

**IN THE HIGH COURT OF KERALA AT ERNAKULAM
PRESENT
THE HONOURABLE DR. JUSTICE A.K.JAYASANKARAN NAMBIAR
&
THE HONOURABLE MR. JUSTICE SYAM KUMAR V.M.**

**Friday, the 6th day of September 2024 / 15th Bhadra, 1946
WP(C) NO. 28509 OF 2024**

PETITIONER:

**IN RE: PREVENTION AND MANAGEMENT OF NATURAL DISASTERS IN KERALA HIGH
COURT OF KERALA, PIN - 682031**

RESPONDENTS:

1. STATE OF KERALA, REPRESENTED BY THE CHIEF SECRETARY, GOVERNMENT SECRETARIAT, THIRUVANANTHAPURAM, PIN - 695001
2. UNION OF INDIA, REPRESENTED BY THE SECRETARY, MINISTRY OF ENVIRONMENT FOREST AND CLIMATE CHANGE INDIRA PARYAVARAN BHAWAN JORBAGH ROAD, NEW DELHI, PIN - 110003
3. THE SECRETARY, DEPARTMENT OF MINING AND GEOLOGY, GOVERNMENT SECRETARIAT, THIRUVANANTHAPURAM, PIN - 695001
4. THE DIRECTOR, DIRECTORATE OF MINING AND GEOLOGY, KESAVADASAPURAM, PATTOM PALACE P.O., THIRUVANANTHAPURAM, PIN - 695004
5. THE SECRETARY, MINISTRY OF MINES SHASTRI BHAWAN, DR. RAJENDRA PRASAD ROAD, NEW DELHI, PIN - 110001
6. THE STATE POLICE CHIEF, KERALA STATE POLICE HEAD QUARTERS, VAZHUTHACAUD, THIRUVANANTHAPURAM, PIN - 695010
7. THE COMMISSIONER (*CORRECTED), OFFICE OF THE KERALA STATE DISASTER MANAGEMENT AUTHORITY, OBSERVATORY HILLS, VIKHAS BHAVAN P.O , THIRUVANANTHAPURAM * R7 CORRECTED AS (THE KERALA STATE DISASTER MANAGEMENT AUTHORITY, VIKAS BHAVAN P.O., NANTHANCOD, THIRUVANANTHAPURAM, KERALA, 695033, REPRESENTED BY ITS MEMBER SECRETARY AS PER ORDER DATED 09/08/2024 IN WP(C)), PIN - 695033
8. THE SECRETARY, NATIONAL DISASTER MANAGEMENT AUTHORITY, NDMA BHAWAN, A-1, SAFDARJUNG ENCLAVE, NEW DELHI, PIN - 110029
9. JAMES VADAKKAN, MANAGING TRUSTEE, CENTRE FOR CONSUMER EDUCATION KP 6/699 VADAKKAN BUILDINGS, MUNDANGAL.P.O, PALA, KOTTAYAM, PIN - 686575
10. GEOLOGICAL SURVEY OF INDIA, REPRESENTED BY ITS DEPUTY DIRECTOR GENERAL, HAVING ITS LOCAL OFFICE AT 4TH FLOOR, C BLOCK, KENDRIYA BHAVAN, SEAPORT-AIRPORT ROAD, KAKKANAD, KOCHI, KERALA 682 03.
11. NATIONAL CENTRE FOR EARTH SCIENCE STUDY, REPRESENTED BY THE DIRECTOR, AAKKULAM, THIRUVANANTHAPURAM, POST BOX NO.7250, KERALA 695011.
12. THE SURVEY OF INDIA, REPRESENTED BY THE SURVEYOR GENERAL OF INDIA, OFFICE OF THE SURVEYOR GENERAL OF INDIA, HATHIBARKALA ESTATE, DEHRADUN-248001
13. THE STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY (SEIAA) KERALA, K.S.R.T.C BUS TERMINAL COMPLEX, 4TH FLOOR, THAMPANOR, THIRUVANANTHAPURAM - 695 001
14. THE COASTAL ZONE MANAGEMENT AUTHORITY, THAMPANOR, KSRTC BUILDING,

- 4TH FLOOR, OVERBRIDGE, THAMPANOR, THIRUVANANTHAPURAM, ADDL. R10-R14 ARE IMPEADED AS PER ORDER DATED 09.08.2024 IN WP(C)KERALA 695001.
15. UNION OF INDIA, REPRESENTED BY THE SECRETARY, MINISTRY OF ROAD TRANSPORT AND HIGHWAYS, TRANSPORT BHAWAN, 1, PARLIAMENT STREET, NEW DELHI-110001.
 16. NATIONAL HIGHWAY AUTHORITY OF INDIA, G 5 & 6, SECTOR 10, DWARAKA, NEW DELHI – 110075, REPRESENTED BY ITS CHAIRMAN
 17. CENTRAL WATER COMMISSION, 3RD FLOOR, (SOUTH, SEWA BHAVAN, RK PURAM, SECTOR-1, NEW DELHI – 110066, REPRESENTED BY ITS SECRETARY.
 18. INDIAN NATIONAL CENTRE FOR OCEAN INFORMATION SERVICES (INCOIS), "OCEAN VALLEY", PARAGATHI NAGAR (BO), NIZAMPET(SO), HYDERABAD - 500090, TELANGANA, INDIA, REPRESENTED BY ITS DIRECTOR.
 19. NATIONAL REMOTE SENSING CENTRE, DEPARTMENT OF SPACE, GOVERNMENT OF INDIA, HYDERABAD – 500037, TELANGANA, ADDL.R15 -R19 ARE IMPEADED AS PER ORDER DATED 16.08.2024 IN WP(C).
 20. SAYIR A, (SOUGHT TO BE IMPEADED), AGED 45 YEARS, C/O ABDUL RAHIM A ADATHODI MUNDAKAI, VELLARIMALA, WAYANAD.
 21. HAMZA T, (SOUGHT TO BE IMPEADED), AGED 55, S/O SAIDALI, THAZHETHODY, MEPADI P.O, WAYANAD, KERALA.
 22. BIBIN K AUGASTIAN (SOUGHT TO BE IMPEADED), AGED 29, S/O AUGUSTY, KODIYANKUNNIL, THONICHAL, NALLOORNAD P.O, WAYANAD.

Writ petition (civil) praying inter alia that in the circumstances stated in the affidavit filed along with the WP(C) the High Court be pleased to 1) to call for the records leading to Ext-P8. 2) to direct the 8th respondent to call for the records leading to the order Ext-P8, call for the records of the parties and then to conduct a site inspection and verify the village records, and after obtaining all the said records, to measure the properties and then to submit a report, with the plan and the resurvey details, to denote as to the extent of property that the 7th respondent has, 3) to see it that no further constructions are perpetrated by the 7th respondent, in the disputed property unless the controversy stands resolved, pending consideration of the above writ petition in the interest of justice.

This petition again coming on for orders upon perusing the petition and the affidavit filed in support of WP(C) and 23.08.2024 and upon hearing the arguments of SUO MOTU for the petitioner, GOVERNMENT PLEADER, K. GOPALAKRISHNAKURUP (AG), SHRI. C. E. UNNIKRISHNAN (SPL. G.P TO AG) for R1, R3, R4, R6 & R7, SRI. JOHNSON MANAYANI, BENHUR JOSEPH MANAYANI & JEEVAN MATHEW, Advocates for R9, SRI. PRAKASH M P, (STANDING COUNSEL) for R14, M/S. P. A. MOHAMMED SHAH, RENOY VINCENT, SHAHIR SHOWKATH ALI, CHELSON CHEMBARATHY, MUHAMED JUNAID V., ADITH KRISHNAN. U., SHERIN SHERIYAR, NANDA SURENDRAN & SAHAL SHAJAHAN, Advocates for R20 to R22, the court passed the following:

DR. A.K.JAYASANKARAN NAMBIAR, J.
&
SYAM KUMAR V.M., J.

W.P.(C).NO.28509 OF 2024

Dated this the 6th day of September, 2024

ORDER

Dr. A.K. Jayasankaran Nambiar, J.

Re: Report Nos.1 and 2 of the Amicus Curiae

On behalf of the State Government, the learned Advocate General referred us to the document titled "Memorandum-Kerala" prepared on 17.08.2024 that was produced through a memo filed on 23.08.2024. The document apparently narrates the preparatory steps that were taken by the State Government in terms of the Disaster Management Act to alert the people of Meppadi Grama Panchayat of the possibility of heavy rain fall and landslides. The relevant portion of the document reads as under:

1.2. Preparedness in Wayanad district

The Local Self Governments of Wayanad district has disaster management plans prepared by them based on a consultative process supported by Kerala Institute of Local Administration and Kerala State Disaster Management Authority. The Meppadi Grama Panchayath which was affected by the landslide also meticulously prepared a disaster management plan (https://dmp.kila.ac.in/maps/Wayanad/1096-Meppadi_GP/Disaster_Management_Plan_Document_2019.pdf). Vide GO (Ms) No. 84/2022/LSGD dated 19-4-2022, the 14th Five Year Plan of Local Self Governments in the State has issued clear guidelines for preparation of annual plans. Section 7.2 of this Guidelines provides for local self governments to create projects for the implementation of priority projects identified in the disaster management plans utilizing the annual

development funds available with the Local Self Governments. Wayanad district also has a unique portal for disaster risk reduction initiatives called the DM Suite (<https://www.dmsuite.kerala.gov.in/>). The Suite facilitates the following:

- Rainfall Data Collection - the data source is rainfall measurements by plantations. The data is automatically interpolated to each LSG every day morning by 10 am. The data is collected through a Mobile App.
- Disaster Resource Management
- DM Clubs for Students - the Schools of Wayanad have DM clubs which are funded by the district panchayath.
- Trainings for Resilient Constructors.

Disaster Response Forces available in Wayanad		
Sl. No.	Force	Number
1	Fire & Rescue Services (3 stations - Kalpetta, Sultan Bathery, Mananthavady)	158
2	Civil Defence Volunteers (attached to Fire and Rescue Services Stations - Kalpatta 50, Sulthan Bathery 20, Mananthavady 40)	110
3	Aapda Mitra Volunteers (attached to Fire and Rescue Services Stations - Kalpatta 70, Sulthan Bathery 89, Mananthavady 41)	200
4	National Disaster Response Force (pre-positioned at Meenangadi town of Wayand in June 2024)	30

The DDM started its preparedness early in the month of May 2024 to face the monsoon. The activities are given below:

Sl. No.	Date	Time	Events	Decisions
1	09/05/24	11.00 am	Offline-Meeting Drought & Monsoon Preparedness	All nodal departments attended the meeting
2	26/06/24	5.00-6.00 am	Monsoon emergency meeting of nodal officers regarding Heavy Rainfall Warnings	Entire Tourist Destination - including Public & Private. Earth Cutting and Quarrying has been banned
3	28/06/24	11 am-12.30 pm	Monsoon emergency review meeting regarding Heavy Rainfall Warnings	Review Meeting with all nodal Departments regarding the Monsoon Preparedness
4	16/07/24	11.30 am - 12.30 pm	Monsoon preparedness meeting	Earth Cutting and Quarrying has been banned. Trekking at 900 Kandi & Edakkal Caves has been stopped until

				further orders
5	17/07/24	4.30 pm - 5.30 pm	Monsoon emergency meeting with Tahsildars, Geology, Soil, PRD, KSEB, JD-LSGD, DAM Authorities	Vulnerable people should be moved to camps
6	19/07/24	12.00- 1.00 pm	Charge Minister review meeting	Review Meeting with all nodal Departments regarding the Monsoon Preparedness
7	21/07/24	10.30- 11.30 am	Emergency meeting - Tahsildars, Geology Soil, PRD, KSEB, JD-LSGD, DMO	Review Status
8	21/07/24	5.30- 6.30 pm	Emergency meeting - Tahsildars, Geology, Soil, PRD, KSEB, JD-LSGD, DMO	Review Status
9	22/07/24	10.45- 11.45 am	Emergency meeting - Regarding rise in water level of Bansura Dam- Tahsildars, Geology, Soil, PRD, KSEB, JD-LSGD, DAM Authorities	Review Status

On 29th July 2024 after receiving heavy rainfall information from a local resident the District Panchayath President who is also the Co-chairperson of the District Disaster Management Authority visited multiple panchayaths, leading the local police, revenue and fire and rescue services and the representatives of the grama panchayaths and took initiative to proactively evacuate families living in vulnerable areas from the morning of 29th July 2024. He also visited Meppadi Grama Panchayath and along with the Grama Panchayath President and officials evacuated vulnerable families from Punchirimattam settlements. The team evacuated 15 individuals from Punchirimattam noticing a small landslide and alerted 50 individuals, some of whom left Mundakkai and Punchirimattam to the houses of relatives. Camp was also started in Chooralmala area. The District Panchayath President also alerted the Local Self Governments in the District Planning Committee meeting which was held on 29-7-2024 noon. Meppadi Grama Panchayath also issued a closure notice to all homestays in the area on 29-7-2024 and sent many people out of the panchayath and stopped many tourists from coming to reside there.

The India Meteorological Department issued Orange Alert on 29-7-2024, 1 pm in the District Level Rainfall Forecast for Kerala and Lakshadweep. Considering the possibility of landslides, landslide alerts were issued by State and Wayanad District Emergency Operations Centre and appropriate anticipatory evacuation was carried out by Revenue and Local Self Governments in various panchayaths.

Alerts and warnings were heeded to by many families resulting in saving lives.

2. The cause of the landslide is explained as follows:

“1.3. Meppadi Landslide 30-7-2024

Meppadi Grama Panchayath is in Vythiri Taluk of Wayanad district. Covering an area of 125.94 km² and with a population of 37,785, the panchayath has a population density of 300/km². On 30-7-2024, at around 1.15 am, a major landslide occurred in the arcute shape micro watershed of Punchiri Mattam Hill. The residents reported three consecutive sounds of rock rumbling and bursting, which is later understood to be a consequence of a massive debris slide, and consecutive landslide dams that ruptured.

The nearest official rainfall recording station is at Kalladi (5 kms to the north of the crown of the landslide) where the rainfall recorded on 29-7-2024 was 200.2 mm and 30-7-2024 was 372.6 mm. The rainfall recorded at Kalladi was twice the average rainfall of the district on 30-7-2024.

Salient features of the landslide are given below:

Landslide crown	Punchiri Mattam Evergreen Forest
Type of event	Debris slide turned debris flow that chanelised through Panapuzha (as in Topographic Sheet)
Affected area	7,8973.37 m ²
Length of the runout	8 km (from crown to deposition zone)
Affected wards	10, 11, 12
Affected settlements	Punchiri Mattam, Mundakkai, Chooralmala and Attamala
Impact on geomorphology	20 to 40 m wide Panapuzha which is a tributary of Chaliyar River that experience the landslide and the consequent debris flow became 200 to 300 m wide

The Geological Survey of India reports (First Information Report in MundakkaiChooralmala areas, Meppadi Grama panchayat, Vythiri Taluk of Wayanad District, Kerala), the following: “Physiographically, the Mundakkai area lies on Wayanad plateau having a rugged terrain with ridges and valleys and its relative relief is around 1000m. The probable source of the Mundakkai Debris flow is having an elevation of 1544 m and it is approximately 3 km and 5km from Mundakkai and Chooralmala villages respectively. Geomorphologically the source area is a part of moderately dissected slopes having a steep slope angle varies from ~25-40° with overburden thickness of <5m. The loose and unconsolidated nature of overburden material resulted in rising excess pore pressure within due to incessant rain is assessed to be the triggering factor for all these incidences. As far as landuse landcover is concerned, the upslopes and midslopes in and around the source area are covered by thick forests and the affected areas include tea plantation and mixed crops. Geologically the area belongs to Southern Granulite Terrain (SGT) comprising rocks of Wayanad, charnockite and Migmatite groups.” The FIR of GSI also states the following as the geo-scientific causes of the landslide “The excessive rainfall is the major triggering factor which results in increase of pore water

pressure and reduction of strength on super saturation initiated the slide. Toe erosion by streams.”

3. Thereafter, the document goes on to provide an assessment of Response and Relief measures as per State Disaster Response Fund [SDRF] norms as follows:

“2. Assessment of Response and Relief as per SDRF norms

2.1. Human Fatalities

A total of 231 bodies have been found and 128 are reported to be missing as on 15-8-2024. The total exgratia to be paid is Rs.14,36,00,000/- (@Rs. 4,00,000/deceased).

2.2. Injuries

A total of 378 were injured and required hospitalisation of more than 1 week. The total gratuitous relief will be Rs. 60,48,000/-. It is estimated that as many as 25 individuals have disability of more than 60%. The total gratuitous relief in this account will be Rs. 62,50,000/-. Those who may be between 40 and 60% of disability is 70. The total gratuitous relief in this account will be Rs. 51,80,000/-.

Sl. No.	Head	Amount (Rs)
1	Disability of more than 60% (25 individuals) [@Rs. 2,50,000]	62,50,000
2	Disability of 40 to 60% (70 individuals) [@Rs.74,000]	51,80,000
3	More than 1 week hospitalisation (378 individuals) [@Rs.16,000]	60,48,000
Total		1,74,78,000

2.3. Clothing & utensiles

A total of 1555 houses were totally damaged and 452 houses were partially damaged. All of them lost clothing & utensiles. The total gratuitous relief in this account will be Rs. 1,00,35,000/- (Rs. 2500 - clothing and Rs. 2500 - utensiles).

2.4. Livelihood assistance

A total of 1555 houses were totally damaged and 452 houses were partially damaged. A total of 4102 individuals were in camps as on 1-8-2024. Amongst them 1871 individuals remained in the camps and 2231 individuals moved to the house of relatives. This had 2010 adults. Rounding to the nearest, the daily wage of MNREGA in Kerala is Rs.300/day. These individuals will not be

able to return to normal livelihood in the next 90 days. Therefore, the gratuitous relief that may have to be paid will be $300 \times 2010 \times 90 = \text{Rs.}5,42,70,000/-$.

2.5. Search and Rescue Operations

The Search and Rescue involved over 5000 individuals and 150 heavy machinery. Salvaging operations are continuing and so is the search for missing individuals. The cost of this may be broken down as follows:

Sl. No.	Head	Amount (Rs)
1	Transportation of volunteers and troops by road (actuals)	4,00,00,000
2	Food and water supply for volunteers and troops (actuals)	10,00,00,000
3	Accommodation for volunteers and troops (actuals)	15,00,00,000
4	Vehicles used for evacuation (actuals)	12,00,00,000
5	Construction of Bailey Bridge (allied work) (actuals)	1,00,00,000
6	Procurement of torches, rain coats, umbrella, and gumboots (actuals)	2,98,00,000
7	Medical care for volunteers and troops (actuals)	2,02,00,000

The amount is calculated because the search will continue for 10 more days. The Grama Panchayath is far away from townships and therefore the costs are higher, particularly in times of disaster.

2.6. Search and Rescue Operations - hiring of equipment

The Search and Rescue involved 150 heavy machinery and specialised equipment. The cost of this may be broken down as follows:

Sl. No.	Head	Amount (Rs)
1	IBOD, Drone, Radars (actuals)	3,00,00,000
2	Heavy equipment (JCB, Hitachi, Cranes) (actuals)	15,00,00,000
3	DNA sampling of dead bodies (actuals)	3,00,00,000

2.7. Relief Measures - temporary accommodation

On 1-8-2024, as many as 17 relief camps were started to accommodate 4102 individuals. As many as 14 camps with 1871 individuals are still in the camps. The camps may continue for 30 days. The cost would be:

Sl. No.	Head	Amount (Rs)
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1	Food (actuals)	8,00,00,000
2	Clothing (actuals)	11,00,00,000
3	Medical Care (actuals)	8,00,00,000
4	Generator (actuals)	7,00,00,000

2.8. Relief Measures - air dropping

The air crafts of Indian Air Force were used for transporting troops, air lifting of rescued, air lifting of dead bodies, dropping of troops, VIP movement etc. The cost may be reimbursed in actuals and is estimated to be Rs.17,00,00,000/ (actuals)-.

2.9. Relief Measures - drinking water supply

The houses in the affected grama panchayath wards in which families were staying had to be supplied with drinking water. This will continue for 30 days and is estimated to Rs.3,00,00,000/- (actuals).

2.10. Clearance of affected areas - debris clearance

The debris spread over 1 km² needs to be cleared. The activity is ongoing and involves about 70 heavy equipment. The cost estimated to complete this activity including clearing of boulders and obstructions in the stream is per day Rs.60,00,000/-. The activity will continue for about 60 days and can only be done on rain free days. Thus, the cost estimated is Rs.36,00,00,000/- (actuals).

2.11. Draining of flood water

Many parts of the affected settlements had water ponding. This needed to be drained out. The cost estimated is Rs.3,00,00,000/- (actuals).

2.12. Disposal of dead bodies

The unidentified bodies and body parts had to be buried after collecting DNA samples. The cost involved and estimated is

Sl. No.	Head	Amount (Rs)
1	Burying 359 bodies (@Rs.75,000/body) (actuals)	2,76,75,000

2.13. Agriculture - removing of debris

Crops in 626 ha was affected of which 359 ha was of small and marginal farmers (SMF). The relief assistance for desilting will be Rs.64,62,000/- (Rs. 18,000/ha).

2.14. Agriculture - Loss of land

Crops in 626 ha was affected of which 100 ha was of SMF which became temporary fallow. The relief assistance for desilting will be Rs.47,00,000/- (@Rs. 47,000/ha).

2.15. Agriculture - Perennial crops (Small and Marginal Farmers - SMF)

Crops in 626 ha was affected of which 359 ha was SMF. The area is famous for coffee and cardamom. The relief assistance therefore is Rs.80,77,500/- (@Rs.22,500/ha).

2.16. Agriculture - Perennial crops (non SMF)

Crops in 626 ha was affected of which 359 ha was SMF; 267 ha is that of 14 non-SMF. The relief assistance therefore is Rs. 6,30,000/- (@Rs.22,500/ha limited to 2 ha per farmer).

2.17. Animal Husbandry - Cow

A total of 226 cows are lost as reported by Animal Husbandry and Diary Development Departments. These cows were of 75 farmers (@Rs.37,500/cow limited to 3 cows per farmer). The relief assistance is therefore Rs.84,37,500/-.

2.18. Animal Husbandry - Goat

A total of 165 goats are lost as reported by Animal Husbandry Department. These goats were of 27 farmers (@Rs.4000/goat limited to 6 goats). The relief assistance is therefore Rs.6,48,000/-.

2.19. Animal Husbandry - Poultry

A total of 1032 poultry (hen) are lost as reported by Animal Husbandry Department. These poultry were of 10 farmers (@Rs.10,000/farmer). The relief assistance is therefore Rs.1,00,000/-.

2.20. Animal Husbandry - Cattle camp

One cattle camp was operated in the area for accommodating 65 cows. The camp was run for 15 days and therefore the relief assistance is Rs.78,000/- (@Rs. 80/cow/day).

2.21. Animal Husbandry - Transport of fodder

The cost of transporting fodder and feed to the camp amounted to Rs. 9,80,000/- (actuals)

2.22. Handicrafts - artisans

The impacted area had 14 artisans. Their livelihood was impacted and they lost their equipment and raw materials. The relief assistance is therefore:

Sl. No.	Head	Amount (Rs)
1	Equipment (14 x Rs.5000)	70,000
2	Raw materials (14 x Rs.5000)	70,000

4. The assessment of Recovery and Reconstruction as per the SDRF norms is shown as follows:

“3. Assessment of Recovery & Reconstruction as per SDRF norms

3.1 Housing - severely damaged

A total of 1555 houses were totally or severely damaged. This is a hilly area. The area only has pucca houses. Therefore, the recovery cost as per norms is Rs.20,21,50,000/- (@Rs.1,30,000/house).

3.2 Housing - partially damaged

A total of 452 houses were partially damaged. This is a hilly area. The area only has pucca houses. Therefore, the recovery cost as per norms is Rs.29,38,000/- (@Rs.6,500/house)

3.3 Housing - huts

A total of 35 huts were damaged. Therefore, the recovery cost as per norms is Rs. 2,80,000/- (@Rs.8000/hut)

3.4 Housing - cattle shed

A total of 111 farmers lost their cattle shed. Therefore, the recovery cost as per norms is Rs.3,33,000/- (@Rs.3000/shed)

3.5 Roads & bridges

Sl. No.	Head	Amount (Rs)
1	Roads (1 km State Highway) (@Rs.1,25,000/km)	1,25,000
2	Roads (14.15 km rural road) (@Rs.75,000/km)	10,61,250
3	Bridges (3) (@Rs.75,000/bridge)	2,25,000

3.6 Drinking water supply schemes

Sl. No.	Head	Amount (Rs)
1	Damaged drinking water supply schemes (8) (@Rs. 2,00,000/km)	16,00,000
2	Cleaning of 25 wells (@Rs.10,000/well)	2,50,000

3.7 Power

Sl. No.	Head	Amount (Rs)
1	Transformer (2) (@ Rs.1,00,000/transformer)	2,00,000
2	Poles (616) (@ Rs.5000/pole)	30,80,000
3	LT Lines (124 km) (@ Rs.50,000/km)	62,00,000

3.8 School

Sl. No.	Head	Amount (Rs)
1	School (3 schools) (@ Rs.2,00,000/school)	6,00,000

3.9 Health centre

Sl. No.	Head	Amount (Rs)
1	Health Centre (4) (@ Rs.2,00,000/school)	8,00,000

3.10 Community assets

Sl. No.	Head	Amount (Rs)
1	Community hall (12) (@ Rs.2,00,000/school)	30,00,000
2	Kudumbashree (Women Self Help Group) meeting rooms, pump houses, generator rooms, Yuva kendra, libraries, Panchayath owned commercial building (121) (@Rs. 2,00,000/school)	3,02,50,000
3	Anganwadi (3) (@ Rs.2,00,000/school)	7,50,000

5. The total assessment as per SDRF norms and Actuals is then given as follows:

Sl. No.	Item	SDRF Norms (Rs)	Amount (Rs)
1a	Gratuitous reliefs - Human fatalities (359)	14,36,00,000	-
A) Response & relief			
1b	Disability of more than 60% (25 individuals)	62,50,000	6,25,00,000
1b	Disability of 40% to 60%	51,80,000	5,18,00,000
1c	Injury - more than 1 week hospitalisation	60,48,000	6,04,80,000
1d	Clothing & utensils (2007 families)	1,00,35,000	27,00,00,000
1e	Livelihood assistance (2010 individuals x Rs.300 x 90 days)	5,42,70,000	14,00,00,000
2a	Search and rescue operations	47,00,00,000	47,00,00,000
2b	Search and rescue - hiring of equipment	21,00,00,000	21,00,00,000
3a	Relief measures - temporary accommodation	34,00,00,000	34,00,00,000
3b	Relief measures - Indian Air Force	17,00,00,000	17,00,00,000
3c	Relief measures - drinking water supply	4,00,00,000	4,00,00,000
4a	Clearance of affected areas - debris clearance	36,00,00,000	36,00,00,000
4b	Draining of flood water	3,00,00,000	3,00,00,000

4c	Disposal of dead bodies (359)	6,28,25,000	6,28,25,000
5(i)(A)(b)	Agriculture - removing of debris (359 ha)	64,62,000	7,00,00,000
5(i)(A)(d)	Agriculture - loss of land (100 ha)	47,00,000	14,00,00,000
5(i)(A)(b)	Agriculture - perennial crops - SMF (359 ha)	80,77,500	14,36,00,000
5(ii)	Agriculture - perennial crops - SMF (267 ha)	6,30,000	13,35,00,000
6(i)	Animal husbandry - Cows (226)	84,37,500	4,52,00,000
6(i)	Animal husbandry - Goat (165)	6,48,000	82,50,000
6(i)	Animal husbandry - Poultry (1032)	1,00,000	2,06,400
6(ii)	Animal husbandry - cattle camp	78,000	10,00,000
6(iii)	Animal husbandry - Transport of fodder	9,80,000	9,80,000
8(i)	Assistance to Artisans - equipment (14)	70,000	14,00,000
8(ii)	Assistance to Artisans - raw materials (14)	70,000	14,00,000
	Total	193,84,61,000	281,31,41,400
B) Recovery & reconstruction			
10(a)(i)	Housing - Fully damaged/severely damaged (1555)	20,21,50,000	233,25,00,000
10(b)(i)	Housing - Partially damaged (452)	29,38,000	9,04,00,000
10(c)	Housing - huts (35)	2,80,000	5,00,000
10(e)	Housing - cattle shed (111)	3,33,000	18,00,000
11(1)	Roads - State highway (1 km)	1,25,000	5,00,00,000
11 (1)	Roads - Rural road (14.15 kms)	10,61,250	1,13,20,000
11 (1)	Bridges (3)	2,25,000	13,00,00,000
11 (2)	Drinking water supply - damaged platforms (8)	16,00,000	4,50,00,000
11 (2)	Drinking water supply - cleaning of wells (25)	2,50,000	12,00,000
11 (4)	Power - transformers (2)	2,00,000	32,00,000
11 (4)	Power - Poles (616)	30,80,000	9,24,00,000
11 (4)	Power - LT lines (124 kms)	62,00,000	3,72,00,000
11 (5)	Schools (3)	6,00,000	18,00,00,000
11 (6)	Health Centre (4)	8,00,000	14,00,00,000
11 (7)	Community assets (136)	3,40,00,000	21,76,00,000

Total	25,38,42,250	333,31,20,000
Grand total	219,23,03,250	614,62,61,400
Non SDRF items		
Damages to Tourism assets		50,00,00,000
Livelihood loss to allied sectors depended on agriculture		15,00,00,000
Livelihood loss to allied sectors depended on tourism		23,00,00,000
Damage to Government Assets		56,00,00,000
Vehicles lost		26,00,00,000
Damages to MSME		53,00,00,000
Livelihood loss to MSME sector		19,00,00,000
Damage to religious institutions		18,00,00,000
Cultural assets of Scheduled Tribe abodes		27,00,00,000
Damage to side protection walls		60,00,00,000
Damage to river training structures		30,00,00,000
Damage to storm water drains		36,00,00,000
Loss to cooperative societies		18,50,00,000
Loss to tea factories		27,00,00,000
Loss to drying units		35,00,00,000
Damages to check dams		16,00,00,000
Losses to banks		19,00,00,000
Damages to sockpits		23,00,00,000
Losses to real estate		36,00,00,000
Total		587,50,00,000
Grand total (actual)		1202,12,61,400

6. The details given in the document can be taken as a Statement of the Government as regards the steps taken by them in relation to relief and rehabilitation of affected persons in Wayanad District. Although the document also envisions a concept of a resilient township for the future, we are of the view that implementation of such measures must await a finalisation of the ecologically sensitive areas for future purposes and a decision as regards the nature and extent of development activities that can be permitted therein, after balancing

the competing interest of ecological conservation and economic growth.

7. We have also been referred to the G.O.(Rt.) No.625/2024/DMD dated 23.08.2024, by which, Expert teams have been constituted by the State Government for conducting a Post-Disaster Need Assessment [PDNA]. The specific objectives of the said exercise have been outlined in the Govt. Order as follows:

- Estimate the overall impact of the disaster event on the lives, livelihoods and property of the affected communities; and assess the loss and damage under the social, productive, health, infrastructure, tourism and livelihoods, forest and environment, and DRR sectors, integrating gender and tribal inclusion.
- Assess the impacts of the disaster to develop a Recovery and Reconstruction Strategy to address the early, medium- and long-term recovery and reconstruction needs with costs and a timeline in one consolidated report.
- Ensure that strategies for recovery and reconstruction integrate concepts of disaster risk reduction and “build back better” and address gender and environmental concerns;
- Developing a recovery and reconstruction strategy that is representative of the needs and priorities of the affected communities considering the ecological and geographical challenges
- Recommend and define a strategy for Disaster Risk Management
- Recommend institutional mechanisms and policy options to be undertaken in support of the recovery and reconstruction process and that promote long term disaster resilience
- Recommend an overall “build back better” cost considering the sectoral need assessment.

8. In response to the directions that we had issued in our order dated 23.08.2024, the 7th respondent, on behalf of the 1st respondent, has reported as follows:

Direction Nos.(a) & (b):

- a) Whether in the wake of the natural disasters that have occurred in the State of Kerala, the said respondents propose to increase the number of subject experts as mandated under Section 14(2)(b) of the Disaster Management Act, 2005 [DMA] ?
- b) Whether the Advisory Committees as contemplated under Sections 7, 17 and 28 of the DMA have been constituted at the National, State and District levels and if so, the composition of the said committees ?

Response:

It is submitted that the State Authority has constituted advisory committees for the following:

- NGO Coordination Committee - GO (Rt) No. 814/2022/DMD dated 7-11-2022
- Permanent Expert Technical Committee for hydrologic and hydraulic modelling studies in the State - G.O.(Rt)No.908/2022/WRD dated 10-10-2022
- Landslides - GO (Rt) No. 356/2020/DMD dated 17-03-2020
- Urban Storm Water Management and Flood Mitigation - G.O.(Rt) No.70/2019/WRD Dated. 02/02/2019
- House Construction in Landslide Prone Areas - GO (Rt) No. 644/2018/DMD dated 30-11-2018
- Sub-Committee of State Executive Committee for Disaster Management related to Mullaperiyar Dam [Order No. WP (C) No. 878/17 dated 11-01-2018 of Hon'ble Supreme Court of India] - G.O.(Rt)No.475/2018/DMD dated 04-09-2018

- Minimum relief code for housing - GO (Ms) No. 7/2018/DMD dated 21-6-2018
- School Safety - GO (Rt) No. 271/2018/DMD dated 11-05-2018
- Optimizing response to disasters - GO (Rt) No. 86/2017/DMD dated 12-12-2017
- Earthquake Resistant Construction - GO (Rt) No. 1299/2015/DMD dated 12-03-2015
- Mullaperiyar - GO (Rt) No. 6084/2011/DMD dated 17-12-2011

Data regarding advisory committees in the district level is being collected and will be furnished to Hon'ble Court before the next date of posting.

Direction Nos.(c) & (d):

- c) Details of the Disaster Management Plans prepared at the National, State and District levels in accordance with Sections 37 and 38 of the DMA, together with details of the latest updation done to the said plans.
- d) Details of the funds allocated for carrying out the activities and programmes set out in the respective Disaster Management Plans.

Response:

It is submitted that the State Disaster Management Plan is a compendium of multiple documents. A detailed statement on this matter was given in W.A.No.1915 of 2024, W.A.No.603 of 2024 and W.A.No.664 of 2024. The static part of the State and District Management plans will be revisited again considering the Chooralmala Landslide at Meppadi Grama Panchayath, Wayanad district and if necessary, with available new

information the same will be updated. After every disaster in 2016, Kerala State Emergency Operations Centre has examined the requirements of amendments to the static and dynamic part of the plan. The Government has constituted an expert committee vide G.O.(Rt).No.590/2024/DMD dated 09.08.2024 to examine the landslide and suggest land use recommendations and site suitability of proposed sites for reconstruction.

The dynamic part of the plan being more relevant from an operational perspective, it was decided to update the same every year meticulously. Each time a series of landslides occur, the sites are examined and long-term depopulation of such hazardous terrains are prescribed. Schemes were enacted based on such prescriptions:

Post 2018 Floods

Post Kerala Floods 2018, the Government directed the Geological Survey of India vide G.O.(Ms).No.20/2018/DMD dated 07.09.2018 to map the landslides that occurred in 2018. Geological Survey of India in priority deployed 10 teams, each with two Geologists to immediately survey the landslide sites and proposed the sites that are uninhabitable such that the families dwelling there could be facilitated for relocation. In total 1626 landslides were investigated. The Government vide G.O.(Ms).No. 6/2019/DMD dated 27.02.2019 made the vulnerability linked relocation plan applicable to the dwelling units which were identified as vulnerable by GSI.

Post 2019 Landslides

As per G.O.(Ms).No.6/2018/DMD dated 02.06.2018, a disaster vulnerability linked relocation scheme was announced for those living along the coast line. The scheme is to assist families in the coastal areas, who lost their House and Property due to coastal erosion, as per which they may avail upto a maximum of Rs.6 lakhs for purchasing 3 to 5 cents of land and Rs.4 lakhs for the construction of a house with the condition that the beneficiary family should relocate beyond 50 meters from the high tide line.

Subsequently vide G.O.(Ms) No.7/2018/DMD dated 21.06.2018 and G.O. (Ms).No.25/2019/DMD dated 23.08.2019, the scheme was extended to other hazard prone areas of the State whereby if a land parcel with house is identified by a competent technical authority such as, Geological Survey of India, Irrigation Department, Mining and Geology Department, Soil Conservation Department or such other technical departments or committee constituted by KSDMA or DDMA, as hazard prone and certified as not liveable, the legal owner of the house and land is eligible for Rs.6 lakhs to purchase a minimum of 3 cents of safe land and he/she will be eligible for Rs.4 lakhs to construct a new house. If one avails this option, the beneficiary is not anymore permitted to construct any building in his/her 'non-liveable land'.

The most recent Government Orders in this regard allocating Rs.10 lakhs to 4 families in Malappuram to relocate to safer areas can be seen as G.O. (Rt) No.591/2024/DMD dated 09.08.2024.

The dynamic part of the State Disaster Management Plan, the Orange Book directs local Governments to use this information from the field level checks to enlist vulnerable communities for priority evacuation. Thus, the State of Kerala is not only creating a plan but is also updating those parts that can be routinely updated and also is operationalizing the plan in all possible means.

It is also pertinent to note that the 'Disaster Management (Amendment) Bill, 2024 (Bill No.98 of 2024) introduced in the Parliament reads in Section 14 (5) (amendment of Section 23 of the original Act) "The State Authority shall review the State Plan once in every three years and update at least once in every five years".

To enable Departments of the State to prepare and submit departmental disaster management plans trainings have been carried out since 14.12.2018 continuously for 15 departments which has formed virtual cadre for disaster management created vide G.O.(Rt).No.902/2022/DMD dated 24.12.2022. The process of preparing departmental disaster management plan is ongoing in these departments.

Kerala State Disaster Management Authority has Rs.6 crores as plan funds allocated vide G.O.(Rt).No.481/2024/DMD dated 18.07.2024 primarily for meeting the routine expenses related to its office functioning. The State has created State Disaster Response Fund [SDRF] and State Disaster Mitigation Fund [SDMF] vide Section 48 (1) (a) and 48 (1) (c) and these funds are operated as per the extant guidelines for the operations of these funds as prescribed by Government of India from time to time. In the year 2024-25, the allocation under SDRF is Rs.388 crores in a proportion of 75% from Government of India and 25% from Government of Kerala. In the year 2024-25, the allocation under SDMF is Rs.97 crores in a proportion of 75% from Government of India and 25% from Government of Kerala.

The availability of funds of the Departments of State Government under Section 39 (c) of the Disaster Management Plan 2005 needs to be verified with the departments and a response will be submitted in the shortest possible time.

9. No response has yet been received to direction (e) in relation to possible amendments to the Building Rules in the State. We have also not received the response of the Central Government to the information sought for through our directions. While we await the same, we deem it apposite to issue the following additional direction taking note of the developments in the relief and rehabilitation efforts thus far, as also

keeping in mind the actions that have to be taken in the future based on the plan outlined in our order dated 23.08.2024 for achieving the stated goals of this writ petition:

(i) The Central Government and the National Disaster Management Authority [NDMA] shall inform this Court whether it would be willing to issue directions to write off the personal loans, motor vehicle loans and housing loans availed by members of the affected families in Wynad, in terms of Section 13 of the DMA, 2005. They shall bear in mind that the Constitution of India exhorts every citizen, by imposing on them a fundamental duty, to show compassion to all living creatures, which term indubitably encompasses fellow citizens in distress.

The response of the Central Government and the NDMA on the above aspects shall be made available before this Court by 27.09.2024.

Sd/-
DR. A.K.JAYASANKARAN NAMBIAR
JUDGE

Sd/-
SYAM KUMAR V.M.
JUDGE

prp/6/9/24