

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

Original Application No. 117 of 2021 (SZ)
With
I.A. No. 14 of 2023(SZ)
&
Original Application No. 184 of 2021 (SZ)
(Through Video Conference)

IN THE MATTER OF

Kottayam Nature Society,

Reg. No. K-1/2001, Srinilayam,
Near Union Club, Kottayam- 686001,
Represented by its Secretary Dr. N. Unnikrishnan.

...Applicant(s)

Versus

1. State of Kerala,

Represented by its Principal Secretary,
Department of Environment and Climate Change (DoECC),
4th Floor, KSRTC Bus Terminal and Thampanoor,
Thiruvananthapuram- 695 001.

2. The District Collector, Chairman,

Kottayam District Disaster Management Authority,
Collectorate, Kottayam- 686 002.

3. The Executive Engineer,

Major Irrigation Department,
Housing Board, Kanjikuzhy,
Kottayam- 686 004.

4. The Assistant Conservator of Forests,

Kerala Forest & Wildlife Department,
(Social Forestry Division)
Parampuzha. P.O., Kottayam- 686006.

5. The Kerala State Bio-Diversity Board,

Kailasam, T.C. 24/3219, No. 43, Belhavan Gardens,
Represented by its Chairman,
Kowdiar. P.O. Thiruvananthapuram- 695 003.

...Respondent(s)

A. Markose, aged 76 years

S/o Andrews,
Thottothra house, River bank road,
Old bazaar, Kottayam Taluk,
Kottayam District- 686001

...Intervenor(s)

And

Abraham Mathew,
Aged 70 years, S/o P.V. Mathew,
Velloor P.O. Kottayam- 686 003.

...Applicant(s)

Versus

1. State of Kerala,
Represented by its Additonal Chief Secretary,
Irrigation Department,
Room No. 357(A) & 358,
Main Block, Secretariat,
Thiruvananthapuram- 695001.

2. The Executive Engineer,
Major Irrigation Department,
Housing Board, Kanjirappally,
Kottayam- 686 004.

3. The Revenue Divisional Officer,
Revenue Divisional Office,
Second Floor, Mini Civil Station,
Union Club Road, Puthnangady,
Kottayam- 686001.

4. The Kerala State Bio-Diveristy Board,
Represented by its Member Secretary,
Kailasam, T.C. 4/1679(1), No. 43 Belhaven Gardens,
Kowdiar. P.O. Nandancode, Thiruvananthapuram- 695 003.

...Respondent(s)

O.A. No. 117 of 2021(SZ)

For Appellant(s): Mr. P. B. Sahasranaman.

For Respondent(s): Mr. G. Vignesh for Mr. E.K. Kumaresan for R1 to R4.
Ms. K. Moksha for Ms. Vidyalakshmi Vipin for R5.

O.A. No. 184 of 2021(SZ)

For Appellant(s): Mr. P. B. Sahasranaman.

For Respondent(s): Mr. G. Vignesh for Mr. E.K. Kumaresan for R1 to R3.
Ms. K. Moksha for Ms. Vidyalakshmi Vipin for R4.

Judgment Reserved on: 7th March, 2023.

Judgment Pronounced on: 16th March, 2023

CORAM:

HON'BLE SMT. JUSTICE PUSHPA SATHYANARAYANA, JUDICIAL MEMBER

HON'BLE DR. SATYAGOPAL KORLAPATI, EXPERT MEMBER

JUDGMENT

Delivered by Smt. Justice Pushpa Sathyanarayana, Judicial Member

O.A. No. 117 of 2021

1. The Kottayam Nature Society has filed the above application alleging removal of riparian plants such as Attuvanchi, Bamboo etc., which generally act as a natural barrier for protecting flood and also preserving the retaining capacity of the water of the river Meenachil throughout the year.
2. The importance of preservation of Attuvanchi is brought to the notice of the District Coordinator, Kerala State Biodiversity Board, Kottayam by the Member Secretary, Kerala State Biodiversity Board, Kottayam on 01.03.2021 urging him to take immediate steps for preserving riparian plants like Attuvanchi and other plants on the banks of the river. It is stated that the 3rd respondent is deepening the Meenachil River from Ettumanoor to the lower reaches of the river where it joins with the Vembanad Lake. The project is for the removal of silt and from the river bed and cutting done the riparian vegetation along the course of the river to control flood in the Kottayam District.
3. According to the applicant the removal of silt and sand from the river and also cutting down the riparian vegetation are great threat to the river ecology as the removal of sand, silt and clay will alter the ecology of the river. It is also stated that there is possibility of intrusion of more salt water into the river. The cutting of trees will have serious adverse impact on the river ecology. In the absence

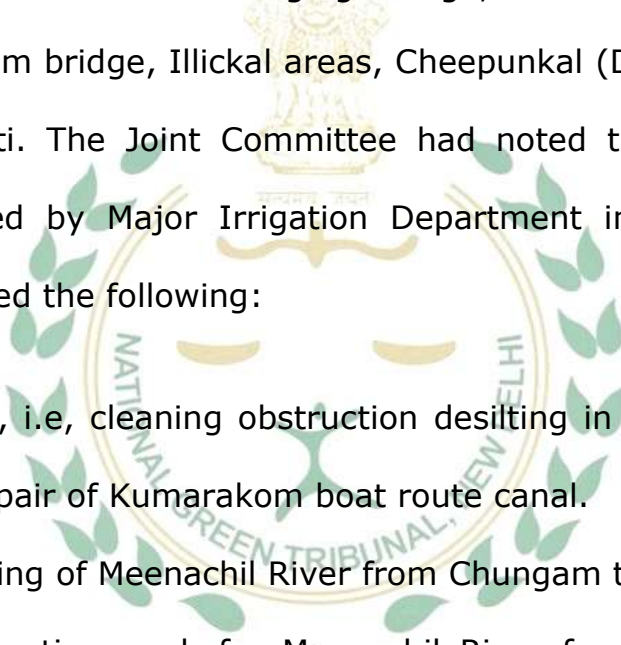
of the Environmental Impact Assessment or any other studies have been conducted before engaging in the activities.

4. It is stated further that there is not even a project report before indulging in such huge work having severe adverse effect on the environment of the area. The riparian plants act as bio-shields and if the same is disturbed, it will adversely affect the riverine ecosystem. The applicant stated that the Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001 casts an obligation on the local authorities to maintain the Kadavu and river banks in safe condition. For the said purpose Bamboo and Attuvanchi are planted on the river banks with the help of the Forest Department to control the river bank sliding. Thus contending the applicant has sought for a direction to the respondents 2 and 3 not to cut or remove any of the trees on the river banks of Meenachil River without conducting any Environmental Impact Assessment and also without obtaining permission from the 1st respondent. The second direction sought for is to the respondents 2 and 3 not to remove silt or sand under the River Meenachil without conducting EIA and finally a direction is sought to the 4th respondent to take immediate steps to plant more Bamboo and Attuvanchi within a time limit to protect the Meenachil River.

5. This Tribunal had appointed a Joint Committee on 25.05.2021 comprising members from MoEF&CC, Bangalore, Biological Diversity Board, State of Kerala, Kerala Forest and Wildlife Department, Major Irrigation Department, Kottayam and District Collector, Kottayam to inspect the area in question and submit a

factual as well as action taken report, if any violations were found. The Committee was directed to ascertain whether any study has been conducted or any plan has been evolved as contemplated under the Disaster Management Act, 2005 considering the nature of impact of flood in those areas in previous years.

6. The Committee has reported that in compliance of the direction given by this Tribunal, they had visited several project sites along the banks of the Meeachil River over a stretch of about 15 to 20 kms. The Joint Committee had inspected the sites at Pichakassery Mali, Poovathum Moodu hanging bridge, Neelimangalam areas, Cherunarakom bridge, Illickal areas, Cheepunkal (Delta), Kavanaar and Arthootti. The Joint Committee had noted that works have been initiated by Major Irrigation Department in Meeachil Rive which included the following:

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- i. CSIND, i.e, cleaning obstruction desilting in Meenachil River and repair of Kumarakom boat route canal.
 - ii. De-silting of Meenachil River from Chungam to Kajiram.
 - iii. Rejuvenation work for Meenachil River from Etumanoor to Kottayam Municipal area.

Of the above three works, only the second work have commenced, however stopped owing to the order of this Tribunal.

7. During the visit, the Committee had noted that at certain parts tree felling was noticed at large but it was ascertained through the department officials that those trees were cut prior to the initiation of the work by the Irrigation Department. The Irrigation Department, which is part of the Joint Committee, had informed

that no damages have been caused to environment on account of these works and there are no construction activities on the banks and there is no sand mining going on. The instant works proposed by Irrigation Department relates only to maintenance of width and depth of the Meenachil River by removing their deltas formed at identified reaches for easy flow of flood water. The silt is to be used for forming eroded banks of the river as well as for filling the deep trenches formed in the river bed identified as per investigation works carried out recently for several feeder canals, which includes various stretches of the river.

8. It was also noted by the Joint Committee that the width of the Meenachil River has been reduced at some places due to delta formation at specific reaches due to natural phenomena, thereby reducing the water conveyance capacity. Also due to meandering of the river, which is a natural process, opposite banks is eroded causing threat to people living on the banks. Further, the Irrigation Department has stated that no trees were cut and removed from the site instead only hanging branches of small trees and hanging portions of Bamboo bunches obstructing the flow of water are cut and deposited on the banks itself and assured that while undertaking desilting activities especially on the deltas formed prior permission from District Tree Committee and Social Forestry wing would be obtained cutting of trees and adequate provisions for planting of Bamboo, Attuvanchi etc., for protection of eroded banks have already been included in the estimate.

9. The Kerala State Biodiversity Board has stated that on spot verification, a rare and endangered species of plant, locally named

as 'Attuvanchi' (*Ochreinauclea Missionis*) is found along the banks of Meenachil River and its tributary. They are endangered due to habitat loss and are listed on the IUCN Red List-II. In addition to that, there are about 12 rare and endangered plants on the IUCN red lists reported from the banks of Meenachil River. These plants play an important role in protecting the river bank from landslides and maintaining the stability of the river. The flow of the river can be facilitated/enhanced in such a way that by cutting down the branches of fallen trees and plants including Bamboo as they obstruct the natural flow of the water. The plants uprooting or cutting down will be subject to landslides on the river banks, which will cause change in the natural habitat of river and also leads to the extinction of the rare plants.

10. The islands formed by the deposition of silt can also be removed in a manner without causing much harm to the river habitat, which will also help the free flow of the river. The excavated sediments should be deposited in suitable places on the bank of the river and native species of plants should be planted for river bank protection. A bio-fence can be constructed to protect the river banks. So the State Biodiversity Board had stated that the ecological and biodiversity study related to the present river projects should be done accordingly.

11. The Social Forestry Division of Kerala Forest Department has given its opinion stating that a radical solution for scientific removal of the silt, debris and sand from the place of deposition had to be sought for to mitigate floods. The deposited silt or soil should be done on a onetime basis and not recurrently. The naturally grown

plants which act as barriers for protecting the water body have to be protected by the Government, even when they are doing desilting or other disaster management activity to prevent flood in future.

12. The Forest Department also had specifically stated that the aquatic fauna and flora in the river and riparian habitat can be made out only after a scientific study. The Forest Department had specifically mentioned that the stretch of the live river tract with entire natural vegetation will be affected by the works of the Major Irrigation Department. The repeated floods along the riverside of the Meenachil River have affected the lives of many people as well. The Forest Department has suggested that the removal should be executed in such a way that they will not spill out into the same river again. For this, permanent removal of debris has to be worked out for increasing the volume and carrying capacity of the river in order to accommodate the flood water and it is necessary to increase the water retention of the lower areas like Pazhukkanilam and Cheepunkal Delta by removing the huge amount of debris accumulated there. The excavated sediments or debris if dumped in the same bank, again seep back into the same river. Hence it can be used for reinforcing the bunds in agricultural lands so that it never spills back to reduce the carrying capacity of the river.

13. Based on the findings of the physical inspection the MoEF&CC also has given its feedback to the Joint Committee. Considering the fact that floods have caused damage to the lives of the population along the banks of the Meenachil River during the floods of 2018-

2019, it was decided to desilt and cut the branches of trees on the river or causing obstruction to the flow of water as per the mandate of the Irrigation Department and Revenue Department. The MoEF&CC has stated that in case any tree has to be cut, it has to be done after seeking a requisite permission from the Social Forestry Department.

14. The District Collector, Kottayam has stated that dredging and desilting of dams, reservoirs or rivers for the purpose of their maintenance, upkeep and disaster management does not require prior Environmental Clearance. The Government of Kerala by the G.O. Ms. No. 316/16/RD dated 24.05.2006 directed the District Collector, Kottayam not to accord sanction for sand mining in Meenachil River for three years.
15. Based on the above reports and opinions of the various authorities, the Joint Committee concluded that no major environmental damage has been caused due to the activities undertaken by the Irrigation Department for desilting Meenachil River and accordingly no Environmental Compensation needs to be recovered from any agency. The Joint Committee had further noted that no specific scientific study has been conducted by the concerned authority for the specific works and these works have been initiated as part of the disaster management mitigation measures and as a routine work of Irrigation Department to avoid floods in the Meenachil River and was taken up based on the internal departmental environmental study reports. Accordingly, the Joint Committee has said that there will be no major environmental changes will be

caused now due to the activities undertaken by the Irrigation Department for desilting the Meenachil River.

16. The Joint Committee recommended that undertaking of flood control and mitigation measures in Meenachil River by clearing the obstructions in the water way, whether it be the hanging branches of trees and Bamboo bushes, obstructing the flow of water or the depositions in the waterway as these are efforts to reinstate the river to its original conditions, thereby increasing the flow area and flood discharge capacity. These measures only reduce the intensity of flooding. The Joint Committee also felt the need for long term measures for future flood control and mitigation in entire Meenachil River basin considering the ecological aspects as well for preventing the recurrence of floods after conducting a detailed scientific study.

17. **The applicant also had filed the objections to the Joint Committee report.** In the objections, the applicant has cited the Judgement of the *Hon'ble High Court of Kerala delivered in O.P. No. 14764 of 1997* wherein the State Government was directed to clearly define the river bank referred to in the condition imposed by it and to fix permanent marks so as to enable the clear determinations of the river bank on either side, to earmark the prohibited area on either sides of bridges, dams and other structures and also to specify the normal sand bed level for the respective rivers, locate the areas where the sand deposits are less and declare such areas as prohibited areas before taking up the work of extraction for the relevant year and also to construct

retaining walls along the river banks where there exist chances of land slide.

18. Though the said judgement was passed during the year 1998, the applicant states that the boundaries of the river have not been demarked and marks were not fixed. No earmarking of river bed has been done and no retaining walls constructed by the Government. It was argued by the Learned Counsel for the applicant that there was nothing to show that desilting and cutting of branches of trees will solve the entire problem of flooding and will not adversely affect the river ecology.

19. To the objection filed by the applicant, **the Executive Engineer, Environment and Climate Change, has filed his Rejoinder** wherein it has been categorically stated that the reference and the order passed in O.P. No. 14764 of 1997 dated 22.07.1998 of Hon'ble High Court of Kerala relates to Kallada River and the same is not relevant for consideration in considering the Meenachil River. The applicant had referred to the works initiated by Major Irrigation Department in Meenachil River and stated that no study with reference to the silt had been made is denied by the 1st respondent. As had been reported by the Joint Committee, the investigation works were carried out as part of the development of inland navigation under IWT scheme in various stretches of the river. The document by name 1) IWT-Development of State Water Ways and Feeder Canal conducting study classification of State water ways and deriving development standards and preparation of master plan for State Water ways for Meenachil River from Chungam to Kanjiram in Kottayam District. In the entire

document the cross section of various portion of the river concerned had been shown so that, from those study materials the portion where the obstruction including silt are clearly identifiable and also by field observation. Thus the Government of Kerala had specifically stated that detailed study had been conducted already in this regard.

20. The Government had further stated that urgent measures are to be taken to avoid floods. As the works arranged in Meenachil River are crucial with regard to disaster management and the present scenario of unpredictable climate conditions of extreme rainfall and cloud bursts and series of land sliders and also the MLA's and MP's and flood affected victims and various organisations had expressed their grievance through their petitions requesting urgent necessary intervention in this regard before the next monsoon as the region could not withstand any future destructions due to floods. Immediate steps are to be taken by the various existing agencies and departments and they cannot wait for the constitution of the river bed authorities. According to the Government, if the present actions are not taken and proposals made are not implemented, Kottayam District will be facing alarming situation in future floods as well.

O.A. No. 184 of 2021

21. This is also an application filed by another individual seeking a direction for restitution of the property damaged including the environment around the Meenachil River and maintained the river ecology. According to this applicant, he had "lost about 10 cents of

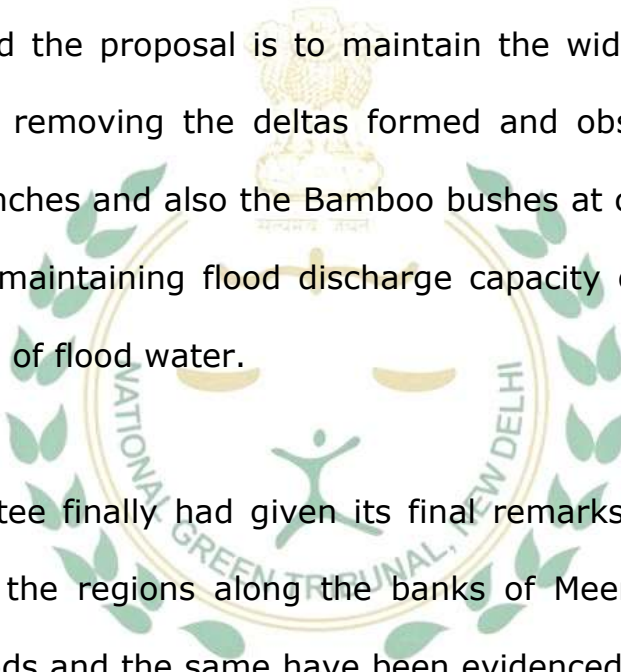
land on account of erosions which has caused on account of the dredging done as if it is de-silting action of the 1st and 2nd respondents". Originally he was owner of 09 ares and 60 sqm in R.S. No. 60/1 of Velloor Village, Kottayam Taluk. Six coconut trees, four herd of Bamboo plants, three Attuvanchis, four Areca trees and several others trees were fallen on account of the excavation done. It is also alleged that no scientific study was conducted by any agency before the de-silting action was taken up.

22. Even in this case, this Tribunal had appointed the Joint Committee. The Joint Committee has stated that the applicant had wrongly stated that there was boundary wall on all sides including the west and south. The applicant's property is on the left bank of Meenachil River at Cherickalbhagom in Kottayam District. On verification it is understood that the alleged portion of the applicant's property is poromboke of Meenachil River which is the land assigned to him years back. The Meenachil River shares the northern and western side of the applicant's property and on the other side of the river is Kottayam Thiruvapu PWD road. However, the report states that there is a boundary wall on western side of the property near the applicant's house which is given as a protection to the river poromboke. The Joint Committee had noted the property of the applicant comes in the end portion of the proposed work of CSIND, de-silting of Meenachil River from Chugam to Janjiram which have been initiated by Major Irrigation Department in Meenachil River.
23. According to the Joint Committee the works are beneficial for mitigation flood hazards especially for protection of live and

property of the people residing near the river bank and western low lying areas of Kottayam District as well as for making the boat routes navigable that are severely blocked by various deposits, vegetation leaning into the water way and weed growth for mitigating the effects of the floods and inland navigation. It is stated further that as the alleged property of the applicant is located in the curved portion of the river, the herd of Bamboo leaning in those portion caused obstruction to flow and the force. Therefore, the leaning branches of Bamboo herd which obstructed the flow of water were cut using the cutting machine. Buildings on the opposite bank are in collapsible position. As per the report, the de-silting activities are proposed on specific locations where there are obstructions to flow and not the entire length of the river for reaching those locations and for the easy execution of the work, the contractor can make use of the barge for moving in the river for doing the activities mentioned in the work and the equipments and machineries are mounted on the barges for easy usage. The Joint Committee has specially found that there was no excavation/de-silting done on this specific location. No deposition of de-silted soil was observed anywhere in the location.

24. The Joint Committee report had further stated that the survey conducted by the Survey Department at the site, there was no loss of land on the western side and the same is poromboke of the river itself which is to be kept as flood plain. As per the survey, nearly 04 cents were seen lost continuously and not bit wise dislocation from that side and there is no indication of recent dislocation at the site and no deposits of any silt on the banks are seen. Regarding the cutting of the Bamboo bushes, it is stated that the Department

is bound to act as per the direction in Orange book of Disaster Management, 2021 to avoid any flood related hazards. In the light of changing climatic conditions and prolonged monsoon seasons and considering the previous floods in the year 2018-2019, it is the responsibility of the Irrigation Department to ensure the free flow of flood water by removing the obstructions in the canals, streams and rivers under its jurisdiction. Regarding the dredging, it is observed that no dredging required in the river bed as Meenachil River has an average depth of 05 meters to 04 meters within the location. As such no dredging is proposed as alleged by the applicant and the proposal is to maintain the width and depth of the river by removing the deltas formed and obstruction by the hanging branches and also the Bamboo bushes at certain identified reaches for maintaining flood discharge capacity of the river and for easy flow of flood water.

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25. The Committee finally had given its final remarks and conclusion stating that the regions along the banks of Meenachil River are prone to floods and the same have been evidenced during the year 2018-2019 wherein considerable amount of loss has occurred. Hence in order to avoid recurrence of such situation, the de-silting activities in the Meenachil River may be taken up on a priority basis. As found earlier, the portion of the applicant's property is only river poromboke which was assigned to him years back. The alleged loss of 04 cents of property which was identified in the survey was lost by the applicant years back as he himself mentioned in the representation dated 26.06.2021.

26. The Joint Committee has specifically found that the Irrigation Department has not initiated any earth work or dredging works in the alleged portion or in the surroundings, and that only Bamboo bushes leaning which caused obstruction to flow were cut using cutting machine to reduce the force of flow towards the opposite bank, which was already in dangerous condition. As the area is now facing a threat of floods due to the monsoon and the Government had already given 'Orange' alert in the months of June, July, August and September, prompt action without delay regarding the mitigation measures warranted have to be taken up to avoid flood related calamities.

27. The Kerala State Biodiversity Board's Senior Research Officer has given its findings and suggestions in common to both the applications. It is specifically stated that most of the sides of the river are badly affected by the floods, branches of trees and bamboo clumps were seen fallen into the river obstructing the natural flow of the water causing floods during rainy season. Moreover in many areas small islands were formed in the river due to deposition of silt and mud further narrowing the river. The change of course of river caused damage in river banks. The Biodiversity Board also observed during flood 'Attuvanchi' (*Ochreinauclea Missionis*) an endangered plant species is seen abundant in the project area and most areas are filled with many other riverine plant species.

28. The Major Irrigation Department of Kerala had initiated works to widen the river and remove obstructions for its normal flow with the aim of mitigating the ill effects of flood in Meenachil River.

However, the Biodiversity Board had suggested that the removal of the silt or widening of the river or cutting of trees should be undertaken only after conducting a detailed study and ensure no loss to the rich biodiversity of the area. It was recommended that it can be achieved through involving proper scientific techniques in the planning as well as implementation level of the project. Similarly, planting more riverine plants and future maintenance of them will ensure the future conservation of the river. Accordingly, the Biodiversity Board had given the following suggestions:

- a. A Scientific study may be conducted for desilting and dredging activities through a reputed agency like Centre for Water Resources Development and Management (CWRDM), Kozhikode.
- b. The fallen branches of the bamboos and trees into the river which obstruct the normal flow can be cut down with utmost care not to uproot these plants.
- c. The sand/silt deposits which made the small islands in the river can be removed and can be stored in a government owned land away from the riverine area to avoid future deposition to river during rainy season.
- d. The illegal constructions/land encroachments along the river basin should be avoided and the river banks can be effectively protected through planting riverine area specific plants such as Ochreinaulea missionis, Vetiver, Pandanus etc., with the support of local bodies.
- e. Ward level action groups may be constituted with the support of local bodies for the monitoring, maintenance and management of the river basin for the future.
- f. Similarly, as per the Biological Diversity Act, 2002. Section 41: Biological Diversity Rules, 2004, Rule (22) and Kerala Biological Diversity Rules, 2008, Rule (20). Government of Kerala has formed Biodiversity Management Committee (BMCs) in all the three tier Panachayats, Municipalities and Corporations. Hence, with the help of BMCs, the future management and maintenance of the Meenachil river banks can be effectively achieved.

29. As per the above suggestions, the report of the Biodiversity Board which was also considered by the Joint Committee constituted and also considering the report of the Social Forestry Division of Forest Department, comments of MoEF&CC, Regional Office and the report of the District Collector, Kottayam, the Joint Committee had adopted the suggestions given by the Biodiversity Board and felt for the need for long term measures for future flood control and

mitigation in the entire Meenachil River basin considering the ecological aspect as well which the department will give due consideration for preventing the recurrence of floods after conducting the detailed scientific study.

30. From the above reports and discussions, it is evident that the area is facing a threat of floods particularly during monsoon season and the Government had also decided to initiate mitigating measures to reduce the risks, it cannot be helped but to proceed with the mitigating steps warranted to avoid the flood related calamities. However, the same may be done taking utmost care and following the suggestions given by the Joint Committee as well as the Biodiversity Board in this regard.

31. With the above directions and in view of the above discussions, the Original Applications are disposed of.

32. In view of the disposal of the above Original Application, I.A. No. 14 of 2023 also stands disposed of.

.....J.M.
(Smt. Justice Pushpa Sathyanarayana)

.....E.M.
(Dr. Satyagopal Korlapati)

Internet – Yes/No
All India NGT Reporter – Yes/No

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