 1 : 50,000 scale map.

:-**Map attached separately**

(iii) Justification for location the project in proposed forest land (s)

:-**For providing water supply facilities for Tribal people**

(iv) Number of trees to be felled (per hectare) and number that will be kept standing.

:-**NO**

2 Detailed, purpose-wise break-up of the total forest land required with proposed building/activity area map.

:-**For weir, raw water well cum pump house , booster pump house, tank and transmission mains and Distribution lines, 1.Weir-.0242 Hectare (6 cent) 2. Well cum pump house -.0242 Hectare (6 cent), 3. Booster pump house- 0.012 Hectare (3 cent), 4.Tank- 0.008 Hectare (2 cent), 5.Transmission mains & distribution pipes - 0.296 Hectare (5911 x 0.5m) ,**

3 Confirmation that User Agency will plant at least twice the number of trees to be felled., in the project or adjacent area and the amount to be provided annually for protection and maintenance for these plants for at least five years (Details to be enclosed)

:-**N/A**

4 Recommendation of the Grama Sabha-Accepted/Rejected

[Please tick (), as the case may be]. Copy of the Grama Sabha resolution to be attached].

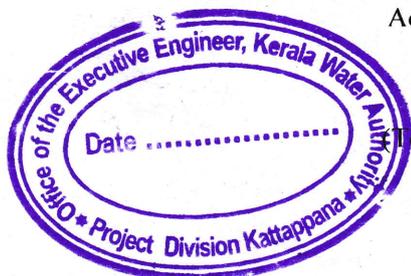
:- **Accepted, Oorukootam resolution attached separate**

Signature of the authorized person for the user
Agency

(Name in Block letters)

Address

Place :



SUDHEER.M
EXECUTIVE ENGINEER
PROJECT DIVISION
KERALA WATER AUTHORITY
KATTAPPANA
Serial No.of proposal

To be filled up the Range Forest Officer with date of receipt)

വൈൽഡ്‌ലൈഫ് വാർഡൻ, വൈൽഡ്‌ലൈഫ് ഡിവിഷൻ, മൂന്നാറിന്റെ നടപടി ഉത്തരവ്

(ഹാജർ:വിനോദ് എസ് വി - 418430)

വിഷയം: വട്ടവട ഗ്രാമ പഞ്ചായത്തിൽ ഉൾപ്പെടുന്ന വത്സപ്പെട്ടി കുടിയിൽ ജൽ ജീവൻ പദ്ധതി പ്രകാരം കുടിവെള്ള പദ്ധതി നടപ്പാക്കുന്നതിനുള്ള അപേക്ഷ- വനാവകാശ നിയമം 2006 പ്രകാരം അനുമതി നൽകുന്നത്- സംബന്ധിച്ച്.

- സൂചന:
1. വനാവകാശ നിയമം 2006
 2. കേരള വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ 27.12.2022 തീയതിയിലെ ഫോം എ അപേക്ഷ
 3. കേരള വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ 26.03.2024 തീയതിയിലെ ഫോം എ അപേക്ഷ
 4. വട്ടവട ഗ്രാമ പഞ്ചായത്തിലെ വത്സപ്പെട്ടി കുടിയിൽ 27.11.2022 ൽ കൂടിയ ഊരുകൂട്ട യോഗ തീരുമാനങ്ങൾ
 5. അസി. വൈൽഡ്‌ലൈഫ് വാർഡൻ, ഷോല നാഷണൽ പാർക്ക്സിന്റെ 10.03.2023 ലെ ഫോം ബി റിപ്പോർട്ട്
 6. അസി. വൈൽഡ്‌ലൈഫ് വാർഡൻ, ഷോല നാഷണൽ പാർക്ക്സിന്റെ 05.04.2024 ലെ ഫോം ബി റിപ്പോർട്ട്

ഉത്തരവ് നമ്പർ എ 45/2023 തീയതി : 22.04.2024

ഷോല നാഷണൽ പാർക്ക്സിന്റെ അധികാര പരിധിയിൽ വരുന്നതും വട്ടവട ഗ്രാമ പഞ്ചായത്തിൽ ഉൾപ്പെട്ടതുമായ വത്സപ്പെട്ടി കുടിയിൽ ജൽ ജീവൻ മിഷൻ പ്രകാരം കുടിവെള്ള പദ്ധതിയായി വനാവകാശ നിയമ പ്രകാരം അനുമതി ലഭിക്കുന്നതിന് സൂചന (2) പ്രകാരവും പദ്ധതിയ്ക്കു തടസ്സമായി നിൽക്കുന്ന പദ്ധതി പ്രദേശത്തെ 17 മരങ്ങൾ മുറിച്ചുമാറ്റുന്നതിനായി സൂചന (3) പ്രകാരവും അപേക്ഷകൾ സമർപ്പിച്ചിട്ടുണ്ട്. ടി അപേക്ഷകൾ പരിശോധിച്ചതിൽ വത്സപ്പെട്ടി കുടിയിൽ നിലവിൽ കുടിവെള്ള പദ്ധതികൾ ഒന്നുതന്നെ ഇല്ലാത്തതിനാലാണ് മേൽ പദ്ധതിയായി അപേക്ഷ സമർപ്പിച്ചിരിക്കുന്നത്. ആയതിലേയ്ക്കായി കേരള വാട്ടർ അതോറിറ്റി യുടെ കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ ഫോം എ, ഊരുകൂട്ടത്തിന്റെ മിനിംസിന്റെ പകർപ്പ്, മാപ്പ്, സ്കീമാറ്റിക് ഡയഗ്രാം എന്നിവ സമർപ്പിച്ചിരുന്നു. ആയത് ഈ കാര്യാലയത്തിൽ നിന്നും ഷോല നാഷണൽ പാർക്ക് അസ്സെസ്സന്റ് വൈൽഡ് ലൈഫ് വാർഡൻ പരിശോധനകൾക്കായി നൽകിയിരുന്നു. തുടർന്ന് ഷോല നാഷണൽ പാർക്ക് അസ്സെസ്സന്റ് വൈൽഡ്‌ലൈഫ് വാർഡൻ അപേക്ഷകൾ പരിശോധിച്ച് ഫോം ബി സമർപ്പിച്ചിട്ടുണ്ട്. ആയതിൽ മേൽ പദ്ധതി ആദിവാസി സമൂഹത്തിന്റെ ഉന്നമനത്തിനായാണെന്നും ആയതിലേയ്ക്കായി 0.365 ഹെക്ടർ സ്ഥലമാണ് ആവശ്യമായിട്ടുള്ളതെന്നും ടി പദ്ധതിക്ക് അനുവാദം നൽകാവുന്നതാണെന്നും ശുപാർശ ചെയ്തിട്ടുണ്ട്.

കൂടാതെ മേൽ പദ്ധതി പ്രവർത്തനങ്ങൾക്ക് തടസ്സമായി നിൽക്കുന്ന 17 മരങ്ങൾ മുറിയ്ക്കേണ്ടി വരുന്നതാണെന്നും പരിശോധനപ്രകാരം, ആവാസ വ്യവസ്ഥയ്ക്ക് കോട്ടം വരുത്തേണ്ടിവരുകയോ ആവശ്യമില്ല എന്നും ആദിവാസി ജനസമൂഹത്തിന്റെ ഉന്നമനത്തിനുള്ള ഈ പ്രൊപ്പോസൽ നിലവിലുള്ള നിയമവ്യവസ്ഥയ്ക്ക് വിധേയമായി അനുഭാവപൂർവ്വം പരിഗണിക്കാവുന്നതാണെന്നും അസി. വൈൽഡ് ലൈഫ് വാർഡൻ ഷോല നാഷണൽ

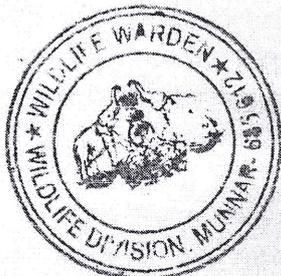
പാർക്ക്സ് സൂചന (4),(5) എന്നിവ പ്രകാരം ശുപാർശ ചെയ്തിട്ടുണ്ട്. വനാവകാശ നിയമം (Scheduled Tribes & Other Traditional Forest Dwellers Right Act) 2006 സെക്ഷൻ 3 (2) പ്രകാരം ആദിവാസി സമൂഹത്തിന്റെ ക്ഷേമ പ്രവർത്തനങ്ങൾക്ക് 1 (ഒന്ന്) ഹെക്ടറിൽ താഴെയുള്ള വനഭൂമി ഉപയോഗിക്കുന്നതിന് അനുവദിക്കാവുന്നതും, ഒരു ഹെക്ടറിൽ നിന്നും പരമാവധി 75 മരങ്ങൾ മുറിക്കാവുന്നതാണ്.

മേൽ സാഹചര്യത്തിൽ ഷോല നാഷണൽ പാർക്ക്സ് അസി. വൈൽഡ്‌ലൈഫ് വാർഡന്റെ ഫോം ബി പ്രൊപ്പോസലും പരിശോധനാ റിപ്പോർട്ടും യൂസർ ഏജൻസിയുടെ ഫോം എ യും ഉൾക്കൊള്ളുന്നതീരുമാനവും പരിഗണിച്ചും Scheduled Tribes & Other Traditional Forest Dwellers Right Act 2006 സെക്ഷൻ 3 (2) പ്രകാരവും ആനുമതിക്കേണ്ട നാഷണൽ പാർക്കിന്റെ അധീനതയിൽപ്പെട്ട വത്സപ്പെട്ടിടുത്തിയിൽ ഇൽ ജീവൻ പദ്ധതിപ്രകാരം കുടിവെള്ള പദ്ധതി നടപ്പാക്കുന്നതിനായി 0.365 ഹെക്ടർ സ്ഥലം താഴെപ്പറയുന്ന നിബന്ധനകളോടെ അനുവദിച്ചു കൊണ്ട് മൂന്നാർ വൈൽഡ്‌ലൈഫ് വാർഡനായ വിനോദ് എസ് വി (418430) എന്ന ഞാൻ ഇതിനാൽ ഉത്തരവാകുന്നു.

നിബന്ധനകൾ

1. അനുവദിച്ച വനഭൂമി മുകളിൽ സൂചിപ്പിച്ച ആവശ്യത്തിനല്ലാതെ മറ്റ് ആവശ്യങ്ങൾക്ക് ഉപയോഗിക്കുന്നത് അനുവദനീയമല്ല.
2. നിയമാനുസരണം അനുവാദം നൽകിയിട്ടുള്ള വത്സപ്പെട്ടിടുത്തിയിലെ 0.365 ഹെക്ടർ സ്ഥലത്ത് നിർദ്ദിഷ്ട പ്രവർത്തനങ്ങൾ ഉത്തരവ് തീയതി മുതൽ ഒരു വർഷത്തിനകം ആരംഭിക്കാത്തപക്ഷം ടി സ്ഥലങ്ങൾ വനംവകുപ്പ് തിരികെ ഏറ്റെടുക്കുന്നതാണ്.
3. പ്രസ്തുത വനഭൂമിയുടെ സ്റ്റാറ്റസ് വന്യജീവി സങ്കേതമായി തന്നെ തുടരുന്നതാണ്.
4. ജീവജാലങ്ങൾക്കോ പരിസ്ഥിതിക്കോ ടി പ്രവർത്തനം കാരണം യാതൊരു നാശനഷ്ടവും വരുത്തുവാൻ പാടുള്ളതല്ല.
5. അനുവാദം നൽകിയ ഭൂമി സർവ്വെ ചെയ്ത് വ്യക്തമായി അതിരുകൾ മാർക്ക് ചെയ്ത് സൂക്ഷിക്കേണ്ടതാണ്.
6. പാറപൊട്ടിക്കൽ (Blasting) അനുവദനീയമല്ല.
7. പദ്ധതി ആവശ്യത്തിനായി മുറിക്കുന്ന 17 മരങ്ങൾ പദ്ധതി ഏറ്റെടുത്തിട്ടുള്ള യൂസർ ഏജൻസിയുടെ ചിലവിൽ വനം വകുപ്പ് ഉദ്യോഗസ്ഥരുടെ മേൽ നോട്ടത്തിൽ മുറിച്ചു വീഴ്ത്തി ഇടമുറിച്ച് ക്ഷണങ്ങളാകി സ്ഥലത്തു നിന്നും നീക്കം ചെയ്ത് വാഹനം ചെന്നെത്തുന്ന സ്ഥലത്ത് അട്ടിവയ്ക്കേണ്ടതാണ്.

മേൽ പറഞ്ഞ നിബന്ധനകൾ ലംഘിക്കപ്പെടുന്ന പക്ഷം യാതൊരു മുന്നറിയിപ്പുമില്ലാതെ മേൽ ഉത്തരവ് റദ്ദാക്കപ്പെടുന്നതാണ്.



വിനോദ് എസ് വി
വൈൽഡ്‌ലൈഫ് വാർഡൻ
മൂന്നാർ

പകർപ്പ്: അഡീ. പ്രിൻസിപ്പൽ ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ (SA), തിരുവനന്തപുരം അവാർകളുടെ അറിവിലേയ്ക്കായി സമർപ്പിക്കുന്നു

പകർപ്പ്: ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ ടി ഫീൽഡ് ഡയറക്ടർ (പി.റ്റി), കോട്ടയത്തിന്റെ അറിവിലേയ്ക്കായി സമർപ്പിക്കുന്നു

പകർപ്പ്: കേരളാ വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ അറിവിനായി നൽകുന്നു.

പകർപ്പ്: അസി. വൈൽഡ്ലൈഫ് വാർഡൻ, ഷോല നാഷണൽ പാർക്ക്സിന്റെ അറിവിനും അനന്തര നടപടികൾക്കുമായി നൽകുന്നു. താങ്കൾ ഉത്തരവിൽ പറയുന്ന നിബന്ധനകൾ പാലിക്കുന്നതിനായി ഉപഭോക്താക്കളുമായി ആവശ്യമായ ഉടമ്പടി വയ്ക്കേണ്ടതും പ്രസ്തുത ജോലിയുടെ പുരോഗതി വിവരം യഥാസമയം ഈ ഓഫീസിൽ റിപ്പോർട്ട് ചെയ്യേണ്ടതുമാണ്.

പകർപ്പ്: ട്രൈബൽ ഡവലപ്മെന്റ് ഓഫീസർ അടിമാലിയുടെ അറിവിനായി നൽകുന്നു.

വൈൽഡ്‌ലൈഫ് വാർഡൻ, വൈൽഡ്‌ലൈഫ് ഡിവിഷൻ, മൂന്നാറിന്റെ

നടപടി ഉത്തരവ്

(ഹാജർ:വിനോദ് എസ് വി - 418430)

വിഷയം: വട്ടവട ഗ്രാമ പഞ്ചായത്തിൽ ഉൾപ്പെടുന്ന വൽസപ്പെട്ടിക്കുടിയിൽ ജൽ ജീവൻ പദ്ധതി പ്രകാരം കുടിവെള്ള പദ്ധതി നടപ്പാക്കുന്നതിനുള്ള അപേക്ഷ- വനാവകാശ നിയമം 2006 പ്രകാരം അനുമതി നൽകുന്നത്- സംബന്ധിച്ച്.

- സൂചന:
1. വനാവകാശ നിയമം 2006
 2. കേരളാ വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ 27.12.2022 തീയതിയിലെ ഫോം എ അപേക്ഷ
 3. വട്ടവട ഗ്രാമ പഞ്ചായത്തിലെ വത്സപ്പെട്ടി കുടിയിൽ 27.11.2022 ൽ കുടിയ ഉറുകൂട്ട യോഗ തീരുമാനങ്ങൾ
 4. അസി. വൈൽഡ്‌ലൈഫ് വാർഡൻ, ഷോല നാഷണൽ പാർക്ക്സിന്റെ 10.03.2023 ലെ ഫോം ബി റിപ്പോർട്ട്
 5. ഈ ഓഫീസിലെ 03.04.2023 ലെ ഇതേ നമ്പർ നടപടി ഉത്തരവ്
 6. കേരളാ വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ 27.11.2023 തീയതിയിലെ AEE/JJM/Vatatvada/2021-22 നമ്പർ കത്തും പദ്ധതി റിപ്പോർട്ടും.

ഉത്തരവ് നമ്പർ എ 45/2023 തീയതി : 18.12.2023

ഷോല നാഷണൽ പാർക്ക്സിന്റെ അധികാര പരിധിയിൽ വരുന്നതും വട്ടവട ഗ്രാമ പഞ്ചായത്തിൽ ഉൾപ്പെട്ടതുമായ വൽസപ്പെട്ടിക്കുടിയിൽ ജൽ ജീവൻ മിഷൻ പ്രകാരം കുടിവെള്ള പദ്ധതികായി വനാവകാശ നിയമ പ്രകാരം അനുമതി ലഭിക്കുന്നതിന് സൂചന (2) പ്രകാരം അപേക്ഷ സമർപ്പിച്ചിട്ടുണ്ട്. ടി അപേക്ഷ പരിശോധിച്ചതിൽ വൽസപ്പെട്ടിക്കുടിയിൽ നിലവിൽ കുടിവെള്ള പദ്ധതികൾ ഒന്നുതന്നെ ഇല്ലാത്തതിനാലാണ് മേൽ പദ്ധതികായി അപേക്ഷ സമർപ്പിച്ചിരിക്കുന്നത്. ആയതിലേയ്ക്കായി കേരളാ വാട്ടർ അതോറിറ്റിയുടെ കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ, ഫോം എ, ഉറുകൂട്ടത്തിന്റെ മിനിസ്സിന്റെ പകർപ്പ്, മാപ്പ്, സ്കീമാറ്റിക് ഡയഗ്രാം എന്നിവ സമർപ്പിച്ചിരുന്നു. ആയത് ഈ കാര്യാലയത്തിൽ നിന്നും ഷോല നാഷണൽ പാർക്ക് അസ്സിസ്റ്റന്റ് വൈൽഡ് ലൈഫ് വാർഡൻ പരിശോധന കൾക്കായി നൽകിയിരുന്നു. തുടർന്ന് ഷോല നാഷണൽ പാർക്ക് അസ്സിസ്റ്റന്റ് വൈൽഡ്‌ലൈഫ് വാർഡൻ അപേക്ഷകൾ പരിശോധിച്ച് ഫോം ബി സമർപ്പിച്ചിട്ടുണ്ട്. ആയതിൽ മേൽ പദ്ധതി ആദിവാസി സമൂഹത്തിന്റെ ഉന്നമനത്തിനായാണെന്നും ആയതിലേയ്ക്കായി 0.365 ഹെക്ടർ സ്ഥലമാണ് ആവശ്യമായിട്ടുള്ളതെന്നും ടി പദ്ധതിക്ക് അനുവാദം നൽകാവുന്നതാണെന്നും ശുപാർശ ചെയ്തിട്ടുണ്ട്.

കൂടാതെ മേൽ പ്രവർത്തനങ്ങൾക്കായി മരങ്ങൾ മുറിയ്ക്കേണ്ടി വരികയോ, ആവാസ വ്യവസ്ഥയ്ക്ക് കോട്ടം വരുത്തേണ്ടിവരുകയോ ആവശ്യമില്ല എന്നും ആദിവാസി ജനസമൂഹത്തിന്റെ ഉന്നമനത്തിനുകുന്ന ഈ പ്രൊപ്പോസൽ നിലവിലുള്ള നിയമവ്യവസ്ഥയ്ക്ക് വിധേയമായി അനുഭാവപൂർവ്വം പരിഗണിക്കാവുന്നതാണെന്നും അസി. വൈൽഡ് ലൈഫ് വാർഡൻ ഷോല നാഷണൽ പാർക്ക്സ് ശുപാർശ ചെയ്തിട്ടുണ്ട്. വനാവകാശ നിയമം (Scheduled Tribes & Other Traditional Forest Dwellers Right Act) 2006 സെക്ഷൻ 3 (2) പ്രകാരം ആദിവാസി സമൂഹ

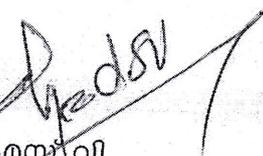
ത്തിന്റെ ക്ഷേമ പ്രവർത്തനങ്ങൾക്ക് 1 (ഒന്ന്) ഹെക്ടറിൽ താഴെത്തുള്ള വനഭൂമി ഉപയോഗിക്കുന്നതിന് അനുമതിയുണ്ടെന്നാണ്.

മേൽ സാഹചര്യത്തിൽ ക്ഷേമ നാഷണൽ പാർക്ക്സ് അസി. വൈൽഡ്‌ലൈഫ് വാർഡന്റെ ഫോം ബി പ്രൊപ്പോസലും പരിശോധനാ റിപ്പോർട്ടും യൂസർ എജൻസിയുടെ ഫോം എ യും ഉൾക്കൊള്ളുന്നതുമായ പരിഗണിച്ചും Scheduled Tribes & Other Traditional Forest Dwellers Right Act 2006 സെക്ഷൻ 3 (2) പ്രകാരവും ആനുമതിയോടെ നാഷണൽ പാർക്കിന്റെ അധീനതയിൽപ്പെട്ട വൽസപ്പെട്ടിയിൽ ജൽ ജീവൻ പദ്ധതിപ്രകാരം കുടിവെള്ള പദ്ധതി നടപ്പാക്കുന്നതിനായി 0.365 ഹെക്ടർ സ്ഥലം താഴെപ്പറയുന്ന നിബന്ധനകളോടെ അനുമതിയുള്ള കോണ്ട് മൂന്നാർ വൈൽഡ്‌ലൈഫ് വാർഡനായ വിനോദ് എസ് വി. (418430) എന്ന ഞാൻ ഇതിനാൽ ഉത്തരവാകുന്നു.

നിബന്ധനകൾ

1. അനുമതിയുള്ള വനഭൂമി മുകളിൽസൂചിപ്പിച്ച ആവശ്യത്തിനല്ലാതെ മറ്റ് ആവശ്യങ്ങൾക്ക് ഉപയോഗിക്കുന്നത് അനുമതിയില്ല.
2. നിയമാനുസരണം അനുമതിയുള്ള വൽസപ്പെട്ടിയിൽ 0.365 ഹെക്ടർ സ്ഥലത്ത് നിർദ്ദിഷ്ട പ്രവർത്തനങ്ങൾ ഉത്തരവ് തീയതി മുതൽ ഒരു വർഷത്തിനകം ആരംഭിക്കാത്തപക്ഷം ടി സ്ഥലങ്ങൾ വനംവകുപ്പ് തിരികെ ഏറ്റെടുക്കുന്നതാണ്.
3. പ്രസ്തുത വനഭൂമിയുടെ സ്റ്റാറ്റസ് വന്യജീവി സങ്കേതമായി തന്നെ തുടരുന്നതാണ്.
4. ജീവജാലങ്ങൾക്കോ പരിസ്ഥിതിക്കോ ടി പ്രവർത്തനം കാരണം യാതൊരു നാശനഷ്ടവും വരുത്തുവാൻ പാടുള്ളതല്ല.
5. അനുമതിയുള്ള ഭൂമി സർവ്വെ ചെയ്ത് വ്യക്തമായി അതിരുകൾ മാർക്ക് ചെയ്ത് സൂക്ഷിക്കേണ്ടതാണ്.
6. പാറപൊട്ടിക്കൽ (Blasting) അനുമതിയില്ല.

മേൽ പറഞ്ഞ നിബന്ധനകൾ ലംഘിക്കപ്പെടുന്ന പക്ഷം യാതൊരു മുന്നറിയിപ്പുമില്ലാതെ മേൽ ഉത്തരവ് റദ്ദാക്കപ്പെടുന്നതാണ്.


 വിനോദ് എസ് വി
 വൈൽഡ്‌ലൈഫ് വാർഡൻ
 മൂന്നാർ

- പകർപ്പ്: അഡീ. പ്രിൻസിപ്പൽ ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ (SA), തിരുവനന്തപുരം അവാർകളുടെ അറിവിലേയ്ക്കായി സമർപ്പിക്കുന്നു
- പകർപ്പ്: ചീഫ് ഫോറസ്റ്റ് കൺസർവേറ്റർ & ഫീൽഡ് ഡയറക്ടർ (പി.റ്റി), കോട്ടയത്തിന്റെ അറിവിലേയ്ക്കായി സമർപ്പിക്കുന്നു
- പകർപ്പ്: കേരള വാട്ടർ അതോറിറ്റി കട്ടപ്പന പ്രോജക്ട് ഡിവിഷൻ എക്സിക്യൂട്ടീവ് എഞ്ചിനീയറുടെ അറിവിനായി നൽകുന്നു.
- പകർപ്പ്: അസി. വൈൽഡ്‌ലൈഫ് വാർഡൻ, ക്ഷേമ നാഷണൽ പാർക്ക്സിന്റെ അറിവിനും അനന്തര നടപടികൾക്കുമായി നൽകുന്നു. താങ്കൾ ഉത്തരവിൽ പറയുന്ന നിബന്ധനകൾ

കൾ പാലിക്കുന്നതിനായി ഉപഭോക്താക്കളുമായി ആവശ്യമായ ഉടമ്പടി വയ്ക്കേണ്ടതും പ്രസ്തുത ജോലിയുടെ പുരോഗതി വിവരം യഥാസമയം ഈ ഓഫീസിൽ റിപ്പോർട്ട് ചെയ്യേണ്ടതുമാണ്.

✓

Proceeding Order of The Wildlife Warden, Wildlife Division, Munnar

(Present: Vinod S V - 418430)

Subject: Application for Implementation of Drinking Water Scheme under Jal Jeevan Mission at Valsapetikudi under Vattavada Grama Panchayat - Grant of Permission under Forest Rights Act 2006

References:

1. Forest Rights Act 2006
2. Form A application dated 27.12.2022 from The Executive Engineer, Kerala Water Authority, Project Division Kattappana
3. Oorukootta meeting Resolutions held on 27.11.2022 at Valsapetikudi, Vattavada Grama Panchayat
4. Form B Report dated 10.03.2023 by The Assistant Wildlife Warden, Shola National Parks
5. Order dated 03.04.2023 from this office
6. Kerala Water Authority Kattappana Project Division Executive Engineer's letter No. AEE/JJM/Vattavada/2021-22 dated 27.11.2023 and project report

Order No. A 45/2023 Dated: 18.12.2023

An application has been submitted under reference (2) for obtaining permission under the Forest Rights Act for the drinking water Project under the Jal Jeevan Mission at Valsapetikudi, within the jurisdiction of Shola National Parks and included in the Vattavada Grama Panchayat. Upon examination of the application, the Kattappana Project Division Executive Engineer of the Kerala Water Authority submitted Form A, a copy Oorukoottam minutes, a map, and a schematic diagram for the application due to the absence of a drinking water project in Valsapetikudi. This office handed over the documents to the Shola National Park Assistant Wildlife Warden for inspection. The Assistant Wildlife Warden verified the applications and submitted Form B, recommending the scheme for the betterment of the tribal community and stating that 0.365 hectares of land is required for the project and can be permitted.

Additionally, the Assistant Wildlife Warden of Shola National Parks recommended that the activities do not require tree cutting or habitat damage and that this proposal can be sympathetically considered for the betterment of the tribal people under the existing legal system. According to Section 3 (2) of the Scheduled Tribes & Other Traditional Forest

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**EXECUTIVE ENGINEER
PROJECT DIVISION
KERALA WATER AUTHORITY**



Dwellers Rights Act, 2006, the use of forest land less than 1 hectare can be allowed for the welfare activities of the tribal community.

In light of the above, the Shola National Parks Assistant Wildlife Warden's Form B proposal and inspection report, the User Agency's Form A, and the Oorukootta meeting decision, and in accordance with Section 3 (2) of the Scheduled Tribes & Other Traditional Forest Dwellers Rights Act 2006, I, Vinod SV (418430), Wildlife Warden, Munnar, hereby authorize the use of 0.365 hectares of land for the implementation of the drinking water project under the Jal Jeevan Mission at Valsapetikudi under the Anamudishola National Park, with the following conditions:

Conditions:

1. The allotted forest land shall not be used for purposes other than those mentioned above.
2. If the specified works on the 0.365-hectare area under Valsapetikudi, as permitted under the Act, are not started within one year from the date of this order, the sites will be taken back by the Forest Department.
3. The status of the said forest land shall remain as a wildlife sanctuary.
4. No damage should be caused to living organisms or the environment due to the activity.
5. The land granted should be surveyed, clearly demarcated, and maintained.
6. Blasting is not allowed.

If the above conditions are violated, this order will be cancelled without any warning.

Vinod S V

Wildlife Warden, Munnar

Copy:

- For the information of Additional Principal Chief Conservator of Forests (SA), Thiruvananthapuram
- For the information of Chief Forest Conservator & Field Director (PT), Kottayam
- Issued for the information of Executive Engineer, Kattappana Project Division, Kerala Water Authority

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**EXECUTIVE ENGINEER
PROJECT DIVISION
KERALA WATER AUTHORITY**



- To The Assistant Wildlife Warden, Shola National Parks for information and follow-up. Necessary agreements should be made with the consumers to comply with the terms mentioned in the order. and progress information of the said work should be reported to this office in time.

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**EXECUTIVE ENGINEER
PROJECT DIVISION
KERALA WATER AUTHORITY**



Proceeding Order of The Wildlife Warden, Wildlife Division, Munnar

(Present: Vinod S V - 418430)

Subject: Application for implementation of drinking water scheme under Jal Jeevan Mission at Valsapetikudi in Vattavada Grama Panchayat - Grant of permission under Forest Rights Act 2006 - regarding

References:

1. Forest Rights Act 2006
2. Form A application of the Executive Engineer, Kerala Water Authority, Project Division, Kattappana dated 27.12.2022
3. Form A Application of the Executive Engineer, Kerala Water Authority Project, Division, Kattappana dated 26.03.2024
4. Oorukootta meeting Resolutions held on 27.11.2022 at Valsapetikudi, Vattavada Gram Panchayat
5. Form B Report of The Assistant Wildlife Warden, Shola National Parks dated 10.03.2023
6. Form B Report of The Assistant Wildlife Warden, Shola National Parks dated 05.04.2024

Order No. A 45/2023 dated: 22.04.2024

In Valsapetikudi, which falls under the jurisdiction of Shola National Park and is included in Vattavada Grama Panchayat, applications have been submitted under the Jal Jeevan Mission to obtain permission under the Forest Rights Act for the drinking water project and, as indicated in (3), to cut 17 trees in the project area that are obstructing the project. After reviewing the applications, the application for the above project has been submitted due to the absence of a drinking water project in Valsapetikudi at present. The Executive Engineer of the Kattappana Project Division, Kerala Water Authority, had submitted Form A, a copy of the minutes of Oorukoottam, a map, and a schematic diagram. This office handed over the documents to the Shola National Park Assistant Wildlife Warden for inspection. The Shola National Park Assistant Wildlife Warden verified the applications and submitted Form B, recommending the project for the upliftment of the tribal community and stating that 0.365 hectares of land is required for the project, which can be allowed.

In addition, the Assistant Wildlife Warden of Shola National Parks has recommended, as per indications (4) and (5), that 17 trees obstructing the above project activities need to be

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PROJECT DIVISION
KERALA WATER AUTHORITY
KATTAPPANA**



cut. According to the inspection, there is no need to damage the habitat, and this proposal for the betterment of the tribal people can be sympathetically considered under the existing legal system. According to Section 3 (2) of the Scheduled Tribes & Other Traditional Forest Dwellers Rights Act, 2006, forest land less than 1 hectare can be used for the welfare of the tribal community, and a maximum of 75 trees can be cut from one hectare.

In light of the above circumstances, the Shola National Parks Assistant Wildlife Warden's Form B proposal and inspection report, the User Agency's Form A, and the Oorukootta meeting decision have been considered. As per Section 3 (2) of the Scheduled Tribes & Other Traditional Forest Dwellers Rights Act, 2006, J. Vinod SV (418430), Wildlife Warden, Munnar, hereby grant permission for the use of 0.365 hectares of land for the implementation of the drinking water scheme under the Jal Jeevan Scheme at Valsapetikudi under Anamudishola National Park, subject to the following conditions:

Conditions:

1. The allotted forest land is not allowed to be used for purposes other than those mentioned above.
2. The Forest Department will take back the 0.365 hectares of land in Valsapetikudi as permitted under the Act unless the specified works are started within one year from the date of the order.
3. The status of the said forest land will remain as a wildlife sanctuary.
4. There should be no damage to living organisms or the environment due to the activity.
5. The land granted should be surveyed, clearly demarcated, and maintained.
6. Blasting is not allowed.
7. The 17 trees cut for the purpose of the project shall be removed from the site by the user who has undertaken the project, at the agency's expense, under the supervision of the Forest Department officials. The trees should be cut into pieces, removed from the site, and disposed of at the vehicle access point.

If the above conditions are violated, this order will be cancelled without any warning.

Vinod S V
Wildlife Warden, Munnar

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EXECUTIVE ENGINEER
PROJECT DIVISION
WEDDIA WATER AUTHORITY



Copy:

1. For the information of Additional Principal Chief Forest Conservator (SA), Thiruvananthapuram
2. For the information of Chief Forest Conservator & Field Director (PT), Kottayam
3. Issued for the information of Executive Engineer, Kattappana Project Division, Kerala Water Authority
4. The Assistant Wildlife Warden, Shola National Parks, for information and follow-up. Necessary agreements should be made with the clients to comply with the terms mentioned in the order, and progress information of the said work should be reported to this office in time.
5. Provided for the information of The Tribal Development Officer, Adimali

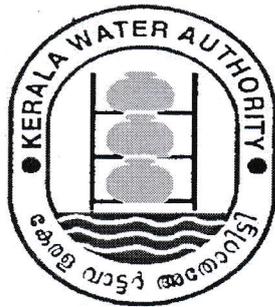
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**EXECUTIVE ENGINEER
PROJECT DIVISION
KERALA WATER AUTHORITY**



KERALA WATER AUTHORITY

JAL JEEVAN MISSION



**JJM –CWSS TO DESIGN AND CONSTRUCTION OF RCC WEIR
ACROSS CHILANDHIYAR RIVER AT CHILANDHIYAR IN**

VATTAVADA PANCHAYAT

DETAILED ENGINEERING REPORT

IDUKKI DISTRICT

NOVEMBER – 2023

PROJECT AT A GLANCE

- 1 Name of the Project : JJM – CWSS TO
Design and construction of RCC weir
across Chilandhiyar river at
Chilandhiyar in Vattavada
Panchayathu
- 2 Name of the District : Idukki
- 3 Name of the state : Kerala
- 4 Name of the Taluk : Devikulam
- 5 Name of Consistuecy : Devikulam
- 6 Name of Panchayath : Vattavada
- 7 Area Covered : 67.81 sq.km
- 8 No of Household : 2850 Nos
- 9 Population : 5697 Nos
- 10 Proposed FHTC : 617 Nos
- 11 Project cost : 205 Lakhs


**CHIEF ENGINEER
KERALA WATER AUTHORITY
CENTRAL REGION
KOCHI-11**

VATTAVADA PANCHAYATH

Introduction

Vattavada Panchayath is situated at the Southern part of the Idukki district in Devikulam Taluk. Total population as per 2011 census is 5697. This project is meant for providing water service connections in various wards of Vattavada gramapanchayath under JalJeevan Mission under the head augmentable, retrofittable and extensible from the existing distribution lines and from short extensions.

Proposed schemes

Water supply in Majority area of Vattavada Panchayth is covered by various JalaNidhi schemes. Jala Jeevan mission aims to provide water supply to the remaining areas, where the Jala Nidhi schemes does not exists. The primary source of water selected for this project is Chilanthiyar water falls . A weir need to be constructed across the water falls for ponding to ensure raw water pumping. The raw water is pumped and treated in proposed 3 MLD water treatment plant near Chilanthiyar Karuppasami temple and then it is distributed to different areas of Vattavada Panchayath. The proposed scheme aims to provide Functional house hold tap connection to 617 households of Vattavada panchayath.

Need of the proposal

Raw water source selected for the proposed scheme at Vattavada is the Chilanthiyar water falls. Raw water need to be pumped from the water falls to the proposed water treatment plant at Chilanthiyar. Proper ponding of water need to be provided at the water falls for ensuring proper pumping of raw water. A weir need to be constructed across the water falls for ponding. A weir is proposed across the water falls for length of 45 meter and average height of 1 meters.

Project Cost

The estimate is prepared for construction of weir across the water falls. The total Estimate amount comes to Rs205 Lakhs .


CHIEF ENGINEER
KERALA WATER AUTHORITY
CENTRAL REGION
KOGCHI-11

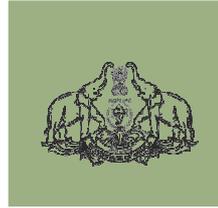


ANNEXURE V

Soil Investigation for JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada



KERALA ENGINEERING RESEARCH INSTITUTE
PEECHI, THRISSUR
2023



IRRIGATION DEPARTMENT
Government Of Kerala

*Soil Investigation Report – JJM- Water supply
scheme to Vattavada Panchayath for construction
of weir across Chilanthiyar Waterfalls in
Vattavada.*

2023



KERALA ENGINEERING RESEARCH INSTITUTE
Peechi

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3.	<i>Description of Site</i>	1
4.	<i>Purpose And Scope of Work</i>	3
5.	<i>Geotechnical Investigation</i>	3
6.	<i>Core Recovery Ratio (CRR) And Rock Quality Designation (RQD)</i>	8
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Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthiyar Waterfalls in Vattavada"

109/2023

1. Introduction

This report was prepared based on letter No.AEE/JJM/Vattavada /2021-2022 dated 14/10/2022 received from Executive Engineer, Project Division Kattapana,Vellayamkudy requesting a soil investigation for the proposed check dam across Chilanthiyar Waterfalls at Vattavada Grama Panchayath in Idukki District .This report presents the geotechnical characterization of the ground based on field and lab tests at bore hole locations of the proposed construction. The total width of the stream at the proposed location is 22 m. Three borehole was drilled along the stream portion (BH1,BH2, and BH3). Two boreholes were excavated for retaining wall upstream portion (BH 4 & BH5, on the right bank).

2. Objective

To conduct a Soil Investigation for proposed check dam across Chilanthiyar Waterfalls in Vattavada Grama Panchayath in Idukki District.

3. Description of Site

The above prescribed weir is located across Chilanthiyar Waterfalls in Vattavada Grama Panchayath in Idukki District. The location of the boreholes were decided after the site visit conducted by officials of KERI and the officials of KWA, Project Division Kattapana,Vellayamkudy during the site visit on 17th October 2022. Existing site is in the upstream side of the Chilanthiyar Waterfalls. Exposed rock can be seen near the proposed location of site.

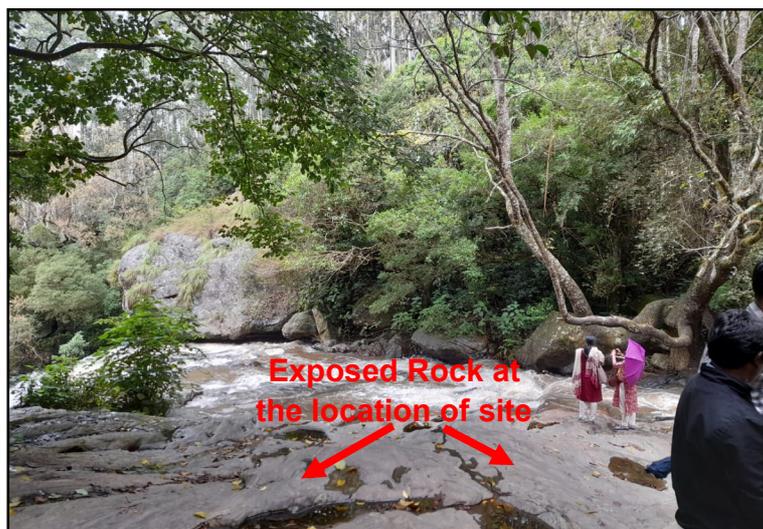


Fig.1 (a) Site condition

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

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Fig.1 (b) joint site inspection by KERI officials and KWA officials

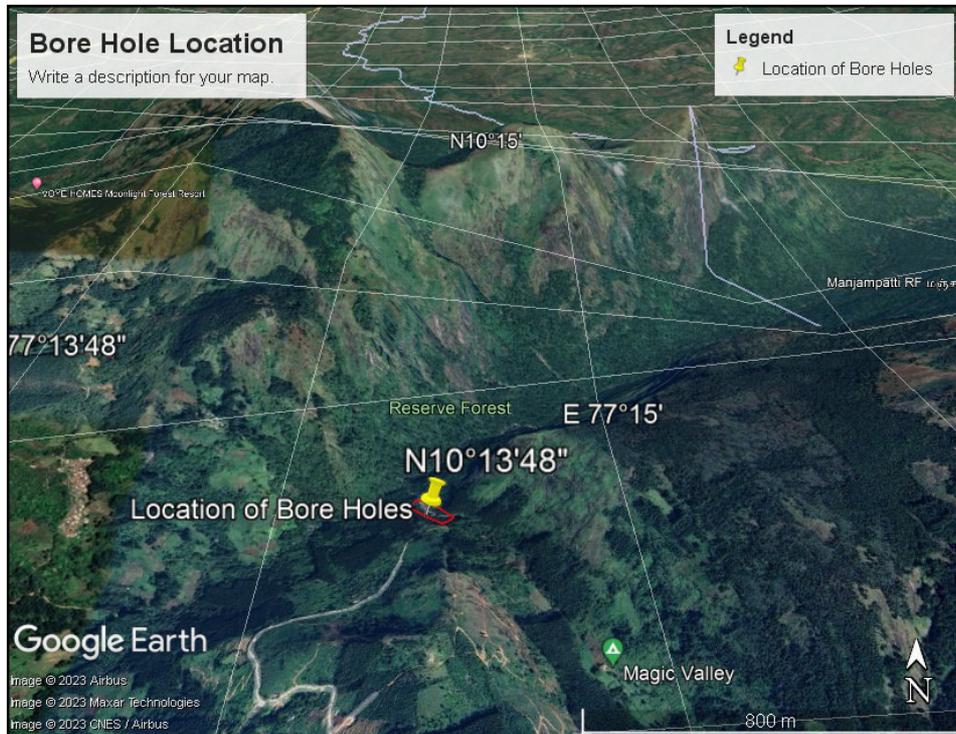


Fig. 2 Site map of the Borehole Location

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthiyar Waterfalls in Vattavada"

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4. Purpose And Scope of Work

The purpose of the present investigation is to evaluate the subsurface condition at various locations of the site and to conduct the laboratory test on the disturbed and undisturbed soil and rock core samples recovered from site and to determine the strength characteristics or compressive strength of the rock material .

The scope of work for the geotechnical investigation campaign is listed as follows:

- Mobilization of the boring rig with all necessary equipment and skilled personals for the fieldwork.
- Boring 5 numbers of boreholes of diameter 100 mm, with drilling equipment's in all types of soil till the Standard Penetration Test value is rebound or with coring of rock samples.
- Conducting Standard Penetration Test (SPT) at every 1.5m interval until rock coring
- Collecting disturbed/undisturbed samples in different strata.
- Transferring collected disturbed samples into airtight polythene bags with proper labeling and transportation to the laboratory.
- Removing the collected undisturbed soil sampler tube and sealing its ends with molten wax before transportation..
- Describing site investigation techniques..
- Preparing borehole logs and describing rock conditions.
- Conducting laboratory tests on the samples collected as per relevant Indian Standards and furnishing the results.
- Preparing and submitting the report along with field and laboratory results.

4. GEOTECHNICAL INVESTIGATION

Instrumentation division of Kerala Engineering Research Institute, Peechi mobilized a Rotary Calyx drilling boring plant to the site on January 23rd, 2023. However, due to heavy rain and extreme site conditions, the investigation works had to be postponed. Field works were eventually started on January 31st, 2023, and continued until February 10th, 2023. During the investigation, five boreholes with a diameter of 100 mm were made within the study region. Since the check dam location was finalized in an area with exposed rock, core drilling in rocks was carried out by the Calyx rotary machine using Nx size diamond-tipped drill bits.

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

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Bore Holes

BH1

The drilling process for Borehole BH1 began on January 31st, 2023, and was completed on February 1st, 2023. BH1 is located at the left abutment, 2 meters away from the bank along the alignment of the proposed weir at RL 1510.765 m. The top layer of soil is 15 cm, and hard rock begins after that and is drilled to a depth of 2.00 m through rock strata, up to a total depth of 2.15 m. Annexure I contains the details of the borehole log. Figure 3 below illustrates Borehole BH1.



Fig .3 BH1 is located at junction between left bank and stream portion along the alignment of proposed weir.

BH2

The drilling for Borehole BH2 began on February 1st, 2023, and was completed on February 2nd, 2023. BH2 is located 6 meters away from BH1, along the alignment of the proposed weir at a RL of 1509.96 m. Hard rock begins at ground level and drilled to a depth of 2.10 m through rock strata. Annexure I contains the details of the borehole log. Figure 4 below illustrates Borehole BH2.

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

109/2023



Fig.4 BH 2 is located at a distance of 6m away from BH1 along the alignment of proposed weir.

BH3

The drilling for Borehole BH3 began on February 3rd, 2023, and was completed on February 4th, 2023. BH3 is located on the upstream side of the left abutment, 8.8 m away from BH1, with a RL of 1510.670 m. Hard rock begins at ground level and drilled to a depth of 2.50 m through rock strata. Annexure I contains the details of the borehole log. Figure 5 below illustrates Borehole BH3.

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthiyar Waterfalls in Vattavada"

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Fig.5 BH 3 is located at left bank (upstream side of proposed check dam) at a distance of 8.8 m away from BH 1.

BH4

The drilling for Borehole BH4 began on February 6th, 2023, and was completed on February 7th, 2023. BH4 is located at the right abutment, 27 m away from BH1 along the alignment with a RL of 1509.915 m. There is a top layer of soil for 1.00 m. Hard rock begins at 1.00 m and drilled to a depth of 2.30 m through rock strata. At a depth of 2.30 m to 2.45 m, a soil layer was observed during drilling. Hard rock drilling started again from 2.45 m to a depth of 5.15 m. Annexure I contains the details of the borehole log. Figure 6 below illustrates Borehole BH4.

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthiyar Waterfalls in Vattavada"

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Fig.6 BH 4 is located at a distance of 22 m from BH1 along the alignment of proposed check dam

BH5

The drilling for Borehole BH5 began on February 8th, 2023, and was completed on February 9th, 2023. BH5 is located 17.50 m away from BH4 along the right abutment upstream side of the proposed weir with a RL of 1509.990 m. The top layer of soil is 0.75 m, and hard rock begins at 0.75 m and drilled to a depth of 2.50 m through rock strata. . Annexure I contains the details of the borehole log. Figure 7 below illustrates Borehole BH4.

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

109/2023

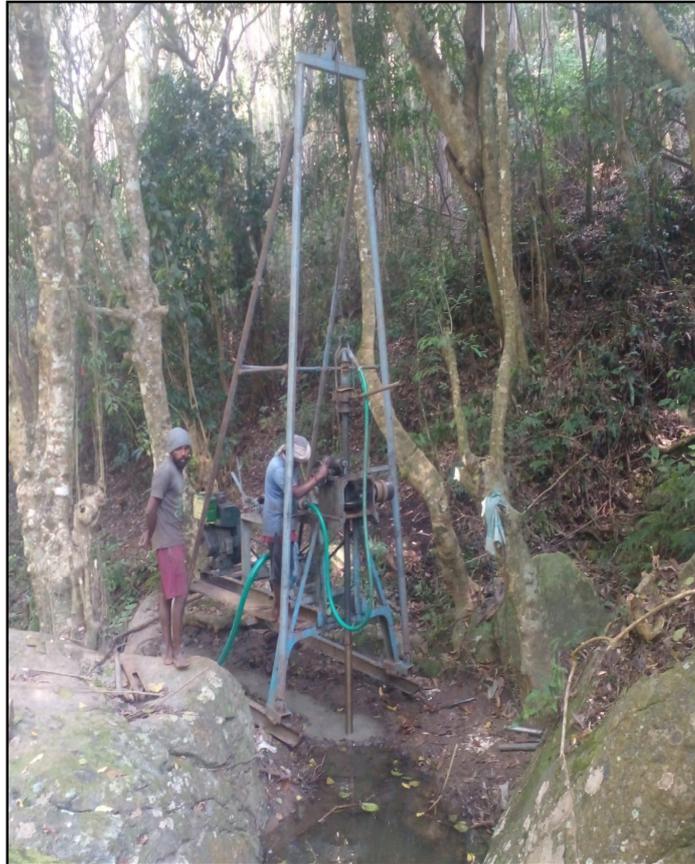


Fig.7 BH 5 is located at right bank (upstream side of proposed check dam) at a distance of 17.50 m away from BH 4.

5. CORE RECOVERY RATIO (CRR) AND ROCK QUALITY DESIGNATION (RQD)

At the drilling site, the cores were placed in core boxes upon withdrawal from the core barrel. The natural state of rock fractures was described using the core recovery ratio (CRR) and rock quality designation (RQD). Core recovery is defined as the sum of the lengths of all recovered core pieces expressed as a percentage of the length drilled. It should be measured and recorded to the nearest 2 percent, if possible. If the core is highly fragmented, the length of such portions is estimated by assembling the fragments and estimating the length of the core that the fragments represent. Sound rock typically yields high recoveries, often around 100 percent, while seamy or jointed rock may result in low recovery and badly broken cores. RQD is a modified core recovery percentage in which all sound core pieces over 10 cm long are counted as recovered

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

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and expressed as a percentage of the length drilled. Smaller pieces resulting from closer jointing, faulting, or weathering are discounted. As per IS 11315 (Part 11) - 1985 and IS 4464:2020 concerning RQD, the core quality is classified as shown in Table 1.

Table 1 Relationship between RQD and Core quality

RQD (percentage)	Core Quality
90-100	Excellent
75-90	Good
50-75	Fair
25-50	Poor
<25	Very poor

The rock core from the Vattavada site was recovered and transferred to the core box. The values of CRR and RQD of rock samples received from each borehole are shown in the corresponding bore log chart in Annexure 1. The rock samples collected from the site were handed over to Construction Materials Division of KERI for testing. The test result is attached in Annexure IV



Fig.8 Rock cores received from drilling kept in Core Box

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthiyar Waterfalls in Vattavada"

109/2023

6. REDUCED LEVELS OF BOREHOLES

The reduced levels of the boreholes are tabulated based on the temporary benchmark provided on the rock stratum in left bank near to borehole location, BH1 by Coastal Engineering Division ,KERI. (PT 6 - 745883.3622,131460.0588).



Fig.9 Location of temporary benchmark provided on the rock stratum in left bank

The reduced levels of the borehole locations are taken with the help of dumpy level and the results are tabulated in Table 2.



Fig.10 Conducting survey for finding reduced levels of boreholes

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

109/2023

TABLE 2: Location of bore hole with Rock Levels

Sl.No	Bore Hole	Location	RL of Ground level (m)	Depth of Hard Rock Level from GL (m)	RL of Rock Level (m)
1	BH1	745881.66, 1131463.3288	1510.765	0.15	1510.615
2	BH2	745884.60, 1131468.1958	1509.96	At GL	1509.96
3	BH3	745889.663, 1131459.526	1510.670	At GL	1510.670
4	BH4	745894.339, 1131487.352	1509.915	1.00	1508.915
5	BH5	745905.728, 1131473.592	1509.990	0.75	1509.24

The schematic diagram showing the strata of the proposed site for the construction of check dam is shown below. The drawings below in figure 11 and 12 show the nature of strata between boreholes BH1, BH2 & BH4 and BH3 & BH5 respectively.

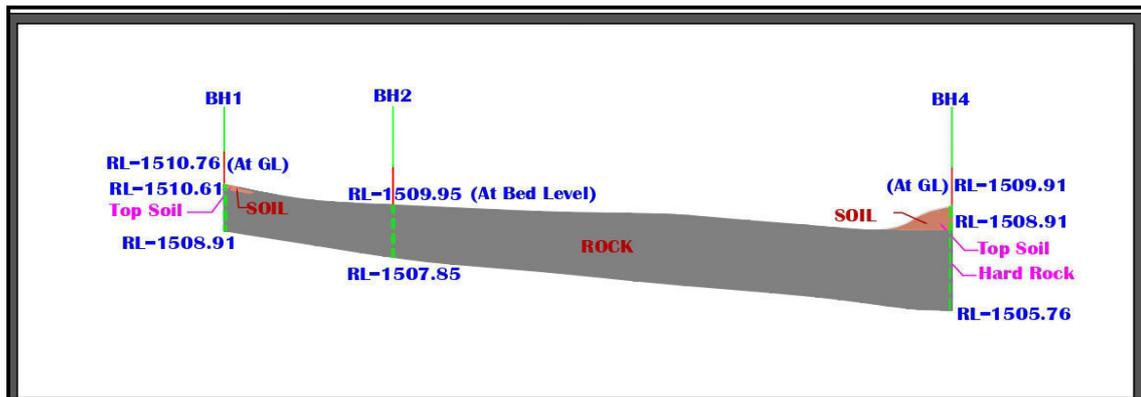


Fig.11. Schematic diagram showing the strata of site connecting Boreholes BH1, BH2 & BH4

Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"

109/2023

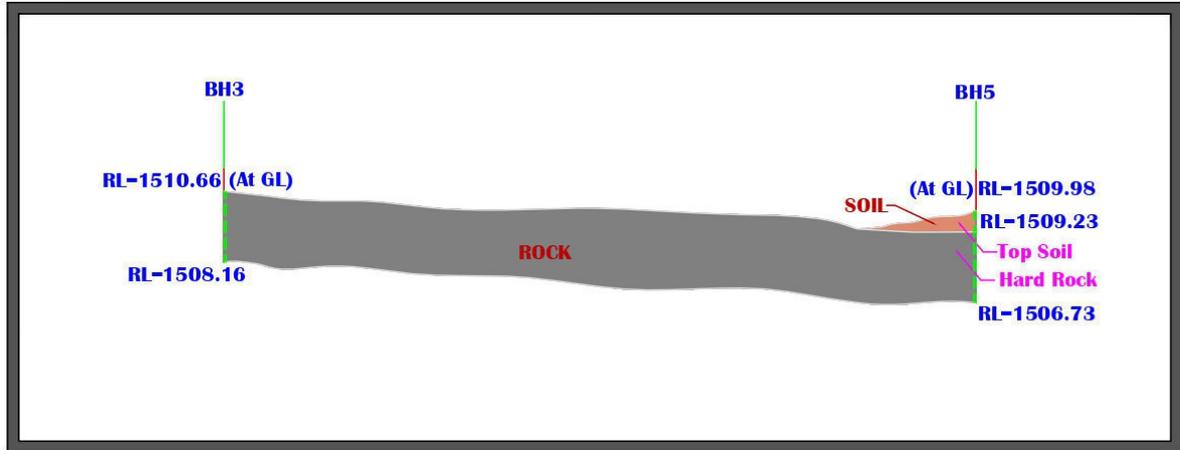


Fig.12. Schematic diagram showing the strata of site connecting Boreholes BH3 & BH5

After completion of the field work, samples were transported to CM lab for testing of rock samples respectively. The test results of the rock samples are attached in Annexure III.

[Type text]

Annexure I

BORE HOLE LOG

&

**DRAWINGS OF LOCATION
OF BORE HOLES**



CLIENT:		KERALA WATER AUTHORITY																
PROJECT:		Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"																
SITE:		Chilanthyar Waterfalls , Vattavada,Idukki District .																
BORE HOLE NO. : BH-1					Date of start :			31-01-2023										
REDUCED LEVEL :1510.76					Date of completion :			01./02./2023										
TYPE OF BORING: Rotary Drilling				COORDINATES :745881.66,1131463.3288														
Description of soil	Depth in m below GL	Thickness of layer m	Bore log	Standard Penetration Test				Graph of 'N' Value					ROCK			Remarks		
				Depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	Depth		C R R	R Q D
Soil	0 0.15	0.15		0.15														Top soil
Hard rock	0.80	0.65													0.80	83	76	Fresh Rock ,Thickly Bedded Layer .Granite rock
	1.85	1.05													1.05	90	75	Fresh Rock ,Thickly Bedded Layer .Granite rock
	2.15	0.30													1.85	93	93	Fresh Rock, Thickly Bedded Layer .Granite rock
Bore hole terminated at 2.15 m depth																		



CLIENT:		KERALA WATER AUTHORITY																	
PROJECT:		Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"																	
SITE:		Chilanthyar Waterfalls , Vattavada,Idukki District .																	
BORE HOLE NO. : BH-2					Date of start :			01.-01.-2023											
REDUCED LEVEL :1509.96					Date of completion :			02.-02.-2023											
TYPE OF BORING: Rotary Drilling			COORDINATES :745884.60,1131468.1958																
Description of soil	Depth in m below GL	Thickness of layer (m)	Bore log	Standard Penetration Test					Graph of 'N' Value					ROCK			Remarks		
				Depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	Depth	C R R		R Q D	
Hard rock	0 0.60	0.60																	Fresh Rock ,Thickly Bedded Layer. Granite rock
Hard rock	2.10	1.50																	Fresh Rock ,Thickly Bedded Layer. Granite rock
Bore hole terminated at 2.10m depth																			



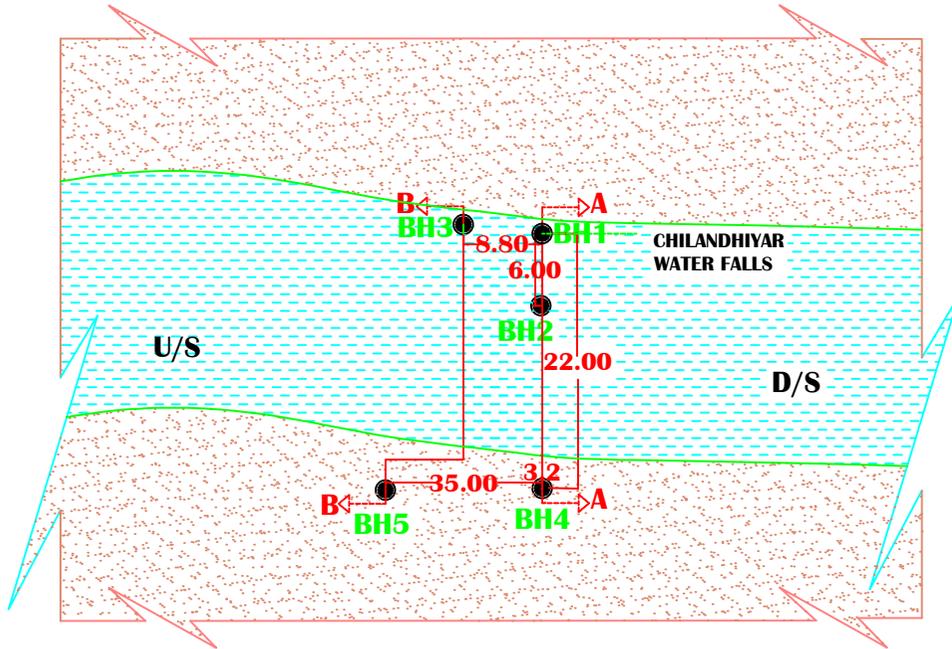
CLIENT:		KERALA WATER AUTHORITY																	
PROJECT:		Soil Investigation charges for the work "JJM Water supply scheme to Vattavada Panchayath for construction of weir across Chilanthyar Waterfalls in Vattavada"																	
SITE:		Chilanthyar Waterfalls , Vattavada,Idukki District .																	
BORE HOLE NO. : BH-3						Date of start :						03./02/2023							
REDUCED LEVEL :1510.67						Date of completion :						04./02/2023							
TYPE OF BORING: Rotary Drilling				COORDINATES :745889.663, 1131459.526															
Description of soil	Depth in m below GL	Thickness of layer m	Bore log	Standard Penetration Test					Graph of 'N' Value					ROCK			Remarks		
				Depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	Depth	C R R		R Q D	
Hard rock	0	0.90																	Fresh Rock ,Thickly Bedded Layer. Granite rock
	0.90																		
Hard rock		1.60																	Fresh Rock ,Thickly Bedded Layer. Granite rock
	2.50																		
Bore hole terminated at 2.50m depth																			



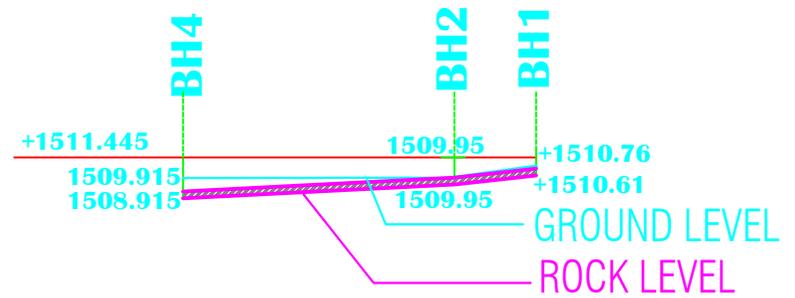
CLIENT:		KERALA WATER AUTHORITY																	
PROJECT:		"Soil Investigation for JJM - Water Supply Scheme to Vattavada Panchayath for Construct a weir across Chilanthiyar Waterfalls in Vattavada "																	
SITE:		Chilanthiyar Waterfalls , Vattavada,Idukki District .																	
BORE HOLE NO. : BH-4					Date of start :					06-02-2023									
REDUCED LEVEL :1509.91					Date of completion :					07-02-2023									
TYPE OF BORING: Rotary Drilling			COORDINATES :745894.339, 1131487.352																
Description of soil	Depth in m below GL	Thickness of layer m	Bore log	Standard Penetration Test					Graph of 'N' Value					ROCK			Remarks		
				Depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	Depth	CR R		R Q D	
Soil	0	1.00																	Top soil Layer
	1.0																		
Hard rock		1.30																	Rock layer
	2.30																2.30	65	60
Soil	2.45	0.15																	
Hard rock		1.70																	
	4.15																4.15	84	73
Hard rock		1.00																	
	5.15																5.15	100	100
Bore hole terminated at 5.15m depth																			



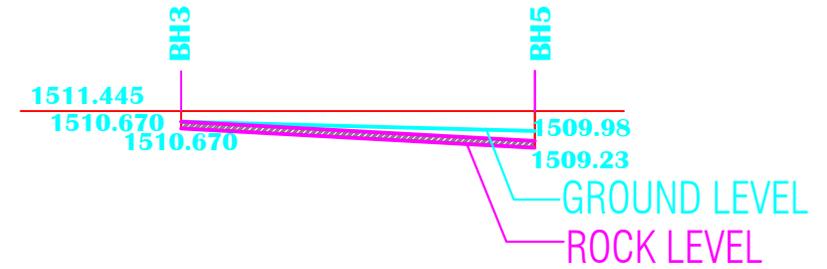
CLIENT:		KERALA WATER AUTHORITY																		
PROJECT:		"Soil Investigation for JJM - Water Supply Scheme to Vattavada Panchayath for Construct a weir across Chilanthiyar Waterfalls in Vattavada "																		
SITE:		Chilanthiyar Waterfalls , Vattavada,Idukki District .																		
BORE HOLE NO. : BH-5						Date of start :						08.-02-2023								
REDUCED LEVEL :1509.99						Date of completion :						09.-02-2023								
TYPE OF BORING: Rotary Drilling				COORDINATES :745905.728,1131473.592																
Description of soil	Depth in m below GL	Thickness of layer m	Bore log	Standard Penetration Test					Graph of 'N' Value					ROCK			Remarks			
				Depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	Depth	C R R		R Q D		
Soil	0 0.75	0.75																	Top soil	
Hard rock	2.25	1.50															2.25	93	93	Fresh Rock ,Thickly Bedded Layer. Granite rock
Hard rock	3.25	1.00															3.25	79	64	Fresh Rock ,Thickly Bedded Layer. Granite rock
Bore hole terminated at 3.25m depth																				



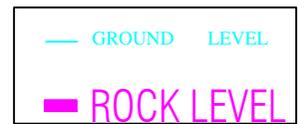
PLAN



SECTION-A A



SECTION-B B



CLIENT : IRRIGATION DEPARTMENT	 INSTRUMENTATION DIVISION K E R I, PEECHI
PROJECT : SOIL INVESTIGATION FOR JIM - Water supply scheme to Vattavada Panchayath for construct a weir across Chilanthiyar Waterfalls in Vattavada.	
TITLE : BORE HOLE SKETCH	
	DATE : 01/03/2023
	DRAWING NO :

[Type text]

Annexure II

**LABORATORY TEST ON ROCK
SAMPLES**

Sample #	CM 160/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	14-02-2023		Rev.#0	
Codal reference	IS 9143 -1979 (Reaffirmed 2021) and IS 4464-2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Name of the Customer : Deputy Director
Instrumentation Division
KERI, Peechi, Thrissur
[email:ddinstrumentationkeri@gmail.com](mailto:ddinstrumentationkeri@gmail.com)

TEST REPORT ON COMPRESSIVE STRENGTH OF ROCK SAMPLES

Test Sample Description : Rock Core samples-BH: 1

Sample received on : 03-02-2023

Customer Order/Ref. Date : DB-20/2022-23 dated 03-02-2023

Name of Work : *Soil Investigation for JJM -Water Supply scheme to Vattavada Panchayath for Construction of Weir across Chilanthiyar Waterfalls in Vattavada*

Scale of strength, based on uniaxial compressive test for strength characteristics of the rock materials is shown below

Table 1 Strength of Intact Rock Material
(Clause 3.6.2.3)

SI No.	Qualitative description	Compressive strength (Mpa)
(1)	(2)	(3)
i)	Extremely Weak	<1
ii)	Very Weak	1-5
iii)	Weak	5-25
iv)	Medium Strong	25-50
v)	Strong	50-100
vi)	Very Strong	100-250
vii)	Extremely Strong	>250

Terms in first Column () redefined according to ISO 14689*

Ref. IS 4464 -2020 Clause 3.6.2.3

Sample #	CM 160/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	14-02-2023		Rev.#0	
Codal reference	IS 9143 -1979 (Reaffirmed 2021) and IS 4464-2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Table 1. Compressive Strength Results

Identification Mark.	Weight g	Average Diameter, b (mm)	Length, h (mm)	h/b ratio	Breaking Load (kN)	Compressive Strength Cp (N/mm ²)
Sample BH-1	1	755	110.60	2	304.89	126.94
	2	710	110.80	2	251.73	104.43
	3	745	110.60	2	239.63	99.77
	4	690	110.60	2	228.83	95.27
	5	685	110.60	2	127.65	53.15

Photographs of samples from each borehole before and after testing



Sample #	CM 164/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	15-02-2023		Rev.#0	
Codal reference	IS: 1121 Part 1-2013 (Reaffirmed 2017) & IS 9143 -1979 (Reaffirmed 2021) and IS 4464-2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Name of the Customer : Deputy Director
Instrumentation Division
KERI, Peechi, Thrissur
[email:ddinstrumentationkeri@gmail.com](mailto:ddinstrumentationkeri@gmail.com)

TEST REPORT ON COMPRESSIVE STRENGTH OF ROCK SAMPLES

Test Sample Description : Rock Core samples-BH: 2 & 3

Sample received on : 10-02-2023

Customer Order/Ref. Date : DB-20/2022-23 dated 10-02-2023

Name of Work : *Soil Investigation for JJM -Water Supply scheme to Vattavada Panchayath for Construction of Weir across Chilanthiyar Waterfalls in Vattavada*

Scale of strength, based on uniaxial compressive test for strength characteristics of the rock materials is as shown below

Table 1 Strength of Intact Rock Material
(Clause 3.6.2.3)

Sl No.	Qualitative description	Compressive strength (Mpa)
(1)	(2)	(3)
i)	Extremely Weak	<1
ii)	Very Weak	1-5
iii)	Weak	5-25
iv)	Medium Strong	25-50
v)	Strong	50-100
vi)	Very Strong	100-250
vii)	Extremely Strong	>250

Terms in first Column () redefined according to ISO 14689*

Ref. IS 4464 -2020 Clause 3.6.2.3

Sample #	CM 164/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	15-02-2023		Rev.#0	
Codal reference	IS: 1121 Part 1-2013 (Reaffirmed 2017) & IS 9143 -1979 (Reaffirmed 2021) and IS 4464-2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Table 1. Compressive Strength Results

Identification Mark.	Weight g	Average Diameter b (mm)	Length h (mm)	h/b ratio	Breaking Load (kN)	Compressive Strength Cp (N/mm ²)	Corrected Compressive strength Cc for h/b =2 N/mm ²
Sample BH-2	1	710	108.93	2.00	137.15	59.0	59.0
	2	725	109.00	2.00	220.93	95.1	95.1
	3	435	66.63	1.22	228.06	98.1	90.9
Sample BH-3	1	700	109.14	2.00	124.75	53.6	53.6
	2	690	109.17	2.00	118.15	50.6	50.7
	3	695	109.00	2.00	116.07	49.8	49.8

Photographs of samples from each borehole before and after testing



Sample #	CM 165/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	15-02-2023		Rev.#0	
Codal reference	IS 9143 -1979 (Reaffirmed 2021) and IS 4464 -2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Name of the Customer : Deputy Director
Instrumentation Division
KERI, Peechi, Thrissur
[email:ddinstrumentationkeri@gmail.com](mailto:ddinstrumentationkeri@gmail.com)

TEST REPORT ON COMPRESSIVE STRENGTH OF ROCK SAMPLES

Test Sample Description : Rock Core samples-BH: 4 & 5

Sample received on : 10-02-2023

Customer Order/Ref. Date : DB-20/2022-23 dated 10-02-2023

Name of Work : *Soil Investigation for JJM -Water Supply scheme to Vattavada Panchayath for Construction of Weir across Chilanthyar Waterfalls in Vattavada*

Scale of strength, based on uniaxial compressive test for strength characteristics of the rock materials is as shown below

Table 1 Strength of Intact Rock Material

(Clause 3.6.2.3)

Sl No.	Qualitative description	Compressive strength (Mpa)
(1)	(2)	(3)
i)	Extremely Weak	<1
ii)	Very Weak	1-5
iii)	Weak	5-25
iv)	Medium Strong	25-50
v)	Strong	50-100
vi)	Very Strong	100-250
vii)	Extremely Strong	>250

Terms in first Column () redefined according to ISO 14689*

Ref. IS 4464 -2020 Clause 3.6.2.3

Sample #	CM 165/22-23	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-174
Date	15-02-2023		Rev.#0	
Codal reference	IS 9143 -1979 (Reaffirmed 2021) and IS 4464 -2020			

REPORT

Name of test: Compressive strength of Rock samples

Note: 1. CM Lab has not taken part in selecting samples for the test.

2. Results are valid only for the samples supplied at CM Lab by the applicant.

Table 1. Compressive Strength Results

Identification Mark.		Weight g	Average Diameter b (mm)	Length h (mm)	h/b ratio	Breaking Load (kN)	Compressive Strength Cp (N/mm ²)
Sample BH-4	1	675	54.5	109.0	2	153.01	65.59
	2	675	54.7	109.4	2	147.56	62.79
	3	695	54.5	109.0	2	135.55	58.11
	4	705	54.7	109.4	2	244.07	103.86
	5	690	54.5	109.0	2	205.98	88.30
Sample BH-5	1	720	54.5	109.0	2	185.27	79.42
	2	665	54.5	109.0	2	102.07	43.72
	3	705	54.5	109.0	2	123.36	52.88
	4	705	54.5	109.0	2	119.88	51.39

**BEFORE THE HON'BLE NATIONAL
GREEN TRIBUNAL
(SOUTHERN ZONE BENCH, CHENNAI)**

**ORIGINAL APPLICATION NO. 181 OF
2024**

In the matter of:
Tribunal on its own motion SUO MOTU
based on the News Item in 'The Times
of India', Chennai Edition dt:
20.05.2024, "Work on Checkdam in
Kerala stokes TN farmers' fears".

-VS-

The Chief Secretary to Govt. of Tamil
Nadu, Chennai and Ors.

----Respondent(s)

**REPORT FILED BY CHIEF
ENGINEER, KERALA WATER
AUTHORITY/ 3rd RESPONDENT**

**E.K. KUMARESAN,
Standing Counsel for Government
of kerala**

No.6, Indian Chambers (SICCI)
Annex Building, Ground Floor,
Esplanade, Chennai - 600 108.

Cell No: 95974 35955