

Curriculum Vitae

Personal Information

Name : **Dr. Abin Varghese**
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e- mail : abin.udumbanattu@gmail.com
Date of Birth :30.05.1985
Father's name : O.V. Varghese Mother's name: O.A. Mariamma
Place of Birth :Kottayam Citizenship : Indian
Religion :Christian Caste : Orthodox
Gender : Male Marital Status : Married
Languages Known : English, Hindi and Malayalam

Educational Qualifications

Course	Year	Institution	Board/ University	Percentage
SSLC	2000	Amayannoor High School, Amayannoor	Kerala State Board of Education	74.50
Plus 2	2002	St. Mary's HSS, Manarcadu	Kerala State higher secondary Board	68.00
B.Sc. Zoology	2005	St. Mary's College, Manarcadu	Mahatma Gandhi University, Kottayam	86.50
M.Sc. Environment Science and Management	2007	School of Environmental Science, P.D. Hills	Mahatma Gandhi University, Kottayam	80.70
M. Phil. Environment Management	2008	School of Environmental Science, P.D. Hills	Mahatma Gandhi University, Kottayam	80.60
Ph. D. Environmental Sciences	2017	Tropical Institute of Ecological Sciences, Kottayam	Mahatma Gandhi University, Kottayam	

Professional Experiences

- Co- Ordinator Dr. R. Satheesh Centre for Remote Sensing and GIS, School of Environmental Sciences, M G University
- Worked as **faculty in Natural Resources Management** and **Coordinator**, Centre for Geoinformatics Applications for Rural Development (CGARD under NIRD& PR, Hyderabad) in **State Institute of Rural Development (SIRD), Kerala**, Kollam (now renamed as Kerala Institute of Local Administration- Centre for Human Resources Development) (from 13th January 2015 – 30th June 2017).
- Worked as **Senior Research Fellow** in **International and Inter University Centre for Natural Resource Management (IIUCNRM), University of Kerala** (from 1st July 2014 to 12th January 2015)
- Worked as **Research Associate** in **Kerala Maritime Institute, Directorate of Ports, Govt. of Kerala** (from 5th December 2013 to 4th June 2014).
- Worked as **District Programme Coordinator (Water Quality)** in **Communication and Capacity Development Unit (CCDU)** under Water Resources Department of Govt. of Kerala (from 24th September 2012 to 24th September 2013).
- Worked as **Consultant Field Biologist** in Semester India Programme of International Institute for Science and Academic Collaboration, New York, USA. (2010 - 2013).
- Worked as **Research Associate** in Division of Environmental Sciences, **Tropical Institute of Ecological Sciences**, Kottayam (Affiliated research center, M.G University, Kottayam) (October 2007- July 2008).
- Worked as **Research Assistant** in **Kerala Rodent Research centre**, Kottayam (2005).

Professional Skills

Watershed Management

- Watershed based Natural Resources Management.
- Water, soil and biodiversity conservation strategies.

Geoinformatics skills

- Software known: Arc GIS (All recent versions), ERDAS Imagine, (All recent versions), Q GIS, RUSLE 2.
- All landscape level analysis (6 years of experience).

Biodiversity estimation skills

- Population estimation and species composition of different ecosystems using Quadrate and Transect methods.
- Known to perform biomass estimation of various ecosystems.

Analytical Skills on Environmental samples

- Water quality: Known to analyze 30 various Physico- chemical parameters of water.
- Soil/ Sediment quality: Known to analyze 20 various Physico- chemical parameters of Soil/ Sediment .
- Air quality monitoring using High volume sampler.

Environmental Impact Assessment

- Know to collect essential primary and secondary data for EIA.
- Know to prepare the EIA report.

Microbiological Skills

- Bacterial characterization up to species level by Biochemical methods.
- Fungal species identification up to species level by microscopic and macroscopic methods.
- Known to check antimicrobial properties of various products.

Computer Skills

- Operating systems known: Windows 98, Windows 2000 professional, Windows XP, Windows Vista, Windows 2007, LINUX.
- Software known: MS Office, Photoshop, Page Maker, SPSS etc.

Project Experiences

- Geoinformatics based Watershed Master Plan Preparation for Wadakkanchery Block Panchayat (Principal Investigator)
- Integrated Cluster Action plan (ICAP) preparation for Syamaprasad Mukhargi National Rural Urban Mission (NRuM) of Phase I and II Clusters of Kerala (Master Planner)
- Detailed Project Preparation (DPR) preparation for Syamaprasad Mukhargi National Rural Urban Mission (NRuM) of Phase I Clusters of Kerala (Team Leader).
- A study on the total costs and benefits of coastal shipping with special emphasis on environmental costs and benefits compared with alternate modes of transport in Kerala.
- Impact of Anthropogenic stress on Biodiversity in Periyar Tiger Reserve: An RS and GIS supported Survey (Thesis work during Ph. D programme).
- Impact of Anthropological stress on floral community structure in Pamba range of Periyar Tiger Reserve: An RS and GIS supported biodiversity survey (Thesis work during M.Phil programme).
- Pathogenic diversity of Pamba river basin: An ecological study with special reference to Sabarimala pilgrimage (Thesis work during M.Sc programme).
- A study on the Ecological conditions of canals systems of Kuttanadu wetland ecosystem during monsoon season (Thesis work during M. Sc programme).
- A study on fungal pathogens of Poultry (Thesis work during B.Sc programme).
- Crash study on viral fever outbreak in Kerala, 2007. Conducted by Tropical Institute of Ecological Sciences, Kottayam (Worked as Research Assistant).
- Crash study on health status and water usage pattern among the Pamba river bank community, conducted by Tropical Institute of Ecological Sciences, Kottayam (Worked as Team leader).
- Solid waste characterization in Municipal dumping yard, Kottayam, conducted by Tropical Institute of Ecological Sciences, Kottayam for Ramky Enviro Engineers Limited (REEL) (Worked as Team member).

- Solid waste characterization in Corporation Vermicomposting yard, Coimbatore, conducted by Tropical Institute of Ecological Sciences, Kottayam for Ramky Enviro Engineers Limited (REEL) (Worked as Team member).
- Study on impact of sewage canals on water quality of Kottayam Medical college area, conducted by Tropical Institute of Ecological Sciences (Worked as Team member).
- Study on the associated soil microflora of Paddy and fish rotational farming fields of Kumarakom, conducted by Tropical Institute of Ecological Sciences (Worked as Team member).
- Study on the Impact of chemical treatment on water and sediment quality of Njunagar (tributary of river Pamba) during Sabarimala pilgrimage season, conducted by School of Environmental Sciences, M.G University and Tropical Institute of Ecological Sciences, Kottayam for Kerala Pollution control Board (Worked as Team member).

Achievements

- **Good service Entry** from Director, State Institute of Rural Development for successfully coordinating the pilot batch of Barefoot Technicians (BFTs) in Mahatma Gandhi NREGS.
- **3rd rank holder** for **M.Sc.** Environment Science and Management.
- **1st rank holder** for **M. Phil** Environment Management.
- 3rd Prize in State level Paper presentation competition (Zoosem) conducted by Zoological Society of Kerala, held at Union Christian College, Aluva, 2003.
- Best Researcher Award- 2007 given by Tropical Institute of Ecological Sciences, Kottayam.

Fellowships

- Won the **Kerala State council for Science, Technology and Environment (KSCSTE) Research Fellowship- 2008.**

Trainings attended

- Training course on **“Introduction to GIS and its Applications”** conducted by **National remote Sensing Centre (NRSC)**, Training and Education division, Hyderabad during 30th August to 24th September 2010.
- Workshop on **Environmental Impact Assessment (EIA)** organized by Department of Environmental Sciences, Kerala University, March 2012.
- Short term training programme in Analytical Instrumentation (**Chromatographic Techniques**), Organised by Advanced Centre of Environmental Studies and Sustainable Development (ACESSD)- An Inter University centre, Mahatma Gandhi university, Kottayam held during 25th to 27th April 2012.
- Certificate course in **MS DOS, Windows, MS office and Page Maker** from Computer centre, St. Mary’s College, Manarcadu 2004.

Publications

Book Chapters/ Discussion papers

- Sabina C. A. and **Abin Varghese**. 2012. An Introduction to Kerala Studies. **Geographical Specialties and Natural Diversity of Kerala**. Publishes by International Institute for Science and Technology Collaboration, USA.
- **Abin Varghese**, Manuel Thomas, Ajayakumar M.N, Simimol Cyriac and Punnen Kurian. 2007. **Sabarimala pilgrimage and Pamba river pollution**. *TIES Discussion Paper series- V*.
- Manuel Thomas, **Abin Varghese**, Neethu Sreenivas, Ipe Mathew and Punnen Kurian. 2007. Viral fever outbreak in Kerala 2007. *TIES Discussion Paper series-I V*.

Publications in International/ National Journals

- **Abin Varghese.**, John C. M., Subin K. J. and Kurian, P. 2011. **Geospatial characterisation of land use/ land cover in Pamba range of Periyar tiger reserve**. *Eco. Env. & Cons.* 17 (4). pp: 37-39.
- **Abin Varghese** and Kurian, P. 2011. Changing Patterns of Pathogenic Bacterial Population In Relation To Physico- Chemical Properties of Surface and Ground Water Resources of Pamba River Basin, Kerala, India. *Asian Jr. of Microbiol. Biotech. Env. Sc.* Vol. 13, No. (4). pp: 703-709.
- **Abin Varghese**, Manuel Thomas and Punnen Kurian. 2012. Prevalence of Fungal Pathogens In Pamba River Basin, Kerala, India. *Pollution Research*, Issue No. (3).
- Subin K. Jose, **Abin Varghese**, Alex C. J, Santhosh Kumar,G .Madhu. 2011. **Soil Erosion Modeling Using Remote Sensing and GIS: A Case Study of Shendurney Wild Life Sanctuary In Southern Western Ghats, Kerala, India**. *Journal of Ecology and Environmental conservation. Eco. Env. & Cons.* 17 (4) : 2011; pp. (685-690).
- Subin K. Jose, **Abin Varghese**, Alex C. J, Santhosh Kumar,G .Madhu. 2011. **Forest Fire A Global Scenario Identification and Management Using Geo Information Technology**. *Journal of Environmental Research And Development*. Vol.6, No.(6): 122-131.
- Subin K. Jose, Alex C. J, Santhosh Kumar, **Abin Varghese**, G .Madhu. 2011. **Landscape Metric Modeling - a Technique for Forest Disturbance Assessment in Shendurney Wildlife Sanctuary**. *Environmental Research, Engineering and Management*. Vol. 4, No. (58), P. 34-41.
- Manuel Thomas, **Abin Varghese**, Abraham Samuel and Punnen Kurian. 2009. Zygomycosis in captive Asian Elephant (*Elephas maximus*). *ZOO's PRINT*, Volume XXVI(4), April 2011
- Thomas, M., **Abin Varghese.**, Rajan, R., Samuel, A.K and Kurian, P. 2011. Checklist of Microfungi in Kerala, India. *Asian Jr. of Microbiol. Biotech. Env. Sc.* Vol. 13, No. (4). pp: 651-658.
- Jesmi Yousuf , Jabir Thajudeen , Aneesha P.A , Ajith Joseph , Divya P.S , **Abin Varghese** , Mohamed Hatha A.A. 2019. Diversity and activity of culturable nitrogen fixing heterotrophic bacteria from estuarine and coastal environments of Southeastern Arabian Sea (SEAS). *Regional Studies in Marine Science*.
- Jesmi Yousuf. , Jabir Thajudeen., P.V. Vipindas., **Abin Varghese.**, Mohamed Hatha A.A. Role of environmental factors on nitrogen fixation rate in a tropical estuary (southwest coast of India). 2020. *Regional Studies in Marine Science*. <https://doi.org/10.1016/j.rsma.2020.101383>.
- Laigi Joseph., Sylas V. Paulose., Neethu Cyril., Sanu K. Santhosh., **Abin Varghese.**, Anila B. Nelson., Smitha V. Kunjankutty., Sreedharan Kasu. 2020. Organochlorine pesticides in the soils of Cardamom Hill Reserve (CHR), Kerala, India: Geo spatial

distribution, ecological and human health risk assessment. *Environmental Chemistry and Ecotoxicology*. <http://dx.doi.org/10.1016/j.eneco.2020.01.001> .

- Simi M R., Bindhu B K, Abin Varghese., Rani M R. 2021. Ground water vulnerability assessment of Kodoor river basin by integrated DRASTIC method. <https://www.doi.org/10.37896/YMER21.03/22>.
- Vishnu M. Sreejith., John Richard Thomas., Nejumal K. Khalid., **Abin Varghese.**, Usha K. Aravind., · Charuvila T. Aravindakumar. 2021. Implosion–demolitions: impact on the local environment in a tropical humid Ramsar site located in southwestern India. *Air Quality, Atmosphere & Health* <https://doi.org/10.1007/s11869-021-01136-1>.
- Sreelakshmi Prakash, Baiju K.R., Abin Varghese and Anish A.U. 2022. Annual Soil Loss Estimation in a Tropical River Basin of Southern India Using RUSLE Model and AHP Techniques. *JGSR*, Vol. 7, No.2. <https://doi.org/10.56153/g19088-021-0068-8>.
- Sumith Satheendran S, Smitha Chandran. S., John C. Mathew, Abin Varghese. 2022. Impact of Urbanization and Spatio-temporal Estimation of Land Surface Temperature in a Fast-growing Coastal Town in Kerala, Western Coast of Peninsular India. *Remote Sensing in Earth Systems Sciences*. <https://doi.org/10.1007/s41976-022-00075-4>

Publications in International/ National Conferences

- Lal, N.S., Thomas, J. R., Satheendran, S. **Abin Varghese.**, Aravind, U. K, Aravindakumar, C. T. 2019. Spatio- temporal analysis of air quality and its disturbance zone in greater Cochin region of Ernakulam district, Kerala: A Geospatial approach.
- Satheendran. S., Chandran, S and **Abin Varghese.** Space based Spatio- temporal assessment of Land Surface Temperature in Karunagapally Municipality, a fast growing city in the Western Coast of India. Proceedings of the international Archives of the photogrammetry, remote sensing and spatial information science, Volume XLII- 5, ISPRS TC V, Mid ter, Symposium “Geospatial Technology”- Pixel to Papers” organized during 20th to 23rd November 2018 at Deradun, India.
- Krishnan, S, A., Ganesh, S, Satheendran, S and **Abin Varghese.** 2018. Flood mapping and damage assessment of Kaziranga National Park, Assam using multi temporal Sentinel- 1 Synthetic Aperture Radar images. *Proceedings of 27th Swedeshi Science Congress during 7th to 9th November 2017.*
- Williams, P., John, J. S., Sumith, S. S. and **Abin Varghese.** 2018. Synthetic aperture radar based physical and biological oceanic changes in mid bank locations of Kerala Coast. *Proceedings of 30th Kerala Science Congress during 28th to 30th 2018.*
- Jose, A., Sarimil, V. R., Lal, S., Shibila, S, Sumith, S. S. and **Abin Varghese.** 2018. Spatio-temporal analysis of carbon storage assessment using geospatial technology in Devikulam taluk, Idukki district of Southern Western Ghats, Proceedings of National Seminar on recent trends in Climate change and carbon Storage organized by Dept. of Botany, University of Calicut during 26th to 28th February 2018.
- Lal, N. S., Thomas, J. R., Sumith S.S. and **Abin Varghese.** 2019. Spatio- temporal variations of LST in greater cochin region: A geospatial approach. Proceedings of the National Seminar on Environmental Education in India: Scope and Challenges, organized by Dept of Environmental Studies, Kannur Univerisity.
- Deepa, P. G., Juothi, K. G. Sumith, S. S. and **Abin Varghese.** 2019. Ground water prospect zone mapping and integrated watershed management plan of Geoinformatics in Perumbavoor region of Periyar river basin. Proceedings of the National Seminar on Environmental Education in India: Scope and Challenges, organized by Dept of Environmental Studies, Kannur Univerisity.

- Arun, P., Ouwayar, A., Baby, B. Ashok, V., Sumith S.S., and **Abin Varghese**. 2019. The runoff and sedimentation estimation of the Idukki dam reservoir using Geoinformatics. Proceedings of the National Seminar on Environmental Education in India: Scope and Challenges, organized by Dept of Environmental Studies, Kannur Univerisity.
- Kurien, V. T., Srikanth, N. P., **Abin Varghese**., Thomas, E. and Thomas, A. P. Soil health status of selected land use systems in region of Achenkovil watershed Kollam district: A study in the impact of land use management. *Proceedings of 31st Kerala Science Congress during 02nd to 03rd February 2019.*
- **Abin Varghese** and Punnen Kurian. 2011. Changing Pattern of Floral Community Structure In Periyar Tiger Reserve With Respect To Sabarimala Pilgrimage. Proceedings of the UGC sponsored National conference on Biodiversity Conservation and its threat, St. Mary's college, Manarcadu, Kottayam.
- **Abin Varghese**, John C.M, Punnen Kurian and Thomas A.P. **2010. Forest disturbance analysis using Geoinformatics in Pamba Range of Periyar Tiger Reserve, Kerala, India.** Proceedings of the International conference “Applied Geoinformatics for Society and Environment (AGSE), organized by Universidad Católica de Santa María, Arequipa – Perú, co-organized by Stuttgart University of Applied Sciences, Germany.
- Manuel Thomas, **Abin Varghese**, Rajani Rajan, Abraham Samuel K. and Punnen Kurian. **2010.** Microfungal diversity in Kerala, India: A Preliminary Report. Proceedings of the Internatinal conference on Global warming, climate change, sustainable development and secular spirituality organized by Santhigiri reserch foundation in association with UNESCO American centre.
- **Abin Varghese**, Rahul Ravendran and Punnen Kurian. **2010. Influence of FeCl₃ treatment on water quality of river Pamba and its tributeries.** Proceedings of the International conference “The Green path to the sustainability: Prospects and challeneges”, organised by Assumption college, changanachery, Kottayam, in association with Rajiv Gandhi chair in contemporaray studies, CUSAT, Cochin.
- K. Divya, Ramya Kumaran, **Abin Varghese** and Punnen Kurian. **2010.** Potablity of harvested rain water: A microbial analysis. Proceedings of the International conference “The Green path to the sustainability: Prospects and challeneges”, organised by Assumption college, changanachery, Kottayam, in association with Rajiv Gandhi chair in contemporaray studies, CUSAT, Cochin.
- Benila J.M, Ramya Kumaran, Manuel Thomas, **Abin Varghese** and Punnen Kurian. 2010. Comparison of Soil Micro flora of Paddy field among different rice farming system. Proceedings of the “*National symposium on recent developments in Environmental science and technology*” organized by Manonmaniam sundaranar university, Alwakurichy, Tamilnadu
- **Abin Varghese** , John C. M. and Punnen Kurian. 2010. **Land use and land cover change detection using Geoinformatics- A case study of Pamba range of Periyar Tiger Reserve.** *Proceedings of the UGC sponsored National seminar on Sustainable agriculture*, CMS College, Kottayam.
- **Abin Varghese**, Manuel Thomas and Punnen Kurian. 2009. **Changes in water quality of Pamba river basin in relation to Sabarimala pilgrimage.** *Proceedings of the UGC sponsored National conference on Environmental challenges and Sustainable development*, Sir Syed College, Thaliparamb.
- Manuel Thomas, **Abin Varghese**, Abraham Samuel and Punnen Kurian. 2004. Prevalence of pathogenic fungi in domestic environment. *Proceedings of the Indian Environmental Congress 2004*, Centre for Environment and Development, Thiruvananthapuram.

Conference/ Workshop attended

- National seminar on Environmental crisis management and sustainable development: Present status and emerging trends- 2006, organized by Department of Zoology, Baselius college, Kottayam in collaboration with School of Environmental Sciences, M.G University.
- One day workshop on Student projects in life and environmental sciences- 2008, Organized by Tropical Institute of Ecological Sciences, Kottayam in collaboration with CMS college, Kottayam.

References

1. Dr. Punnen Kurian, Director, Tropical Institute of Ecological Sciences, Ecological Research Campus, Velloor P.O, K.K Road, Pampady, Kottayam. (Principal, St. Mary's College, Manarcadu, Kottayam).
2. Dr. A.P. Thomas, Director, Advanced Centre for Environmental Studies and Sustainable Development (ACESSD), School of Environmental Sciences, Mahatma Gandhi University, Kottayam.
3. Dr. Baiju K.R, Director, School of Environmental Sciences, Mahatma Gandhi University, Kottayam

Declaration

I hereby declare that the above particulars are true and correct to the best of my knowledge and brief and in the event of any information found false and incorrect, my candidature will be liable to be canceled.

Date: 12.07.2022

Place: Kottayam

Signature

