



# LAKE 2012

## National Conference on Conservation and Management of Wetland Ecosystems



06 -08, November 2012

*Organised by*

**School of Environmental Sciences**  
Mahatma Gandhi University, Kottayam, Kerala

*In association with*

Energy and Wetlands Research Group, Centre  
for Ecological Sciences, Indian Institute of  
Science, Bangalore

& Advanced Centre of Environmental Studies and  
Sustainable Development, Mahatma Gandhi  
University, Kottayam, Kerala

Venue : School Environmental Sciences (SES)  
School of Chemical Sciences (SCS) (6<sup>th</sup> November forenoon session)

### Programme Schedule

#### Day I, Nov 06 , Tuesday

Venue : School of Chemical Sciences

8.00-9.00 AM : Registration  
9.15-10.15 AM : Inaugural Session  
10.15-11.00 AM : Plenary lecture I : Dr. V. S. Vijayan  
*Former Director, SACON, Coimbatore*  
Lakes and Wetlands

11.00-11.15 AM : Tea

#### Technical sessions

11.15-12.45 PM : Technical Session-I  
Chair : Dr. K.P. Joy  
*Member, Kerala State Environment Impact Assessment Authority*

11.15-11.45 : Invited Talk I : Dr. T. V. Ramachandra  
*Centre for Ecological Sciences, IISc., Bangalore*  
Conservation and Management of Wetlands: Requisite Strategies

11.45-12.15

**Invited Talk II : Dr. Sultan Ahmed Ismail**

*Head, Dept. of Biotechnology, New College, Chennai*

Soil Health - An Indian Earthworm's Eyeview

12.15-12.45

**Invited Talk III : Dr. S. Naren**

dra Prasad

*International Institute of Information Technology, Hyderabad*

Wetland conservation- Marrying Open source geospatial technology with citizen centric approaches

**Walk to School of Environmental Sciences**

**12.45 - 1.45PM : Lunch**

**Hall – I : Main Seminar Hall, SES (Parallel session)**

**1.45 – 3.45 PM : Technical Session II Terrestrial Biodiversity**

**Chair : Dr. Shaju Thomas**

*Professor, Nirmala College, Muvattupuzha*

1.45-2.15 PM : **Invited lecture IV : Dr. Mohandas,**

*WWF, Coimbatore, India*

- 2.15-2.25 L 01 Forest Endemism in Relation to Hydrology of Western Ghats  
**Subash Chandran M.D., Rao G.R, Rajasri Ray and Ramachandra T.V.**
- 2.25-2.35 L 02 Swarming of the Termite *Coptotermes heimi* in Northeastern Puducherry Region  
**A.K. Harit, S. Gajalakshmi, and S. A. Abbasi**
- 2.35-2.45 L 03 Status of Forests in Shimoga, Central Western Ghats  
**Sudarshan P. Bhat, Subash Chandran M D and Ramachandra T V**
- 2.45-2.55 L 04 Ecological Importance of Relic Forest Patches – from Species to Ecosystem  
**Rajasri Ray, M.D. Subash Chandran and T.V.Ramachandra**
- 2.55-3.05 L 05 A Study on the Invasion of *Clidemia hirta* (L.) D. Don in the Ponthenpuzha Reserve Forest of Kottayam District, Kerala  
**Deepamol P.K., Ramesan M., Jayasooryan K.K., Joby Paul, John C.M and V.P. Syllas**
- 3.05-3.15 L 06 Association of a Mangrove Dwelling Euphytic Oribatid Mite, *Rhysotritia ardua* (C.L. Koch, 1841) (Acari :Oribatei) with the Epiphytic Alga, *Microspora* Sp.  
**P.K Syamjith\* and N. Ramani**
- 3.15-3.25 L 07 Edible Biodiversity of Kurumba Tribes in the Buffer Zone of Silent Valley National Park, Kerala  
**Anhjali, S. N, Sankar, S and Veena George, M**
- 3.25-3.35 L 08 Habitat Preference of Asian Elephant, *Elephas maximus* outside the Protected Areas in the Fragmented Landscape of Munnar, Southern Western Ghats - A Geospatial Approach  
**Rameshan M., Arijit Roy, Ramasamy E. V.**
- 3.35-3.45 L 09 Landscape Dynamics of Uttara Kannada District  
**Bharath Setturu and Ramachandra T V**

### 3.45 - 4.00 PM : Tea

Hall – II : Mini Seminar Hall, SES (Parallel session)

1.45 – 3.45 PM : Technical Session III : Aquatic Biodiversity

Chair : Dr. Sankaran Unni

*Former Professor & Head, Dept. of Botany, Govt. College, Chindwada, MP*

- 1.45-1.55 L 10 Diversity and Distribution of Aquatic Insects in Aghanashini River of Central Western Ghats, India  
**Balachandran, C., Dinakaran, S, Subash Chandran, M.D. and Ramachandra, T.V**
- 1.55-2.05 L 11 Seasonal Wetland Flora of the Laterite Plateaus of Coastal Uttara Kannada  
**G.R. Rao., G. Krishnakumar, M.D. Subash Chandran and T.V. Ramachandra**
- 2.05-2.15 L 12 Conservation Strategies for the Hygrophilous pteridophytes of Central Western Ghats  
**Sumesh N. Dudani., M. K. Mahesh, M. D. Subash Chandran and T. V. Ramachandra**
- 2.15-2.25 L 13 Preliminary Documentation of Aquatic Macrophytes of Kole Wetlands of Malappuram District, Kerala  
**Jyothi P.V., S. Suresh Kumar**
- 2.25-2.35 L 14 Comparative Analysis of Morphometric Characters in the Population of Golden Mahseer, *Tor putitora* (Hamilton) (Cyprinidae: Pisces) of a Man-Made Wetland and a Natural Stream in Himachal Pradesh, India.  
**Rinku Arora and J.M. Julka**
- 2.35-2.45 L 15 Floristic Diversity in Wetland Rice Ecosystem of Thiruvananthapuram District  
**Sajith Babu, D., Sansamma George and Nishan, M.A.**
- 2.45-2.55 L 16 Ecology of Clam Bed - Hydrographic Conditions Influencing the Density and Distribution of Venerid Clam *Paphia Malabarica* in two Lake Systems.  
**Ampili.M., and Shiny Sreedhar K.**
- 2.55-3.05 L 17 Phyto Diversity and Conservation of Pulicat Lake- Andhra Pradesh  
**S.K.M.Basha, E.Rajya Laksmi**
- 3.05-3.15 L 18 Phytoplankton Diversity for Monitoring Freshwater Reservoir of Belgaum District, Karnataka State  
**B.S. Giriappanavar and R.R.Patil**
- 3.15-3.25 L 19 Preliminary Report on Physico-Chemical Characteristics and Algal Biodiversity of Temple Tanks of Belgaum and Dharwad Districts, Karnataka State.  
**B.S.Giriappanavar and P.B.Shivalli**
- 3.25-3.35 L 20 Aquatic Plant Diversity of Ponds in Palakkad District; Kerala  
**Bhagyaleena. P and R. Gopalan**
- 3.35-3.45 L 21 Abundance Patterns and Distribution of Annelids In Kundalika Estuary Along the Northwest Coast of India  
**Rakesh P.S, Ajit Ambekar, Soniya Sukumaran and S.N. Gajbhiye**
- 3.45-3.55 L 22 Influence of Climate Variability on Productivity of Rice  
**Kishlay Kumar Singh, Surender Paul**

## 3.45 - 4.00 PM : Tea

### Hall – I : Main Seminar Hall, SES (Parallel session)

#### 4.00 - 5.20 PM : Technical Session IV : Waste management

**Chair : Dr. George Chakkachery**

*Executive Director, Suchitwa Mission, Govt. of Kerala*

- 4.00-4.10 L 26 Assessment of impact of the Vermicompost Generated from Allelopathic Weed *Lantana camara* on Seed Germination and Seedling Growth  
**Naseer Hussain, M.Karthikeyan, S. Gajalakshmi and S.A. Abbasi**
- 4.10-4.20 L 27 Environmental Implications of Mismanagement of Municipal Solid Waste  
**Shwetmala, H N Chanaky, T V Ramachandra**
- 4.20-4.30 L 28 Feasibility Studies of Selected Plants in the Treatment of Water Contaminants  
**Snisha S., Alni C. Ali, Harilal, C.C. and Pradeep Kumar, G.**
- 4.30-4.40 L 29 Role of Phytoremediation Technique in Industrial Wastewater Treatment Using Constructed Wetland  
**J.S.Sudarsan, V.T.Deeptha, Deepak Maurya**
- 4.40-4.50 L 30 E-Waste: An Ever-Growing Global Threat Against Sustainable Development  
**Regi P. Mathew and Ignatius Antony**
- 4.50-5.00 L 31 Survival of *Eudrilus eugeniae* in Oil Contaminated Soil  
**Sujatha S., Nasheeda Beevi A. N., And E.V. Ramasamy**
- 5.00-5.10 L 32 Sustainable Algal Scum Management and Wastewater Treatment in Bangalore  
**Durga Madhab Mahapatra, Chankaya H N and Ramachandra T V**
- 5.10-5.20 L 33 Phytoremediation of Leachate from Municipal Dump Yard in a Constructed Wetland Planted with *Colocasia esculenta*  
**Shamili, V.K., Sajithkumar, K.J., Arun Babu, V., Ramasamy, E.V.**

**Hall – II : Mini Seminar Hall, SES (Parallel session)**

**4.00 - 4.30 PM : Technical Session III continues... Aquatic Biodiversity**

- 4.00-4.10 L 23 Diversity of Monocotyledonous Plants of the Water Bodies of Bangalore and Adjacent Areas  
**Ravi, G., Haridasan, V.K.**
- 4.10-4.20 L 24 Seasonal Variation and Biodiversity of Phytoplankton in Parambikulam Reservoir, Western Ghats, Kerala  
**K.M. Mohamed Nasser and S. Sureshkumar**
- 4.20-4.30 L 25 Phytoplankton population of wetlands adjacent to sea food processing industries in Vembanad lake ecosystem  
**Vidya. V, Sumathy K and G. Prasad**

**Hall – II : Mini Seminar Hall, SES (Parallel session)**

**4.30 - 5.30 PM : Technical Session V Avian Biodiversity**

**Chair : Dr. Punnen Kurian**

*Associate Professor, St: Mary's College, Manarcad*

**4.30-5.00 PM : Invited lecture V : Dr. E. A. Jayson**

*Scientist, KFRI, Peechi*

Diversity of Birds in Kerala, India

- 5.00-5.10 L 34 Abundance, Distribution and Conservation of Wetland Birds in the Kole Lands of Kerala  
**Chandrakasan Sivaperuman, and EA Jayson**
- 5.10-5.20 L 35 Avifauna Across a Dying Water Body: From the Perspective of Birds Diversity to Assess the Habitat of the Haihole Tank in Shettihalli Wildlife Sanctuary  
**Shrinivas Kadabagere and Vijaya Kumara**
- 5.20-5.30 L 36 Santragachhi Jheel: A Migratory Birds Paradise Restored  
**Devsena Roychoudhury and Arjan Basu Roy**

## 5.20 to 6.20 PM : POSTER session

- P 01 Household Consumption Pattern in Pathanamthitta Districts – An Assessment  
*John Richard Thomas, P. Padma , E.V Ramasamy , Muralivallabhan T. V , A.P Thomas*
- P 02 Landuse as a Determinant in Carbon Source or Sink Capacity of Soil from a Climate Change Perspective: A Case Study  
*Sreekanth N.P, Babu Padmakumar, Shanthi Prabha V, Renuka R, A.P Thomas*
- P 03 Survival Chances Of Colony Forming Microcystis Sp And Scenedesmus Sp In Fresh Water Lake And Pond  
*Aneesh C, and Manilal V. B*
- L 04 Geochemical Signature of a High Altitude Wetland in Kerala  
*Anisha P A ; Pragath M and Girish Gopinath*
- P 05 Estuarine Bird Conservation in Uttara Kannada  
*Shrikant Naik, M.D. Subash Chandran and T.V. Ramachandra*
- P 06 Roadside Trees of Uttara Kannada District, Karnataka  
*Vishnu D.M., Rao G R, M.D. Subash Chandran and T.V. Ramachandra*
- P 07 In Situ Conservation of Traditional Rice Varieties of Uttara Kannada  
*Gayatri H. Naik, M.D. Subash Chandran and T.V. Ramachandra*
- P 08 Toxicity Study due to Accumulation of Heavy Metals in Sediment Ecosystem of Bhavan's College Lake of Andheri, Mumbai  
*P.U. Singare, M.S.Talpade, V.G.Bhawe and D.V.Dagli*
- P 09 Microhabitat Influence on Diatom Distributional Pattern in Diverse Ecosystems  
*Alakananda, B., Mahesh, M.K. and Ramachandra T.V*

8.00-9.00 PM : Dinner (SES)

## Day 2 , November 07 , Wednesday

Hall – I : Main Seminar Hall, SES (Parallel session)

9.00-10.40 AM : Technical Session VI : Pollution – I  
Chair : Dr. Kamalakshan Kokkal  
*Joint Director, KSCSTE, Thiruvananthapuram*

9.00-9.30AM : Invited lecture VI : Dr. Ligi Philip  
*Professor, IIT Madras*  
Bioremediation of Endosulfan Contaminated Soils

- 9.30-9.40 L 37 Environmental Status of the Kavvayi Wetland System  
**Shiji.M, Bindhya Mol. K and Harikumar. P. S**
- 9.40-9.50 L 38 Atmospheric Pollution and its Correlation with Transportation Sector in South Kerala  
**P.Kalaiarasan and B.G.Sreedevi**
- 9.50-10.00 L 39 Pesticide Contamination and Bacterial Pesticide Resistance in the Soils of Selected **Panchayats** of Wayanad District, Kerala  
**Chandini P.K Jaysooryan K.K Rinoy Varghese K. P. Smitha and Sylas V.P**
- 10.00-10.10 L 40 Mercury Pollution in the Lakes, Rivers and Estuaries of India  
**Navya Cherian and Mahesh Mohan**
- 10.10-10.20 L 41 Studies on the Effect of Crude Plant Extracts on the Control of Mosquito Vectors  
**Rathy M.C., Sajith, U. and Harilal, C. C.**
- 10.20-10.30 L 42 Geochemistry and Heavy Metals in the Soils of Kuttanad Agricultural Ecosystem, Kerala  
**Kannan V.M, Toms Augustine, Navya Cherian, Mahesh Mohan**
- 10.30-10.40 L 43 Removal of Selected Heavy Metal Ions Using Metal Tolerant Bacterial Isolates  
**Krishna M.P, Rinoy Varghese, Arun Babu V Jayasuryan K.K, Jyothy S. and A.A. Mohamed Hatha**

10.30-10.45 AM : Tea

**Hall – II** : **Mini Seminar Hall, SES (Parallel session)**  
**9.00 – 10.30 PM** : **Technical Session VII- Climate Change and coastal wetlands**  
**Chair : Dr. M.P. Muraleedharan**

*Former Director Geological survey of India, Kerala*

**9.00-9.30 AM** : **Invited Lecture VII : Dr. J. Ravindran**

*Scientist, NIO, Kochi*

Climate and Coral Reefs

9.30-9.40 L 44 Mangrove Associated Molluscs of India  
**M.Boominathan**, G. Ravikumar, M.D. Subash Chandranand T.V. Ramachandra  
9.40-9.50 L 45 Carbon Emissions due to Electricity Consumption in the Residential Sector  
**Vishnu Bajpai**, Gouri Kulkarni, Ramachandra T. V  
9.50-10.00 L 46 Carbon Footprint of Municipal Solid Waste in Greater Bangalore  
**Gouri Kulkarni**, Vishnu Bajpai, Ramachandra T. V

**Hall – II** : **Mini Seminar Hall, SES (Parallel session)**

**10.00 -10.30 AM** : **Technical Session VIII Green Technology**

**Chair : Dr. C. T. Aravindakumar**

*Director, School of Environmental Sciences, M. G. University*

**10.00-10.30 AM** : **Invited Lecture VIII : Dr. V.B. Manilal**

*Scientist, IIIST, Thiruvananthapuram*

Anaerobic Processes Coupled Green Technologies

**10.30-10.45 AM : Tea**



**Hall – I : Main Seminar Hall, SES (Parallel session)**

**10.45 -12.15PM : Technical Session IX Limnology**

**Chair : Dr. V Sivanandan Achari**

*School of Environmental Studies, CUSAT*

**10.45-11.15PM : Invited Talk IX : Dr. K.V. Jayakumar**

*Professor, NIT, Warangal*

- 11.15-11.25 L 55 A Trophic Flow Model of the Karapuzha Reservoir, Wayanad, Kerala  
**Preetha Panikkar**, Feroz Khan, Sharma A.P., Jha, B.C.
- 11.25-11.35 L 56 Preliminary Work on Physico-Chemical Properties of Two Lakes of  
Navalgund, Dharwad District, Karnataka, India  
*B.S. Giriappanavar and R.V. Airsang*
- 11.35-11.45 L 57 The Lentic Ecosystem of Two Lakes in Puducherry Union Territory  
**Ramamoorthy D**
- 1145-11.55 L 58 A Threat of Sedimentation and Aquatic Weed Growth for Sustainance of  
Some Lakes and Reservoirs in Maharashtra  
*MI Shaikh, MB Nakil, S K Kalvit*
- 11.55-12.05 L 59 Sediment resuspension driven internal phosphorous loading in a  
shallow  
**S. Panigrahi**, S. N. Bramha, A. K. Mohanty, M.K.Samantara, T. Ramesh & K.  
K. Satpathy
- 12.05-12.15 L 60 Landscape dynamics, Rainfall and Stream Flow: Linkages  
**Anindita Dasgupta** and T. V. Ramachandra

**12.15-1.15 PM : Lunch**

**Hall – II : Mini Seminar Hall, SES (Parallel session)**

**10.45 -12.05 PM : Technical Session VIII Green Technology - continues**

- 10.45-10.55 L 47 Household Sanitation Device for Decentralized Sewage Treatment  
**J. Ansari, V.B.Manilal, Ajit Haridas, Ajayan M.S**
- 10.55-11.05 L 48 Use of Raman Microspectroscopy to Detect Changes in Lipid Pools of Microalgae  
**Supriya G., Asulabha K.S. and Ramachandra T.V**
- 11.05-11.15 L 49 Nutrient Removal of Secondary Treated Water Through Algal Ponds  
**Sincy Varghese, Durga Madhab Mahapatra, and Ramachandra T V**
- 11.15-11.25 L 50 Effect of Salinity Concentrations on Growth Rate and Lipid Concentration in Microcystis Sp., Chlorococcum Sp. And Chaetoceros Sp.  
**Asulabh K S, Supriya G and Ramachandra T V**
- 11.25-11.35 L 51 Performance of Salvinia (*Salvinia Molesta*, Mitchell) As a Bioagent for Very Rapid Treatment of Septic Tank Effluents in the SHEFROL® Bioreactor  
**M. Ashraf Bhat, Tasneem Abbasi\*, and S. A. Abbasi**
- 11.35-11.45 L 52 A Low-Energy Non-Polluting Process For The – Extraction Of Volatile Fatty Acids From Ipomoea (*Ipomoea Carnea*)  
**M. Rafiq Kumar, Tasneem Abbasi\*, and S. A. Abbasi**
- 11.45-11.55 L 53 Post Harvest Treatment of Water Hyacinth Biomass For Biogas Production  
**Arya Bhasi, Dersana.B, Shabeer Ali.H, B.Krishnakumar**
- 11.55-12.05 L 54 Phytoremediation of Cadmium from Aqueous Solutions  
**Ignatius Antony, Arun Babu V, Neethu Joy and E.V.Ramasamy**

**12.15-1.15 PM : Lunch**

**1.15 PM To Vembanad Lake**

**2.00 pm – 5.30 pm Boat Session “Conference on Cruise”**

**2.15 – 4.30 PM : Technical Session - X : Vembanad Lake**

- : **Chair : Dr. A.P. Thomas**  
*Director, ACESSD, M.G. University*
- 2.15 - 3.00** : **Plenary Lecture II : Dr. Ajaykumar Varma**  
*Scientist, CESS, Thiruvananthapuram*  
A Glimpse of the Vembanad Lake Environment
- 3.00-3.10 L 61 Glimpses into the Evolution of Vembanad Lake: A Ramsar Site Along the South West Coast of India  
**B. Ajay Kumar, Mahesh Mohan and M. S. Shylesh Chandran**
- 3.10-3.20
- 3.20-3.30 L 63 An NGO's Effort for the Conservation of Vembanad Wetlands  
**Unnikrishnan N. and Sreekumar B.**
- 3.30-3.40 L 64 Participatory Mapping of Natural Resources in Vembanad Lake  
**Ashish Mathew George and M.C Kiran**
- 3.40-3.50 L 65 An Assessment of Heavy Metal Accumulation and their Dynamics in Water, Sediment and Different Aquatic Edible Species in Vembanad Lake, Southwest Coast of India  
**Reshma Ramachandran and Anisa.B. Khan**
- 3.50-4.00 L 66 A Study on Accumulation of Heavy Metals (Zn, Cd, Pb And Cu) in Fishes and Associated Community Health Risk from Cochin Estuary  
**Jayasooryan K.K, Shylesh Chandran, M.S, Mahesh Mohan and Ramasamy, E.V**
- 4.00-4.10 L 67 Spectral discrimination and Characterisation of Aquatic Macrophyte Communities in Part of a Ramsar Site of Kerala State, India Using World View-2 Satellite Image  
**John Richard, John C. M. and Sulas V. P.**
- 4.10-4.20 L 68 Vembanad Wetland as a Source of Livestock Feed  
**Biju P.**
- 4.20-4.30 L 69 Spatial and temporal variations of water quality and heavy metal concentration in Vembanad Lake, Kerala  
**Shylesh Chandran M.S, Mahesh Mohan, Jayasooryan K.K. and Ramasamy, E.V**
- 4.30-4.40 L 70 Mercury pollution in the Vembanad Lake  
**E.V. Ramasamy, Mahesh Mohan, Shylesh Chandran M.S. and Jayasooryan KK**
- 5.30PM** : **Reaching Kottayam Club, Kumarakom**
- 6.00- 7.00 PM** : **Cultural Programme**
- 7.00-8.00 PM** : **Lake Side Dinner at Kottayam Club**

### Day 3, Nov 08, 2012

**Hall – I** : **Main Seminar Hall, SES (Parallel session)**

- 9.00-10.40 AM** : **Technical Session XI** Application of GIS in wetland management  
**Chair : Dr .S. Narendra Prasad**  
*International Institute of Information Technology, Hyderabad*
- 9.00-9.30 AM** : **Invited Lecture X Dr. A. R.R. Menon**  
*Former Head, Ecology Division, KFRI, Peechi*  
 Geospatial Evaluation of Wet Land Biodiversity Using Remote Sensing and GIS
- 9.30-9.40 L 71 Resource Information System for Kundapallam (Kd-1) Watershed in the Nilgiris District Using Remote Sensing, GPS and GIS  
**P.Rajesh Prasanna, S. Evany Nithya S. Eswaramoorthi**
- 9.40-9.50 L 72 Status of Wetlands in Urbanising Tier II Cities of Karnataka: Analysis Using Spatio-Temporal Data  
**Bharath H Aithal, Durgappa S. and Ramachandra T V**
- 9.50-10.00 L 73 Multi-Sensor, Multi-Resolution Image Fusion for Monitoring of Wetlands  
**Uttam Kumar, Anindita Dasgupta, Chiranjit Mukhopadhyay N. V. Joshi and T. V. Ramachandra**
- 10.00-10.10 L 74 Temporal Analysis of Water Bodies in Ten Mega Cities of India  
**Sowmyashree M V and Ramachandra T V**
- 10.10-10.20 L 75 Spatio-Temporal Distribution Mapping of Aquatic Macrophyte Communities in Kuttanad Wetland Ecosystem  
**John C. M.\*, Sylas V. P. and Unni K. S.**
- 10.20-10.30 L 76 Applications of GIS And Remote Sensing for Mangrove Management in Uttara Kannada, Karnataka  
**Prakash N. Mesta, Settur Bharath, Vishnu D.M., Mahima Bhat, M. D. Subash Chandran and T. V. Ramachandra**
- 10.30-10.40 L 77 Spatio-temporal dynamics of Raichur City  
**Vinay S, Bharath H Aithal, and Ramachandra T V**

**10.45-11.00 AM : Tea**

- Hall – II** : **Mini Seminar Hall, SES (Parallel session)**
- 9.00-10.40 AM** : **Technical Session XII: Natural and Anthropogenic Disasters**  
**Chair : Dr. A.P. Pradeepkumar**  
*Associate Professor, Dept. of Geology, University of Kerala*

- 9.00- 9.30 AM** : **Invited lecture XI : Dr. Murali Das**  
*Former Scientist, CESS, Thiruvananthapuram*  
 Lightning, the Phenomenon and Mechanisms of Accidents
- 9.30-9.40 L 78 Societal Risk Assessment of Toxic Chlorine Gas Release Scenario – A Case Study for Incident Modeling with ALOHA Software  
**Karunakaran Akhil Dev Diptendu Das, K. Ramprasad and Ramdas Bhattacharya**
- 9.40-9.50 L 79 An Appraisal of Community Based Coastal Hazard Management  
**Smijimol P.P and Thomas, K.V.**
- 9.50-10.00 L 80 Identification of Accident-Prone Areas Through Sinuosity Index for the Management of Road Disasters – A Study of the Major Roads to the Sabarimala Pilgrim Destination, Kerala, India.  
**Saran K S, Joice K Joseph Faisal T Illiyas and A P Pradeepkumar**
- 10.00-10.10 L 81 Soil Piping in Idukki District: Chemical or Physical?  
**Bhagyalekshmi S., Sreedharan K., Ajayakumar B., Mahesh Mohan**
- 10.10-10.20 L 82 Impact of Wetland Reclamation on Local Groundwater Levels in and around Kottayam, Kerala State, India  
**K.N.Krishnakumar, A.P.Pradeepkumar**
- 10.20-10.30 L 83 An Assessment on Intrinsic Vulnerability to Flood Hazard of River Killiar in Thiruvananthapuram District  
**Anitha.K, Amalraj.M, Keshav Mohan, Shibu K Mani, Faisel T I, Shibu K. Mani**
- 10.30-10.40 L 84 Multipronged Community Risk and Disaster Management: A Study on Public Safety, Governance and Corporate Social Risk Reduction Initiatives in the Vypin Island, Kerala, India.  
**K.L.Amalkrishna and P. Surya**

**10.45-11.00 AM : Tea**

**Hall – I : Main Seminar Hall, SES (Parallel session)**

**11.00 -12.50 PM : Technical Session XIII Pollution –II**

**Chair : Dr. V.R. Prakasham**

*Professor & Former Head, Dept. of Environmental Sciences, University of Kerala*

**11.00-11.30 AM : Invited Lecture XII : Dr. P.S. Harikumar**

*Scientist, CWRDM, Calicut*

Sustainable Water Quality Management for Wetlands with Reference to Kerala

- 11.30-11.40 L 85 Soil Heavy Metal Human Exposure Risk- A Case Study from Coal Mining Area  
**Joshy George, Masto R. E., Ram L. C., Rout T.K. Unni. K.S.**
- 11.40-11.50 L 86 Rapid Assessment of Persistent Organic Pollutant, Sulfamethoxazole In Aquatic Ecosystems, Using Surface Plasmon Resonance Based Biosensors  
**B. Siva Prasad, Mathews M. John, M. Atul Govardhan, Kannan Ramaswamy, P. Sankar Ganesh**
- 11.50-12.00 L 87 Lake Water Quality and its Interaction With Aquifers in Warangal City  
**C.K.Anoop, E.V.Rathnam, T.Shashidhar A. Shahul Hameed and K.V.Jayakumar**
- 12.00-12.10 L 88 Agrochemicals and their Impacts on the Environmental Health Status  
**Sreedharan K., Thomas A.P.**
- 12.10-12.20 L 89 Impact of Hydroelectric Dams on Fisheries in the Sharavathi Estuary of Uttara Kannada District, South-West India  
**Mahima Bhat, V.N.Nayak, M.D.Subash Chandran and T. V. Ramachandra**
- 12.20-12.30 L 90 A Statistical Modelling Approach for Forecasting of Tourism Developments and its Impacts on Biodiversity on the Largest Wetland Ecosystem in South India  
**Brilliant Rajan, Vincy Mary Varghese and Pradeepkumar, A. P.**
- 12.30-12.40 L 91 Conservation and Management of Akkulam – Veli Lake for Inland Navigation and Tourism  
**Sabitha NM, Sanjay Kumar V.S.**
- 12.40-12.50 L 92 Environmental Issues in an Around Loktak Lake for Sustainable Environmental Management  
**Rajiv Das Kangabam, P. Kumar, M. Govindaraju**

**12.50- 1.45 PM : Lunch**

**Hall – II : Mini Seminar Hall, SES (Parallel session)**

**11.00-12-50 PM : Technical Session XIV : Environmental Education, Sustainable**

## **Agriculture, Sustainable Consumption and Livelihood**

**Chair : Dr. Muraleevallabhan**

*Associate Professor, NSS College, Vazhoor, Kottayam*

**11.00-11.30 PM : Invited lecture XIII : Dr. P.C. Abhilash**

*Institute of Environment & Sustainable Development, Banaras Hindu University*

The use of microbial resources for enhancing agricultural production and reducing trace gases emission from agro ecosystems

- 11.30-11.40 L 93 An Economic Analysis of Food Consumption Pattern in India and Kerala  
**P. Padma, E.V Ramasamy Muralivallabhan T. V and A.P Thomas**
- 11.40-11.50 L 94 Household Consumption of Water in Three Districts of Kerala- A Comparative Analysis  
**Sruthy.S, Thafna.K.K, Pravya Jayaraj C.V P.Padma E.V.Ramasamy, Muralivallabhan, A.P.Thomas**
- 11.50-12.00 L 95 Disrtibution of Nutrients in the Soils of Kuttanad Wetland Agroecosystem, Kerala  
**Thafna K.K., Navya Cherian, Binish M.B., Mahesh Mohan**
- 12.00-12.10 L 96 Temporal Variation of Fish Fauna in Veli Lake, Kerala: A Historical Perspective  
**Regi S. R. and A. Biju Kumar**
- 12.10-12.20 L 97 Livelihood In The Wetland of Pulicat Lake, Spsr Nellore District, Andhra Pradesh  
**E.Rajya Laksmi, and S.K.M.Basha**
- 12.20-12.30 L 98 Reclaiming Paddy Cultivation and Reviving Natural Capital: The Cultural Logic and Social Process in a Kerala Village  
**Bijulal M.V.**
- 12.30-12.40 L 99 Ecosystem Goods and Services in Uttara Kannada  
**Ashwath D N, Subash Chandran MD and Ramachandra T V**
- 12.40-12.50 L 100 Scope for Solar Energy in Kerala and Karnataka  
**Ganesh Hegde and Ramachandra T V**

**12.50- 1.45 PM : Lunch**

**Hall – I : Main Seminar Hall, SES**

**1.45 – 4.00 PM : Technical session XIV: My Village Biodiversity**

**Chair : Dr. A. Bijukumar**

*Associate Professor & Head, Dept. of Aquatic Biology and Fisheries,  
University of Kerala*

**1.45 – 2.15 : Invited Talk XIV: Dr. Subhash Chandran**

*Centre for Ecological Sciences, IISc., Bangalore*

'My Village Biodiversity': Students' Involvement in Biodiversity  
Documentation in Uttara Kannada District, South India

2.15 -3.00 PM : Presentation of Students from Bangalore

3.00 -4.00 PM : Presentation of Students from Kerala

**4.00 -4.15 PM : Tea**

**4.15 -5.00 PM : Valedictory**