

## Thanamegam Kaviarasan

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<https://scholar.google.co.in/citations?user=grVjdngAAAAJ&hl=en>

CITATION: 900; h-index 13; i10-index-16

Date of Birth: 03/06/1986



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Marine Biologist with 11+ years of expertise in Marine Biology with proven track record as a post-doctoral fellow in Blue Carbon, Carbon Sequestration, and project scientist in Marine Plastic Pollution. Proficient in research proposal writing, including scoping, budgeting, ecosystem risk assessment. Skilled in leading complex marine environment projects, ecological surveys. Authored 40+ research articles, including book chapters, technical reports. Having 900+ Citation and 13 h-index, 16-i10 index. Adept in strategic technical advice, data interpretation, and project management.

### PROFESSIONAL EXPERIENCE

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**Project Scientist | National Centre for Coastal Research – Chennai, India**

06 May 2019 – Till date

- Organizing and executing research cruises, field sampling in Indian coastal waters, and remote islands for extended periods.
- Participating in field sample collection on research vessels and fishing boats.
- Observing changes in marine ecosystem behavior due to litter and microplastic pollution.
- Conducting beach litter monitoring surveys (macro, meso, and micro) on targeted beaches to assess cleanliness.
- Leading nationwide beach cleaning activities and raising awareness about the harmful effects of marine litter to the public.
- Validating and processing nationwide beach litter data collected through Citizen Science initiatives.
- Drawing conclusions from observations and research data.
- Collaborating with international scientists on an Indo-UK project, exchanging knowledge between teams.
- Preparing inputs for parliamentary questions and technical and policy documents aligned with project objectives.
- Disseminating data and solutions to address marine litter pollution issues.
- Contributing to the Puducherry Fish Kill (September 2019) investigation, collecting data and observing ecosystem changes.
- Providing inputs to comprehensive Marine Ecology Surveys and Environmental Impact Assessment (EIA) reports for Lakshadweep Islands, including remote locations.
- Undertaken various training programs for cutting-edge research technologies aligned with project objectives.
- Guided Master's students and PhD scholars in sample collection and analysis for their research projects.

**Post-Doctoral Fellow | University Grand Commission – Trichy, India**

11 March 2015 – 10 March 2018

- Project writing and obtaining research grants.
- Planning and execution of fieldwork on coastal wetlands in remote island ecosystem
- Field collection & analysis of samples
- Preparing detailed reports and research manuscripts and communication for research findings.
- Effectively presented research data to diverse audiences, including stakeholders, and regulatory bodies.
- Supervised sample collection and analysis for post graduate students' and doctoral research schooler s'.
- Received training in cutting-edge research technologies.

- Spearheaded the design of impactful research projects, meticulously outlining clear trajectories toward achieving defined objectives, showcasing proficiency in project management and goal-oriented planning.
- Led the design and execution of intricate laboratory experiments, showcasing a hands-on approach to research and a proficiency in managing complex scientific investigations.
- Published extensively in reputable scientific journals, showcasing the ability to disseminate research findings effectively.
- Demonstrated exceptional data synthesis and trend interpretation skills through the development and publication of influential papers on marine ecology, contributing significantly to the scientific community and showcasing expertise in scholarly communication.
- Successfully collaborated with interdisciplinary teams, bridging gaps between marine ecosystem and related fields to address complex ecological challenges.
- Applied best practices and adhered to rigorous scientific protocols, ensuring the generation of defensible conclusions supported by robust evidence, reflecting a commitment to maintaining high standards of scientific integrity.
- Actively participated in conferences, presenting research findings and establishing professional networks. Pioneered and executed comprehensive research, developing innovative methodologies and research designs that significantly advanced the understanding of marine ecosystems.
- Mentored junior team members in scientific writing and research methodologies, enhancing the overall skill set within the team. Engaged in teaching and mentorship roles, imparting expertise to students and junior researchers.

## EDUCATION

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<b>Doctor of Philosophy (Ph.D.)</b>   Pondicherry University– Puducherry, India <i>(Specialization in Marine Biology)</i>	July 2015
<b>Post Graduate Diploma (PG Dip.)</b>   Pondicherry University– Puducherry, India <i>(Specialization in Statistical &amp; Research Methods)</i>	May 2011
<b>Master of Science (M.Sc.)</b>   Pondicherry University– Pondicherry, India <i>(Specialization in Marine Biology)</i>	May 2009
<b>Bachelor of Science (B.Sc.)</b>   Bharathidasan University– Trichy, India <i>(Specialization in Microbiology)</i>	April 2007

## SOFT SKILLS

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- Marine Ecological Surveys
- Environmental Monitoring
- Marine Biodiversity Assessment
- Project Management
- Develop Project Proposal
- Communication Skills
- Innovation
- Documentation
- Vendor Management
- Best Practices and Standards
- Collaboration
- Scheduling
- Facilitation

## ANALYTICAL/ INSTRUMENTATION SKILLS

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- Micro-FTIR
- GC-MS
- Arc-GIS
- Statistical software's ORGIN, PRIMER, PAST, ODV.
- *In-situ* Water Quality Multiparameter Sonde

## ACHIEVEMENTS

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- Organized national level beach cleaning activity along Indian coast for International Coastal Clean-up Day activities (2018-2026)
- Prepared policy draft of "A Blueprint for National Marine Litter Policy"
- Awarded for best volunteer for National workshop on Climate change impact on the Marine Environment (CCIME – 2017).
- Best Paper presentation (Oral) award in Best Paper presentation (Oral) award in NCMNP-2016.
- Honor (INR 2500/-) received for paper publication in the Journal of Coastal Environment vol.2. No. 2, 201.

## TRAININGS / WORKSHOP

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- Training workshop for fishers on Issues of Marine Litters/Ghost Gear Management –2023
- Ocean Country Partnership Programme (OCP) on issues of marine pollution –2023
- Biological Data management – 2017
- Short Term Training on Advanced Research – 2010

## PROFESSIONAL SERVICE

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- Frontiers in Marine Science – Review editor.
- Marine Pollution Bulletin – Reviewer.
- Environmental Monitoring and Assessment – Reviewer.
- Chinese Journal of Population, Resources and Environment – Reviewer.
- Journal of Cleaner Production – Reviewer.
- Heliyon – Reviewer.
- Journal of Hazardous Materials – Reviewer.
- Regional Studies in Marine Science – Reviewer.
- Journal of King Saud University – Reviewer.
- Physiological and Molecular Plant Pathology – Reviewer.
- Marine Biological Association of India – Life member since 2016

## INVITED TALK/ RESOURCE PERSON

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- SRMIST, Chennai
- Sathyabama IST Chennai
- Central University of Kerala

## RESEARCH PUBLICATIONS

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2025

**Microplastic contamination in the western Arctic water column: A transition from pristine to polluted**  
Murugan Sambandam, Pravakar Mishra, Takahito Ikenoue, Ryota Nakajima, Motoyo Itoh, Kuppaswamy Dhineka, Thanamegam Kaviarasan, SR Marigouda., Chemosphere 385, 144577. **Q1**.

**Quantification of plastic pollution in Gulf of Mannar Marine Biosphere Reserve: Risk assessment and management strategies.**

A Akash, T Kaviarasan, K Dhineka, M Sambandam, P Mishra, M Anand., Regional Studies in Marine Science 83, 104051. **(IF: 2.1) Q2**

**Coastal Lagoon's dual role as a sink and source for microplastics: A case study from India.**

Dhineka K, Kaviarasan T, Sambandam M, Hoehn DP, Sivyer D, Bakir A, Marigoudar SR, Mishra P. Water, Marine Pollution Bulletin. 2025 Feb 1;211:117480. **(IF: 5.3) Q1**

2024

**Arctic threads: Microplastic fibres in Chukchi and Beaufort sea sediments.**

Dhineka, K., Mishra, P., Ikenoue, T., Nakajima, R., Itoh, M., Sambandam, M., Kaviarasan, T. and Marigoudar, S.R., Marine Pollution Bulletin. 2024 Nov 1;208:116954. (IF: 5.3) Q1

**Capability of space borne multispectral image for detecting discoloration in optically complex coastal waters.**

Natarajan, L., Vajravelu, M., Chandrasekaran, M., Ramakrishnan, S.G., Kaviarasan, T., Babu, P.V., Dash, S.K., Ramu, K. and Murthy, M.R., Marine Pollution Bulletin. 2024 Oct 1;207:116860. (IF: 5.3) Q1

**Abundance, distribution and characterization of microplastics in Tropical River Estuary, South East Coast of India.**

Begum, M., Nagalakshmi, R., Joseph, A., Balaji, A., Saichand, V., Kaviarasan, T. and Mishra, P., Water, Air, & Soil Pollution. 2024 Aug;235(8):1-4. (IF: 3.8) Q2

**Microplastic Contamination in Kollidam River Estuary, East Coast of India: A Comparative Study Across Inner, Outer and Mangrove Estuarine Regions.**

Nagalakshmi R, Joseph A, Balaji VA, Saichand V, Begum M, Sambandam M, Kaviarasan T, Mishra P. Water, Air, & Soil Pollution. 2024 Aug;235(8):1-4. (IF: 3.8) Q2

**Tide of change: Urgency of a national marine litter policy in India.**

Sambandam M, Mishra P, Dhineka K, Kaviarasan T, Murthy MR, Ravichandran M. Marine Pollution Bulletin. 2024 Jul 1;204:116562. (IF: 5.3) Q1

2023

**A new hotspot of macro-litter in the Rutland Island, South Andaman, India: menace from IORC.**

Shankar VS, Purti N, Ramakrishnan S, Kaviarasan T, Satyakeerthy TR, Jacob S. Environmental Science and Pollution Research. 2023 Jul;30(34):82107-23. (IF: 5.3) Q1

**Assessment of national beach litter composition, sources, and management along the Indian coast-a citizen science approach.**

Mishra P, Kaviarasan T, Sambandam M, Dhineka K, Murthy MR, Iyengar G, Singh J, Ravichandran M. Marine Pollution Bulletin. 2023 Jan 1;186:114405. (IF: 5.3) Q1

2022

**Assessment of the hydrological and erosive status of South Andaman's watersheds using drainage morphometric studies and climatic water balance model.**

Shiva Shankar V, Purti N, Ganta N, Mandal KK, Singh RP, Kaviarasan T, Satyakeerthy TR, Jacob S. Geocarto International. 2022 Dec 13;37(26):13391-418. (IF: 3.3) Q1

**Bioactive efficacy of novel carboxylic acid from halophilic *Pseudomonas aeruginosa* against methicillin-resistant *Staphylococcus aureus*.**

Santhaseelan H, Dinakaran VT, Sakthivel B, Somasundaram M, Thanamegam K, Devendiran V, Dahms HU, Rathinam AJ. Metabolites. 2022 Nov 10;12(11):1094. (IF: 3.4) Q2

**Occurrence, characterization, and source delineation of microplastics in the coastal waters and shelf sediments of the central east coast of India, Bay of Bengal.**

Sambandam M, Dhineka K, Sivadas SK, Kaviarasan T, Begum M, Hoehn D, Sivyver D, Mishra P, Murthy MR. Chemosphere. 2022 Sep 1;303:135135. (IF: 8.1) Q1

**Impact of multiple beach activities on litter and microplastic composition, distribution, and characterization along the southeast coast of India.**

Kaviarasan T, Dhineka K, Sambandam M, Sivadas SK, Sivyver D, Hoehn D, Pradhan U, Mishra P, Murthy MR. Ocean & Coastal Management. 2022 May 15;223:106177. (IF: 4. 8) Q1

**Algal bloom, hypoxia, and mass fish kill events in the backwaters of Puducherry, Southeast coast of India.**

Mishra P, Naik S, Babu PV, Pradhan U, Begum M, Kaviarasan T, Vashi A, Bandyopadhyay D, Ezhilarasan P, Panda US, Murthy MR. *Oceanologia*. 2022 Apr 1;64(2):396-403. (IF: 2.6) Q1

**Litter and plastic monitoring in the Indian marine environment: A review of current research, policies, waste management, and a roadmap for multidisciplinary action.**

Sivadas SK, Mishra P, Kaviarasan T, Sambandam M, Dhineka K, Murthy MR, Nayak S, Sivyer D, Hoehn D. *Marine Pollution Bulletin*. 2022 Mar 1;176:113424. (IF: 5.3) Q1

**Comparison of microplastic abundance in varying depths of deep-sea sediments, Bay of Bengal.**

Dhineka K, Kaviarasan T, Sambandam M, Mishra P, Murthy MR. *OCEANS 2022-Chennai 2022* Feb 21 (pp. 1-4). IEEE.

**Microplastic contamination in commercially important fish and shellfish from coastal waters of the Bay of Bengal off Chennai, southeast coast of India.**

Kaviarasan T, Mishra P, Dhineka K, Sambandam M, Begum M, Murthy MR. *OCEANS 2022-Chennai 2022* Feb 21 (pp. 1-5). IEEE.

**Characterization and seasonal distribution of microplastics in the nearshore sediments of the south-east coast of India, Bay of Bengal.**

Dhineka K, Sambandam M, Sivadas SK, Kaviarasan T, Pradhan U, Begum M, Mishra P, Murthy MR. *Frontiers of Environmental Science & Engineering*. 2022 Jan;16:1-1. (IF: 6.1) Q1

2021

**Determination of trace metal (loid) s in mangrove swamp sediments in relation to its adjacent host rocks of South Andaman, India.**

Venkatesan SS, Purti N, Thanamegam K, Ram B, Kesavan D, Mohan P, Raji K, Ganta N, Kathirvel A, Ravindaran ST, Agrawal DK. *Arabian Journal of Geosciences*. 2021 Jul;14:1-3.

2020

**Assessment of litter in the remote beaches of Lakshadweep Islands, Arabian Sea.**

Kaviarasan T, Naik S, Sivadas SK, Dhineka K, Sambandam M, Sivyer D, Mishra P, Murthy MR. *Marine Pollution Bulletin*. 2020 Dec 1;161:111760. (IF: 5.3) Q1

**Structure and Mechanical Properties of Gastropod Egg Capsules from Southeast Coast of India**

Kaviarasan T, Sivasankar R, Tenjing SY.. *Proceedings of the Zoological Society 2020* Jun (Vol. 73, pp. 192-197). Springer India. (SJR: 0.24) Q1

**2004 Post tsunami resilience and recolonization of mangroves in South Andaman, India.**

ShivaShankar V, Narshimulu G, Kaviarasan T, Narayani S, Dharanirajan K, James RA, Singh RP. *Wetlands*. 2020 Jun;40:619-35. (IF: 1.8) Q2

2019

**Multivariate drug resistance and microbial risk assessment in tropical coastal communities.**

Gokul MS, Dahms HU, Muthukumar K, Henciya S, Kaviarasan T, James RA. *Human and Ecological Risk Assessment: An International Journal*. 2019 Jul 4;25(5):1073-95. (IF: 3) Q2

**Seasonal species variation of sediment organic carbon stocks in salt marshes of Tuticorin area, Southern India.**

- Kaviarasan T, Dahms HU, Gokul MS, Henciya S, Muthukumar K, Shankar S, Arthur James R. Wetlands. 2019 Jun 1;39:483-94. (IF: 1.8) Q2
- 2018**  
**Trace metal inference on seaweeds in Wandoor area, Southern Andaman Island. Bulletin of environmental contamination and toxicology.**  
Kaviarasan T, Gokul MS, Henciya S, Muthukumar K, Dahms HU, James RA. 2018. Bulletin of Environmental Contamination and Toxicology May;100:614-9. (IF: 2.7) Q2
- 2017**  
**Synthesis of silver nanoparticles using bacterial exopolysaccharide and its application for degradation of azo-dyes.**  
Saravanan C, Rajesh R, Kaviarasan T, Muthukumar K, Kavitate D, Shetty PH. Biotechnology Reports. 2017 Sep 1;15:33-40. (SJR: 1.1) Q1
- 2016**  
**In-vitro study: immunomodulatory and cytotoxicity effects of ethanolic leave extracts of *Aegle marmelos* and *Ficus benghalensis*.**  
Crossia W, Dahms HU, Muthukumar K, Kaviarasan T, Thirunalasundari T, James RA. Journal of Coastal Life Medicine. 2016 Apr 6;4(3):217-24.
- 2013**  
**Screening of potential human pathogens from the ghost crab, *Ocypode platytarsis* (H. Milne Edwards, 1852) and evaluation of antibiotic resistance.**  
Sankar SR, Sumitha J, Kaviarasan T, Yogamoorthi A. Indian Journal of Geo-Marine Sciences, 2013, 42 (2) 244-248. (IF: 0.4) Q4
- 2012**  
**Ecological implications of trace metals in seaweeds: Bio-indication potential for metal contamination in Wandoor, South Andaman Island.**  
Karthick P, Sankar RS, Kaviarasan T, Mohanraju R. The Egyptian Journal of aquatic research. 2012 Jan 1;38(4):227-31.
- 2011**  
**Heavy metal analysis of three gastropod species in Pondicherry southeast coast of India.**  
Kaviarasan T, Yogamoorthi A, Siva Sankar R. Int J Curr Res. 2012;4:104-6.
- Studies in Ultra Structure of Egg Capsule Wall of Snails using Scanning Electron Microscope.**  
Kaviarasan T, Sankar RS, Yogamoorthi A. Jour. Coast. Env. 2011;2(2).
- Distribution of macro fouling community in the coastal region of Pondicherry, India.**  
Babu RA, Yogamoorthi A, Sankar RS, Kaviarasan T. International Journal of Fisheries and Aquatic Sciences. 2011;1(2):147-9.
- Striking behavior of *Rapana rapiformis* in egg capsule deposition in Pondicherry coastal region.**  
Yogamoorthi A, Kaviarasan T. Journal of Marine Biological Association of India. 2011;53:275-7.

## BOOK CHAPTERS

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**Blue carbon potential of Indian mangroves, seagrasses, and salt marshes: A review of current knowledge and future directions for climate change mitigation.** Thanamegam Kaviarasan, Palanisamy Thanabalan, SR Marigoudar, MV Ramana Murthy. Navigating Climate Change: Impacts on Biodiversity and Ecosystem Resilience 2025 Oct 1 (pp. 31-59). Springer Nature Singapore.

**Salinity Influence on Sediment Organic Carbon (SOC) Stock in Different Coastal Ecosystems of Southern Andaman Island: An Overlooked Aspect of Blue Carbon Research.** Thanamegam Kaviarasan, P Ragavan, R Sivasankar, Venkatesan Shiva Shankar, Rathinam Arthur James. Navigating Climate Change: Impacts on Biodiversity and Ecosystem Resilience 2025 Oct 1 (pp. 179-193). Springer Nature Singapore.

**Multimarker Pollution Studies Along the East Coast of Southern India.**

Gokul MS, Dahms HU, Muthukumar K, Kaviarasan T, Henciya S, Vignesh S, Kumar TD, James RA. Coastal Zone Management 2019 Jan 1 (pp. 331-346). Elsevier.

**Current status of marine litter and microplastic contamination across India's coastal boundaries: Challenges and Management.**

Mishra P, Dhineka K, Kaviarasan T, Sambandam M, Sahu S. Plastic Pollution: Challenges and Green Solutions. 2024 Sep 12:99-124 (Springer)

## PAPER PRESENTED AT CONFERENCE

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**Environmental implication of microplastic ingestion in zooplankton from the Northern Indian Ocean” at MPrism international conference, at MPrism- February- 2025 in international conference, at IISR Kolkata.**

**Microplastic contamination in commercially important fish and shellfish from coastal waters of the Bay of Bengal off Chennai, southeast coast of India at OCEANS- Chennai- February 2022, IIT-Madras.**

**Population ecology of macrofauna in tidal marsh from south Andaman Island.** Indian Biodiversity Congress 2017. Pondicherry Central University.

**Remote sensing and GIS studies on mangrove ecosystem after tsunami 2004 in south Andaman Island – A review.** National Seminar on Multi-Disciplinary (4G) Approach for Mineral Exploration 17th February 2017. CERS, Bharthidasan University, Tiruchirappalli-Tamil Nadu, India

**Assessment of ecosystem variation of sediment organic matter and carbon stock in south Andaman Island.** 104th Indian Science Congress 2017. Sri Venkateswara University, Tirupati.

**Cross linked bio-elastomeric polymer and its mechanical and scanning electron microscopic properties of gastropod egg capsule form Southeast coast of India.** National Conference on New Trends in Biomedical and Pharmaceuticals Application of Marine Natural Products- NCMNP – 2016”. Sathyabhama University- Chennai- India

**Biodiversity conservation of mangrove and sand dune ecosystem from Carbyn's Cove South Andaman Island.** International Conference on Biodiversity And Biotechnology (ICBB - 2016) February 25th –27th. Bharthidasan University, Tiruchirappalli-Tamil Nadu, India

**Base line study on Carbon stock assessment in saltmarsh and sediments from Tuticorin coast, southern India.** “Past And Present Geochemical Processes - Impacts On Climate Change 2015” held on 22nd-23rd December at Convention Centre, Jawaharlal Nehru University.

## **AWARDS RECEIVED:**

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- Best volunteer award for CCIME-2017.
- Best Paper presentation (Oral) award in NCMNP-2016.
- Honor (INR 2500/-) received for paper publication in the Journal of Coastal Environment vol.2. No. 2, 2011

## **MEMBERSHIP IN PROFESSIONAL SOCIETIES, ORGANIZATIONS ETC.**

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- Marine Biological Association of India (Life member since-2016)

## **REFERENCES**

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- Dr. S. R. MARIGOUDAR (srmariogudar@nccr.gov.in) Scientist -E & Group Head, Marine Litter and Microplastics Program National Center for Coastal Research (NCCR)NIOT Campus, Pallikaranai, Chennai – 600100. Tamil Nadu, India.
- Prof. R. A. JAMES (james.msbdu@gmail.com) Head, Department of Marine Science, Bharathidasan University, Tiruchirappallai – 620 024, Tamil Nadu, India