

REPORT NO.

270



PARLIAMENT OF INDIA RAJYA SABHA

DEPARTMENT-RELATED PARLIAMENTARY STANDING
COMMITTEE ON SCIENCE & TECHNOLOGY,
ENVIRONMENT & FORESTS

TWO HUNDRED SEVENTIETH REPORT

ENVIRONMENTAL ISSUES OF KERALA IN GENERAL AND
KOCHI/ERNAKULAM IN PARTICULAR

(PRESENTED TO THE RAJYA SABHA ON THE 23RD DECEMBER, 2015)
(LAID ON THE TABLE OF THE LOK SABHA ON THE 23RD DECEMBER, 2015)



RAJYA SABHA SECRETARIAT
NEW DELHI

DECEMBER, 2015/ AGRAHAYANA, 1937 (SAKA)

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COMPOSITION OF THE COMMITTEE

(2015-16)

(Constituted on 1st September, 2015)

1. **Shri Ashwani Kumar** — *Chairman*

RAJYA SABHA

2. Shri Anil Madhav Dave
3. Shri Prem Chand Gupta
4. Shri C.P. Narayanan
5. Shri Parimal Nathwani
6. Shri Paul Manoj Pandian
7. Dr. T. Subbarami Reddy
8. Shri Arvind Kumar Singh
9. Shri Bhupinder Singh
10. Shri Ronald Sapa Tlau

LOK SABHA

11. Shri Badruddin Ajmal
12. Shri Muzaffar Hussain Baig
13. Shrimati Bijoya Chakraborty
14. Shri Prabhatsinh Chauhan
15. Shri Pankaj Chowdhary
16. Kum. Sushmita Dev
17. Shri Ninong Ering
18. Shri Laxman Giluwa
19. Dr. K. Gopal
20. Shri Daddan Mishra
21. Shri Chirag Paswan
22. Shri Shivaji A. Patil
23. Shri Nanabhau Falgunrao Patole
24. Shri Nagendra Kumar Pradhan
25. Shri Harinarayan Rajbhar
26. Shrimati Sandhya Roy
27. Shri Kirti Vardhan Singh
28. Shri Nagendra Singh
29. Shrimati Renuka Sinha
30. Shri Vikram Usendi
31. Shrimati M. Vasanthi

SECRETARIAT

Shri M.K. Khan, Joint Secretary

Shri Rohtas, Director

Shri Mohd. Salamuddin, Deputy Director

Shri Rajiv Saxena, Assistant Director

INTRODUCTION

I, the Chairman of the Department-related Parliamentary Standing Committee on Science & Technology, Environment & Forests, having been authorized by the Committee to present the report on its behalf, present this Two Hundred Seventieth Report on "Environmental issues of Kerala in General and Kochi/Ernakulam in particular".

2. During its study visit to Kerala from 23rd to 26th November, 2015, the Committee heard the views of the officers of the Central Government and State Government of Kerala and Experts and Civil Society Organisations/NGOs on "Environmental issues of Kerala in General and Kochi/Ernakulam in particular".

3. The Committee expresses its thanks to the officers of the Central Government and State Government of Kerala and Experts and Civil Society Organisations/NGOs for rendering their valuable views/replies to clarifications sought by the Committee.

4. In its meeting held on 22nd December, 2015, the Committee considered the draft report and adopted the same.

NEW DELHI:
December 22, 2015
Pausha 1, 1937

ASHWANI KUMAR
Chairman,
Department-related Parliamentary Standing Committee
on Science & Technology, Environment & Forests
Rajya Sabha

REPORT

The Department-related Parliamentary Standing Committee on Science & Technology, Environment & Forests has been undertaking study visits in various States/cities across the country to assess their environmental status. As part of this exercise, the Committee undertook a study visit *inter-alia* to Kochi from 23rd to 26th November, 2015. During the visit, the Committee held meetings at Kochi with NGOs/Civil Society Organisations/Experts as well as officials of Government of Kerala and Union Ministry of Environment, Forest and Climate Change to apprise itself of the environmental issues of Kochi/Kerala.

2. At Kochi on 25th November, 2015, the Committee first heard the views of NGOs/Civil Society Organisations/Experts on the environmental issues of Kerala in general and Kochi/Ernakulam in particular. The Principal Secretary, Forest & Wildlife Department, Government of Kerala was also present during the meeting. A list of NGOs/Civil Society Organisations/Experts and their representatives who attended the meeting is at Annexure-I. A list of officers of Government of Kerala and Union Ministry of Environment, Forest and Climate Change who were present in the meeting is at Annexure-II. Some NGOs/Civil Society Organisations/Expert also submitted written memoranda. Memoranda are at Annexure-III.

3. Initiating the discussion with the NGOs/Civil Society Organisations, the Chairman¹ of the Committee urged the participants to give viable proposals which could be implemented straightway without any major policy changes especially with regard to solid waste management, sewerage and untreated water disposal to water bodies, regeneration of water resources, afforestation and protection of mangroves on the banks of the wetlands in Kochi in particular and Kerala in general. During the meeting, the members of the NGOs/Civil Society Organisations expressed their views on a number of issues pertaining to the environmental issues of Kochi and Kerala. Later the Committee held discussion with the officers of Government of Kerala and Union Ministry of Environment, Forest and Climate Change on the subject.

4. Some of the views expressed by the NGOs/Civil Society Organisations/Experts are as under:-

(i) The representative of All India River Protection Council drew attention to the air, water and soil pollution in Kochi. He stated that the various water bodies in the state were polluted, have become waste dumping places and nearing extinction but the concerned authorities were not addressing the issue. He also stated that rainwater harvesting should be made compulsory. He mentioned about lack of liquid waste disposal facilities in Kerala. The liquid waste mixed with fresh water was a source of mosquitoes and other bacterial diseases. He also stated that there was no proper drainage system in Kochi and the existing system needed to be redesigned. He further stated that the solid and

¹ Meeting also Chaired by Shri Bhupinder Singh in absence of the Chairman.

liquid waste of the city finally went into Vembanad Lake and stressed the need for a decentralized solid waste disposal system. He further stated that the only solid waste treatment plant at Bhramapura was not sufficient for the city.

(ii) Shri K. Binu from Bazhooor, Kottayam District brought out the condition of mangrove and stated that Kochi had lot of mangrove forests which have been totally destroyed but nothing has been done.

(iii) The representative of Matsyafed brought out the problems regarding the rehabilitation of coastal fishermen. He stated that the steady rise in sea levels and the resultant ingress of the sea to the coastal land and swelling of water bodies was causing irreparable damage to the livelihood opportunities of the fishermen. He expressed concern on the fishermen and residents not being consulted by local authorities to construct homes in coastal areas. He requested that the Central Government should take steps for rehabilitation of the poor people in the coastal area.

(iv) The representatives of Kerala Vrikhsa Prakrithi Samrakshana Samiti pointed out that there has been severe destruction of trees for construction of metro rail corridor and the wastes from of slaughter houses were being disposed into the water bodies. He stated that the number of unauthorised slaughter houses in the city was very large.

(v) The representative of River Research Institute, Thrissur commented on the bad shape of the 44 rivers in Kerala. She expressed her apprehensions on the illegal sand mining and suggested sand holidays for 5 years, so that rivers get enough time to accumulate sand. She suggested that catchment area treatment plants should be established for increasing the capacity of irrigation. Ecological flow assessment and Western Ghat Conservation should be given due importance. She also pointed out the loss of fishes in riverine stretches and stated that tree plantation needs to be supported.

(vi) The representative of Amicus Associates, Ernakulam referred to Supreme Court judgment whereby river sand mining cannot be permitted below the summer water level. He stated that illegal mining permits were being issued by the State Government itself to the sand mafia.

(vii) The representative of Salim Ali Foundation emphasised the importance of conservation of Western Ghats and was of the view that the word afforestation is a misnomer. He said that it was impossible to calculate the loss of biodiversity and aesthetic value of forest.

(viii) The representative of Kerala Tree Protection Council pointed out that the EIA conducted by Delhi Metro Rail Corporation (DMRC) for metro rail project in Kochi envisaged cutting of 443 trees and the project was sanctioned. However, later, the implementing agency, Kochi Metro Rail Ltd. (KMRL) conducted another EIA and cut 1400 trees. He also expressed the need for extending small area of Mangalavanam bird sanctuary (3.7 hectare) by including the nearby area owned by Bharat Petroleum Corporation Ltd., which they were not utilising. He also stated that there was no ambient air quality monitoring equipment in the city. He also dwelt upon violation of norms in issuance of sand mining orders and encroachment in the rivers of the state.

(ix) Shri T.K. Suresh Kumar, a resident of Ambalapuzhha stated that the local residents of Ambalapuzhha around Kapthithode are facing serious health problems like cancer due to waste dumped from the adjacent fish and prawn processing plants/peeling sheds. He requested for relocation of fish processing units.

(x) The representative of Topical Institute of Ecological Sciences pointed out that the Vembanad Lake is heavily infested with the Eichhornia and Salvinia and action needs to be taken to remove these weeds. He also demanded transparency in utilizing river management funds.

(xi) Shri Sreedhar a resident of Kochi stressed the need for a wetland authority to preserve the paddy fields and for wetland protection.

(xii) The representative of Port Watch Cochin stated that a huge quantity of sand had been removed from the riverbed. He also stated that massive dredging had been carried out in Cochin Harbors.

(xiii) Shri Vishunu Katha, Assistant Registrar, CUSAT, Kalamssary stated that waste management in Kochi was a total failure and suggested for the waste segregation at household levels apart from solid and liquid waste management. He also expressed his views for promoting planting of medicinal trees, birth star trees and endangered trees by subsidizing the cost involved.

(xiv) The representative of Lawyers Environment Awareness Forum, Kerala High Court Advocates Association stated that the District Collector should be made the coordinator to identify the ecologically sensitive areas.

(xv) Shri Premchand T.P., a resident of Kochi, pointed out the water logging, siltation and deposition of dredging waste in Kochi.

5. The Committee thereafter heard the representatives of Government of Kerala and Union Ministry of Environment, Forest and Climate Change on the issues. While welcoming the officers of the Central and State Government the Chairman stated that although Kochi can claim to be one of the largest industrial hubs in Kerala, unscientific and environmental unfriendly disposal of solid waste, ambient air quality reaching a critical level and high level of air pollution have led to Kochi being the one of the India's top most environmentally problematic city. He also brought out the issues of environmental degradation put forth before the Committee by the representatives of NGOs/Civil Society Organisations and local people. He asked the officials to apprise the Committee of the steps taken by different agencies to address these environmental issues.

6. The Principal Secretary, Forest and Wildlife Department, Government of Kerala, in his presentation before the Committee gave an overview of state of forest and wildlife in Kerala. He stated that Kerala had 14 districts and the density of the population was very high i.e. 859 per sq/km, which was the highest in the country. The geographical area of the state is 38688 sq. km. As per the Forest Survey of India the forest and tree cover of the state was 54.21% against the national figures of 24.01%. The state maintained 28.42% of the forest area as Protected Area which included 2 Tiger Reserves, 5 National Parks, 15 Sanctuaries and 1 Community Reserve. He also pointed out that 410

sq. km. of forest land was diverted under forest (Conservation) Act, 1980. Some other points covered in this presentation were that many of the private forest (1696 sq km²) areas have been nationalised; land filling has been completely banned; the forest area is increased based on the ecology; Kerala maintains 29% of total area as forest, which is higher than any other state in south India; and boundary has been marked to separate the forest area.

7. Thereafter, the Committee identified following issues for interaction and makes observations/recommendations thereon.

SOLID WASTE DISPOSAL/MANAGEMENT

8. The Chairman drew attention of the Principal Secretary, Government of Kerala to the pathetic sight of waste dumping site at Kalamassary in Kochi. He also goaded the Principal Secretary to give a definite time frame for deliberations on this issue and finding a solution therefor. The Principal Secretary, while promising to take action in the matter, stated that there was only one solid waste disposal unit at Bhramapuram, Kochi which was not able to take the load of whole city. He also stated that it was difficult to process all the waste material, especially due to the rains and humid conditions of Kochi which necessitated 6-8 months for drying. He also stated that they were trying to find out another alternative site for a waste disposal plant. However, there was resistance from the local people and the Government was not getting any land for the same.

9. **The Committee is of the view that waste disposal management is integral part of any city's planning. Not having adequate number of waste disposal plants does not reflect well on the administration of Kochi. The Committee, therefore, recommends as under:-**

- (i) **The waste dumping site in Kalamassery should be cleared within six months from January, 2016. The plea of the State Government that Government was not getting any land for the waste disposal plant is not tenable. The Committee recommends that necessary action should be taken to identify a suitable site for establishing a waste disposal plant, which could cater to the growing needs of Kochi.**
- (ii) **Open dumping sites are an eyesore and environmental hazard and can become a health hazard too. The Committee, therefore, recommends that the State Government should establish covered dumping sites which should be equipped with incinerators.**
- (iii) **Waste disposal plants should have modern methodologies for segregation and scientific disposal of wastes.**
- (iv) **Segregation of waste should become a part of waste disposal management. People should be educated about the benefits of waste segregation and encouraged to segregate the plastic and non-plastic waste at the household level itself. Requisite mechanism for collection of such segregated waste should also be put in place.**

REHABILITATION OF COASTAL FISHERMEN

10. The Committee drew the attention of the representative of State Government to the problem of rehabilitation of coastal fishermen brought out by the representative of one of the organisations appearing before the Committee. The Committee was informed by the Principal Secretary that the State Government had spent a lot of money for their rehabilitation and they planned to construct 5000 flats for the fishermen for which budget allocation has already been made.

11. **The Committee, while taking note of the Government's efforts, is of the view that devising a strategy for rehabilitation of the fishermen is vital. Fishermen face a lot of vagaries of nature on sea shore but often prefer to have their homes near the sea. Therefore, the Committee recommends that the site for construction of their homes should be carefully chosen so that they are away from high tide areas, floods etc. and their lives are secured.**

PROTECTION OF MANGROVE AREAS

12. The Committee drew attention of the State Government to the destruction of mangrove forests, as brought out by some of the NGOs appearing before the Committee and sought response. The Committee was informed by the Principal Secretary that Government of Kerala had embarked on a mission in Konnore District in this regard. They had already taken over about 40 acres of mangroves forests and plan to expand this project in three more districts where mangrove forests existed.

13. **The Committee is of the view that mangroves act as buffers between the land and the sea and are very important part of our biodiversity and their destruction in Kerala is a matter of concern. The Committee, while taking note of the fact that Government of Kerala has taken over 40 hectares of mangrove forests and intends to extend the project to other three districts, feels that the Union Ministry of Environment, Forest and Climate Change and State Government of Kerala should coordinate in this regard and take all necessary steps to save and protect the mangrove areas from destruction, encroachment and garbage dumping.**

STATE OF RIVERS OF KERALA

14. The Committee was informed that all the 44 rivers originating from the Western Ghats and its surrounding hills in Kerala are facing slow ecological death and losing their natural flow pattern due to culminative impact of various interventions in the catchments and inside the river channel including deforestation of the catchment areas, forest fragmentation, blocking the flows by dams, encroachment and massive mining of hills.

15. **The Committee is of the view that to preserve rivers Government should chalk out a sustainable action plan. The Government should also consider declaring sand holidays in identified rivers for a certain period to allow replenishment of sand and revival of the ecological balance of the rivers. The restoration of river catchments should be taken up by concerned authorities alongwith the NGOs etc. working towards forest protection. The awarding of permits for sand mining from rivers in**

violation of Hon'ble Supreme Court judgment also needs to be looked into seriously.

CONSERVATION AND MANAGEMENT OF VEMBANAD LAKE

16. The Committee was informed that there were around one thousand five hundred to two thousand boats in the lake to cater to the tourists and, all along the bank of the lake, residential units had come up by reclaiming the part of the lakes. As per an estimate around 40% of the area of the lake had been reclaimed due to increasing industrialisation and urbanisation. In the absence of any proper sewage or drainage system, the sewerage from the residential units is drained into the lake. It was also noticed that the colour of the lake water has turned into dark black and was eutrophicated with sparse to dense infestation of water hyacinth and other submergent weeds. No trace of aquatic life was noticeable.

17. Director, NIO informed that the problems of eutrofication and encroachment in the lake were due to the deterioration of water quality caused by indiscriminate use of fertilizers and dumping of agricultural and domestic waste. Growth of water weeds decreases water flow, block sunlight from reaching aquatic plants and depletion of oxygen affecting the fishing community adversely.

18. The Committee had visited Vembanad Lake on 8th November, 2014 during its visit to Kochi in November, 2014 and had reviewed the ecological health of the Lake.

19. The Committee expresses its serious concern over the pathetic condition of the lake and the over-increasing eutrophication and pollution in the backwaters caused mainly due to reckless reclamation, completely obstructing inflow of sea water into it and also due to discharge of untreated sewerage into it. The Committee is of the view that the condition of Vembanad Lake instead of improving during the period of one year since the last visit of the Committee to Kochi, has deteriorated further.

20. **The Committee feels that for ensuring the revival of the Kochi Backwaters, its conservation and management, there is an urgent need to constitute an Independent Vembanad Lake Development Authority with full powers on the lines of Chilika Lake Development Authority in Orissa as the present arrangement lacked the requisite support and coordination among different agencies. The Committee, therefore, recommends that the Ministry of Environment, Forests & Climate Change should devise an Action Plan to be implemented within a definite time-frame in coordination with the State Administration / State Pollution Control Board, to restore the health of the backwaters urgently. Following steps need be taken within the time limit stated against each for restoration of the health of the backwaters:-**

- i) Mapping the residential structures along the lake by using technology like satellite imagery etc. and placing the same in public domain, within six months. Preventing further encroachments and**

reclamations by enforcing Coastal Regulation Zone (CRZ) rules strictly;

- ii) Establishing treatment plants by the end of financial year 2015-16 for treating the effluents/sewage falling into the lake;
- iii) Making regulations by March, 2016 for aqua tourism, especially house boats and making them environment-friendly;
- iv) Establishing online pollution monitoring mechanism within nine months at the strategic locations;
- v) Strict enforcement of environment / pollution norms and punishing the violators severely with immediate effect.
- vi) Taking appropriate remedial measures with three months for aquatic weed infestation.

Action taken in this regard within the prescribed time frame be notified to the Committee.

ISSUE OF ILLEGAL SLAUGHTER HOUSES

21. The Committee's attention was drawn to the issue of illegal slaughter houses and disposal of slaughter house wastes into the water bodies. The Principal Secretary assured the Committee to look into the issue of illegal slaughter houses and dumping of slaughter house waste in the water bodies in Kochi.

22. The Committee recommends that the Government must take immediate necessary action in the matter by either regularising or closing down such slaughter houses. It should also be ensured within three months that wastes from such slaughter houses is disposed off in a scientific and environment friendly manner at designated places.

23. During the meeting on 25th November, 2015 *inter-alia* with the officers of the State Government of Kerala, the Chairman of the Committee had sought a commitment to fix a time schedule for an action plan from the Principal Secretary, Government of Kerala regarding the problems related to waste disposal at Kochi. In response, the Secretariat of the Committee received communication, dated 1st December, 2015 and 15th December, 2015 (Annexure-IV & V) from the Additional Chief Secretary, Government of Kerala detailing the action plan for the scientific waste management at Brahmapuram and Kalamasey in Kochi. It was assured that the action taken by the local bodies will also be closely monitored.

Representatives of Civil Society Organizations/NGOs at Kochi

1. Shri T.K. Suresh Kumar
 2. Shri C.G. Thampi, Port Watch Cochin
 3. Dr. C.M. Joy, Kerala Tree Protection Council
 4. Shri Jose Kutty J. Ozhukayil, Malanadu Karshaka Reksha Samithi, Idukki
 5. Shri Premchand T.P.
 6. Shri K.S. Mani, Ayurvedic Medicine Manufactures Organisation of India
 7. Shri V. Dinakaran, Matsyafed
 8. Shri T.N. Prathapan, Kerala Vriksha Prakrithi Samrakshan Samithi
 9. Dr. Sitaraman, All Kerala River Protection Council
 10. Dr. Latha, River Research Institute, Olloor
 11. Shri K. Binu, Binu Mandiram, Therthapadapuram
 12. Justice Sukuman
 13. Dr. Seetharaman, Ramapriya High Road
 14. Dr. Shaju Thomas, Topical Institute of Ecological Sciences
 15. Shri Vishunu Katha, Asst. Registrar, CUSAT
 16. Dr. Sreekumar, Bharat Hospital
 17. Shri Chandrashelhar, Lawyers Environment Awareness Forum
 18. Shri Harish Vasudevan, Amicus Associates
 19. Shri Sridhar R., Thanal
 20. Shri Ranjan Mathew Varghese, Director WWF State Office Vanchiyoor
 21. Dr. V.S. Vijayan, Salim Ali Foundation
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Representatives of Government of Kerala and Union Ministry of Environment, Forest and Climate Change at Kochi

1. Shri Marapandiyan, Principal Secretary, Forest & Wildlife Department, Government of Kerala
 2. Dr. B.S. Corrie, Principal Chief Conservator of Forests & Head of Forest Force
 3. Shri C.S. Yalaki, Principal Chief Conservator of Forests (Social Forestry)
 4. Shri O.P. Kaler, Additional Principal Chief Conservator of Forests (Bio Diversity Cell)
 5. Shri K.J. Varghese, Additional Principal Chief Conservator of Forests (Eco-development)
 6. Shri K. Sajeevan, Chairman, Kerala State Pollution Control Board
 7. Er. M.S. Mythili, Member Secretary, State Pollution Control Board
 8. Shri Amarnath Shetty, Additional PCCF, Bangalore, Ministry of Environment, Forest & Climate Change, Government of India
 9. Shri M.S. Negi, IGF Forest, Ministry of Environment, Forest & Climate Change, Government of India
 10. H.C. Choudhry, Director, Ministry of Environment, Forest & Climate Change, Government of India
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