

## Dr. Sourav Paul

**DOB:** 30.03.1986; **Gender:** Male;

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### **Current Position(s):**

1. **Director** (DIN: 9344577), Estuarine and Coastal Research Foundation (a non-profit research organization), West Bengal, India (1 October 2021 - Present).

2. **SERB Research Scientist**, School of Oceanographic Studies, Jadavpur University, Kolkata, West Bengal, India (14 November 2022 to present)

### **Past position:**

**DST INSPIRE Faculty**, Department of Zoology, University of Calcutta, India (21 September 2016 to 20 September 2022) (**Graded:** '*Excellent*' by review process of Department of Science and Technology, Government of India).

### **Research and education:**

Degree	Board/College/University	Year	Marks
Postdoctoral	Universidad de la República, Uruguay	Feb 2016- July 2016	NA
Postdoctoral	Nelson Mandel University, South Africa	Oct 2014 – Nov 2015	NA
PhD	University of Otago, New Zealand	Dec 2010 – Aug 2014	NA
MSc Environmental System Management	University of Calcutta, India	2007-2009	73.5
BSc Zoology (H)	Presidency College, University of Calcutta, India	2004-2007	62 %
Higher Secondary	Howrah Zilla School; WBCHSE, India	2004	81.5 %
Secondary	Howrah Zilla School; WBSE, India	2002	84 %

**PhD thesis title:** Life history and distribution of mysids (*Tenagomysis* spp.) in estuaries of southern New Zealand: an eco-physiological approach

**Guide's Name:** Dr Gerard P Closs and Dr Keith Probert

**Institute/Organization/University:** University of Otago, New Zealand

**Year of Award:** 2014

### **Teaching Experience (2017 to Present):**

I have been involved in teaching at the Estuarine and Coastal Studies Foundation, University of Calcutta, Diamond Harbour Women's University. I have taught undergraduate/postgraduate Zoology/Environment/Oceanography courses related to applied Ecology, ecological-physiology, coastal ecology, biostatistics, Field excursions and PhD course works.

### **Demonstration Experience (2011 to 2013):**

At the University of Otago New Zealand, I demonstrated Ecology, Biostatistics, Field excursions for the department of Zoology, Ecology and Marine Science.

### **Course Designed:**

1. One year PG diploma program in 'Ecology, Biodiversity and Natural Resource Management' for Diamond Harbour Women's University
2. 'Science Hands-on' certificate program of Estuarine and Coastal Studies Foundation, India.

### **Current Research lines:**

1. Structural resilience/vulnerability of plankton of river-estuaries of Indian Sundarbans.
2. Cyclone Ecology of Indian Sundarbans
3. Stress indicators of estuaries of India, South Africa and Uruguay
4. Scales of plankton sampling of estuaries of India and Uruguay
5. Eco-physiological vulnerability of economically viable shrimps, fish of Indian Sundarbans
6. Food web and bio-economic modelling of the coastal fisheries of India and Oman

### **IOC-UNESCO Endorsement:**

'No. 122.2 - Periodic cyclone effects on Gangetic food web', Decade Action under United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

### **Ongoing Research grants (sole PI):**

**SERB Research Scientist Seed grant (INR 16,000,00/-):** 'Metabolic stress map of the mesozooplankton of a Sundarban estuary in face of salinity shifts'. **2022-2024.**

### **Ongoing Research grants (Co-PI):**

**DBT BioCare grant For Women Scientist (INR 40,68,000/-):** 'Diversity and ecology of ascidians: perspective of Indian Sundarbans and Gujarat Coasts'. **2023-2026.**

### **Project completed (sole PI):**

1. **INSPIRE Seed grant (INR 35,000,00/-):** 'Perspectives on vulnerability and resilience ....in the estuaries of the lower Gangetic Delta: A quantitative and eco-physiological approach'. **2016-2022.**
2. **SERB-CRG (INR 29,76,000/-):** 'Quantitative modeling of the hyper-benthic zooplankton food web of the Hooghly estuary'. **2018-2021.**
3. **WBDST-EMR (INR 5,99,022/-):** 'An eco-physiological approach towards the consequences of salinity, temperature stress on commercial fish species of Indian Sundarbans'. **2018-2020.**
4. **ARTE Channel (Europe) (INR 30,000/-):** '24 hours of copepods in the marine dominated estuaries of Indian Sundarban'. **2019-2020.**

### **Laboratory details:**

**Lab Name:** Coastal and Quantitative Ecology Research Laboratory

#### **Student supervision (past & present):**

1. Saheli Kumar (Postgrad intern, 2017-18)
2. Soumik Ghosh (Postgrad intern, 2018-19)
3. Papiya Bhattacharya (Research Assistant, 2020-21)
4. Dr. Tanmay Nandy (Postdoctoral Fellow, 2021).
5. Samya Karan (Laboratory Assistant, 2018-2021).
6. Hirak Dey (Field Assistant, 2018-2021)
7. Ms. Sonali Ghatak (Postgrad intern, 2021-2022).
8. Mr. Ayan Mallick (NGSF Intern Fellow, 2022)
9. Dr. Laxmi Devi P (INSA-Summer Research Fellow, 2023).
10. **Ms. Debarati Sengupta** (Postgrad intern, 2022-current).
11. **Mr. Palash Naiya** (PhD student, 2023-current).
12. **Dr. Jhimli Mondal** (Postdoctoral Fellow, DBT BioCare Programme, 2023- current).

## **Publications**

1. \*Dutta S, Al-Jufaili S, Al-Anbouri IS, \*Paul, S. 2023. Population Status of *Sardinella longiceps* of the Sultanate of Oman: Perspectives of Length-based Approach. *Thalassas: An International Journal of Marine Sciences*. [doi.org/10.1007/s41208-023-00627-5](https://doi.org/10.1007/s41208-023-00627-5). Publisher: Springer-Nature. ISSN: 2366-1674.
2. Bhattachraya P, \*Paul S. 2023. Effects of abiotic changes on a pelagic Chaetognath *Zonosagitta bedotti* population of the Ganges estuary, India. *Journal of Aquatic Biology & Fisheries*, 9 (1), 1-9. Publisher: Department of Aquatic Biology & Fisheries, University of Kerala. ISSN 2321–340X.
3. \*Paul S, Karan S, Bhattachraya B.D. 2023. Effects of Cyclone Amphan on the copepods of Ganges estuary. *Marine Biology Research*. [doi: 0.1080/17451000.2023.2235591](https://doi.org/10.1080/17451000.2023.2235591). Publisher: Taylor & Francis. ISSN: 1745-1019.
4. \*Dutta S, \*Paul S, Homechaudhury S. 2023. Food web structure and trophic interactions of the Northern Bay of Bengal ecosystem. *Regional Studies in Marine Science*. [doi: 10.1016/j.rsma.2023.102861](https://doi.org/10.1016/j.rsma.2023.102861). Publisher: Elsevier. ISSN: 2352-4855.
5. Chakrabarty C, \*Mukhopadhyay SK, \*Paul S. 2022. Seasonal mesozooplankton dynamics of marine-dominated estuaries of Indian Sundarbans. *Journal of Aquatic Biology & Fisheries*, 9 (1), 1-9. Publisher: Department of Aquatic Biology & Fisheries, University of Kerala. ISSN 2321–340X.
6. Al-Shehhi AM, \*Dutta S, \*Paul S. 2021. Stock assessment of *Scomberomorus commerson* (Kingfish) fishery of Oman: Perspectives of sustainability. *Regional Studies in Marine Science*. [doi: 10.1016/j.rsma.2021.101970](https://doi.org/10.1016/j.rsma.2021.101970). Publisher: Elsevier. ISSN: 2352-4855.
7. \*Dutta S, Al-Abri. I, \*Paul S. 2021. Bio-economic trends of Hilsa (*Tenualosa ilisha*) fishery: perspectives of transboundary management between India and Bangladesh. *Marine Policy*, 128 (June 2021). [doi.org/10.1016/j.marpol.2021.104483](https://doi.org/10.1016/j.marpol.2021.104483). Publisher: Elsevier. ISSN: 0308-597X.
8. \*Dutta S, \*Paul S. 2021. Temporal variability of economic fish assemblage of the Northern Bay of Bengal in relation to its environment. *Iranian Journal of Ichthyology*, 8 (2), 104-113. Publisher: Iranian Society of Ichthyology. ISSN: 2383 0964.
9. \*Paul S, Karan S, Bhattachraya B.D. 2020. Effects of cyclone Fani on the copepod community of the Ganges River Estuary of India. *Environmental Monitoring and Assessment*, 192 (12), 1-16. [doi.org/10.1007/s10661-020-08732-1](https://doi.org/10.1007/s10661-020-08732-1). Publisher: Springer-Nature. ISSN: 1573-2959.
10. \*Paul S, Karan S, Bhattachraya B.D. 2020. Daily variability of copepods after successive tropical cyclones in the Ganges River estuary of India. *Estuarine, Coastal and Shelf Science*, 246 (107048). [doi.org/10.1016/j.ecss.2020.107048](https://doi.org/10.1016/j.ecss.2020.107048). Publisher: Elsevier. ISSN 0272-1714.
11. Karan S, Ghosh S, \*Paul S. 2020. Salinity tolerance of wild *Penaeus monodon* and *Penaeus indicus* juvenile: Perspectives of their sustained availability in Sundarban. *Proceedings of the Zoological Society*, 73, 446-450. Publisher: Springer-Nature. ISSN: 0974-6919.
12. \*Paul S, Karan S, Ghosh S, Bhattachraya BD. 2019. Hourly variation of environment and copepod community of the Ganges River Estuary of India: perspectives on sampling estuarine zooplankton. *Estuarine, Coastal and Shelf Science*, 230. [doi.org/10.1016/j.ecss.2019.106441](https://doi.org/10.1016/j.ecss.2019.106441). Publisher: Elsevier. ISSN: 0272-1714.

13. \*Paul S, Saheli K, Mahammed M, Bhusan CS. 2019. Oxygen consumption of *Mystus gulio* under combined stress of varying salinity and temperature. *Thalassas: An International Journal of Marine Sciences*, 35 (1), 155-160. Publisher: Springer-Nature. ISSN: 2366-1674.
14. \*Paul S, Calliari D. 2019. Sampling estuarine copepods at different scales and resolutions: A study in Rio de la Plata. *Journal of the Marine Biological Association of the United Kingdom*, 99 (5), 1059-1064. Publisher: Cambridge Press. ISSN: 1469-7769.
15. \*Kisten Y, Strydom NA, Perissinotto R, Mpinga, MS, Paul S. 2019. Physiological responses of a juvenile marine estuarine-dependent fish (Family Sparidae) to changing salinity. *Fish Physiology and Biochemistry*, 45 (5), 1523-1531. Publisher: Springer-Nature. ISSN 1573-5168.
16. \*Paul S, Castiglioni R, Cervetto G, Calliari D. 2017. Time variability of prevalent mesozooplankton at Montevideo coast, Río de la Plata and its relationship with physico-chemical drivers. *Pan American Journal of Aquatic Sciences*, 12 (4), 273-281. ISSN 1809-9009.
17. \*Paul S, Calliari D. 2017. Salinity and temperature tolerances of *Neomysis americana* (Crustacea: Mysida) sub adults: Perspectives on vulnerability, and distribution in South America. *Journal of Experimental Marine Biology and Ecology*, 486, 373-378. Publisher: Elsevier. ISSN: 0022-0981.
18. Kisten Y, \*Strydom NA, Perissinotto R, Paul S. 2017. Modelling the occurrence of postflexion stages of a marine estuarine-dependent fish in temperate South African estuaries. *Scientia Marina*, 81 (1), 27-35. Publisher: Instituto de Ciencias del Mar de Barcelona, Spain. ISSN: 1886 – 8134.
19. \*Paul S, Wooldridge T, Perissinotto R. 2016. Evaluation of abiotic stresses of temperate estuaries by using resident zooplankton: A community vs. population approach. *Estuarine, Coastal and Shelf Science*, 170, 102-111. Publisher: Elsevier. ISSN: 0272-7714.
20. \*Paul S, May DM, Lee M, Closs, G.P. 2016. Body and brood sizes of *Tenagomysis* spp. (Crustacea: Mysida) in southern estuaries in New Zealand. *New Zealand Journal of Marine and Freshwater Research*, 50 (3), 433-443. Publisher: Royal Society of New Zealand. ISSN: 1175-8805.
21. \*Paul S, Probert PK, Closs GP. 2015. Oxygen consumption of adult females of *Tenagomysis* spp. (Crustacea: Mysida) in relation to body size and salinity. *New Zealand Journal of Marine and Freshwater Research*, 49 (3), 390-397. Publisher: Royal Society of New Zealand. ISSN: 1175-8805.
22. \*Paul S, Closs GP. 2014. Effects of salinity and food quality on the growth of sub-adult mysids of *Tenagomysis* spp.: a laboratory study. *Aquatic Ecology*, 48(2), 229-235. Publisher: Springer-Nature. ISSN: 1573-5125.
23. \*Paul S, Krkosek M, Probert PK, Closs GP. 2013. Osmoregulation and survival of two mysid species of *Tenagomysis* in southern estuaries of New Zealand. *Marine and Freshwater Research*, 64 (4), 340-347. Publisher: CSIRO-Australia, ISSN: 1323-1650.

**Invited lectures/Keynote Speaker/Panel Chair/Panel Discussant:**

No	Title	Presented at	Date
1.	“Cyclone and Ocean Science: Impacts on India”	Rabindra Mahavidyalaya, Champadanga, Hooghly, West Bengal, India	07/12/2023
2.	Building the cyclone ecology research program for Indian estuaries in the United Nation Decade of Ocean Science for Sustainable Development (2021- 2030)	2 <sup>nd</sup> International Mega-Delta meeting, of IOC-UNESCO UN Ocean Decade. East China Normal University, Shanghai, China	6 to 7 November 2023
3.	Indian ECOPs Meet: 'Exploring Ocean Literacy in India with Indian ECOPs and organisations'	Zoom Platform	2/10/2023
4	‘Building India’s exclusive estuarine institution: an insider’s perspectives’	2 <sup>nd</sup> Academia to Industry conclave (a2i2 2023) at Department of Zoology, University of Calcutta	08/10/2023
5	‘Using ecological-physiology to decode life history and distribution of mysids in New Zealand’s estuaries’- Keynote Speaker	Ecosystem and Biogeochemistry of the North Indian Ocean 2023, Berhampur University, Odisha, India	06/10/2023
6	Indian ECOPs Meet: ‘Ocean Literacy’ 2023 - Chief Speaker	Venue: Zoom, Time: 7 to 9.45 PM.	02/10/2023
7	Panel Discussion on Cyclone & Human Well-being- Chairman of the Panel	International Conference On Climate Change, Disaster Resilience and Human Wellbeing-2023, Berhampur University, Odisha, India	16/09/2023
8	Impacts of periodic cyclones on Ganges estuary	e-Consus Seminar hosted by BB College, Kazi Nazrul University, India	07/06/2023
9	Impacts of periodic cyclones on Ganges estuary	Shibpur Dinobundhoo Institution (College), West Bengal, India	28/03/2023
10	Challenging dogmas of estuarine ecology: intercontinental perspectives	Durgapur Government College, West Bengal, India	05/01/2023
11	Challenging the dogmas of estuarine ecology: perspective of Ganges river estuary	Lady Brabourne College (DBT sponsored), West Bengal India.	16/09/2022

12	Challenging the dogmas of estuarine ecology: perspectives from four continents	University of Kerala, India	10/12/2019
13	Dominant copepods hardly indicate environmental stress of estuaries	ISI, Kolkata, India Biodiversity Meet	19 to 21 October 2019
14	Challenging the dogmas of estuarine ecology	Andhra University, India	23/10/ 2019
15	Ecology of coastal-aquatic systems of four continents: eco-physiological and quantitative approaches	NISER, Bhubaneswar, India	13/03/ 2018
16	Eco-physiological works of estuaries in four continents	Narasinha Dutta College, West Bengal, India	19/12/ 2017
17	From zooplankton to human: perspectives on vulnerability and resilience from UNESCO World Heritage Ecosystems	SAIAB, South Africa	31/08/ 2015
18	Life-history and distribution of estuarine mysids: an approach through eco-physiology.	Zoology, University of Otago, New Zealand	27/09/2013
19	Conserving Indian Sundarban: An alternative approach through economic incentive model for conservation	Zoology, University of Otago, New Zealand	3/08/2012

### **Notable Awards /Fellowships:**

No	Award/Fellowship	Awarding Agency	Year
1	SERB Research Scientist Award	SERB, India	2022
2	Best Young Scientist Award	Zoological Society, Kolkata	2017
3	DST-INSPIRE Faculty Award	DST, India	2016
4	Prof. Dr. Roberto Calderyo Postdoc Fellowship	ANII, Uruguay	2015
5	DST/NRF Postdoctoral Fellowship	DST/NRF, South Africa	2014
6	First Overseas Conference Travel Award	NZ Marine Sciences Society	2012
7	University of Otago PhD Scholarship	University of Otago, NZ	2010
8	University of Calcutta Travel Award	University of Calcutta, India	2010

### **Conference (oral) presentations:**

(PS: Int. = International conference)

1. **Ecosystem and Biogeochemistry of the North Indian Ocean.** Host: Berhampur University, Odisha, India, 05-06 October 2023. *'Day-night variability of the copepod community of the Ganges estuary'*
2. **International Conference On Climate Change, Disaster Resilience and Human Wellbeing.** Host: Berhampur University, Odisha, 16-17 September India, 2023. *'Building the cyclone ecology program for Indian estuaries in the UN Ocean Decade (2021-2030)'*
3. **1<sup>st</sup> International Ocean Decade Conference.** Host: United Nation, online (due to COVID-19 pandemic), 1-2 June, 2021. Represented as an *'Young Ocean Professional'*.

4. India Biodiversity Meet (Int.) 2019: '***Did Mystus gulio* Use Estuaries to Colonize the Coasts of South-East Asia?**'
5. India Biodiversity Meet (Int.) 2018: '**Consequences of varying salinity and temperature on oxygen consumption of *Mystus gulio*: perspectives of stasis and distribution in the estuaries of Indian Sundarban**'
6. Annual National Conference of Zoological society of Kolkata 2018: '**Scales of temporal sampling of estuarine copepods**'
7. Annual National Conference of Zoological society of Kolkata 2017: '**Effects of climate stochasticity on zooplankton of lake St Lucia (World Heritage) of Africa**'
8. South African Society of Aquatic Scientists (Int.) 2015: '**Are zooplankton species abundances indicators of change in St Lucia?**'
9. Annual Conference of New Zealand Marine Sciences Society 2013 (Int.): '**Are Fecundity of Mysids (Crustacean) Adjustment to Habitat Conditions: A study on *Tenagomysis* in southern New Zealand estuaries**'
10. Annual Conference of Australian Marine Sciences Society 2012 (Int.): '**Physiological tolerance of mysid shrimps in the estuaries of New Zealand: Why *Tenagomysis chiltoni* is big?**'
11. Annual Conference of New Zealand Marine Sciences Society 2011 (Int.): '**Osmoregulation of Estuarine Mysids in South Island, New Zealand**'

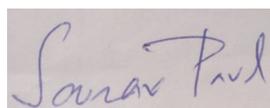
#### **Workshop (coordinator/experts/resource person):**

1. State-Level One-Day Workshop on '***Environment Data Analysis and Decision Making***'. **Host:** BB College Asansol and Estuarine and Coastal Studies Foundation. **Role:** Resource Person. **Date:** 13.12.2023
2. One-Day workshop on '***Water quality of a Ramsar Site***'. **Place:** East Kolkata Wetland. **Role:** Resource Person, **Host:** BE College Model High School and Estuarine and Coastal Studies Foundation. **Date:** 13.12.2023
3. **United Nations Decade of Ocean Science for Sustainable Development (2021-2030)** endorsed workshop on '**World Mangrove Day**' at Sundarbans, India. **Role:** Resource Person, **Host:** Purbasha Eco-helpline Society and Estuarine and Coastal Studies Foundation. **Date:** 26-27 July 2023.
4. **Early Carer Ocean Professional, IOC-UNESCO UN Ocean Decade endorsed** workshop on '***Ocean Literacy***'. **Place:** BE College Model High School. **Role:** Expert. **Host:** BE College Model High School and ECOP, UN Ocean Decade. **Date:** 07.07.2023.
5. **United Nations Decade of Ocean Science for Sustainable Development (2021-2030)** endorsed International Webinar on '**World Ocean Day**', **Role:** Co-ordinator, **Host:** Estuarine and Coastal Studies Foundation, West Bengal, India. **Date:** 8 June 2023. **Venue:** Zoom.
6. **United Nations Decade of Ocean Science for Sustainable Development (2021-2030)** endorsed workshop on '***Cyclone induced changes of lower Ganges delta***' at Sundarbans, India. **Role:** Co-ordinator, **Host:** Estuarine and Coastal Studies Foundation, West Bengal, India. **Date:** 24-25 March 2023
7. International Webinar on '**World Ocean Day**', **Role:** Co-ordinator, **Host:** Estuarine and Coastal Studies Foundation, West Bengal, India. **Date:** 8 June 2022. **Venue:** Google Meet.
8. **Regional Planning Workshop of the United Nations Decade of Ocean Science for Sustainable Development (2021-2030)** for the Northern and Central Indian Ocean countries as well as ROPME Sea area. **Role:** '***Young Ocean Professional***' of India delegation. **Host:** NIOT, Chennai, India. **Date:** 8-10, January, 2020.

## **Reviewer of Journals**

<b>Journal Name</b>	<b>Publication house</b>
Estuarine Coastal and Shelf Science	Elsevier
Estuaries and Coasts	Springer-Nature
Marine Ecology Progress Series	Inter-Research
Marine Biology Research	Taylor & Francis
Journal of Applied Aquaculture	Taylor & Francis
Plos 1	PLoS
Proceedings of Zoological Society	Springer-Nature
Thalassas: An International Journal of Marine Science	Springer-Nature
Aquatic Biology	Inter-Research
Journal of Crustacean Biology	Oxford-Academic
Frontiers in Ecology and Evolution	Frontiers
Wetlands	Springer-Nature
Journal of Oceanology and Limnology	Springer-Nature
Journal of Aquatic Biology & Fisheries	University of Kerala

The above information furnished is best of my knowledge.



**Dr. Sourav Paul**

**Date:** 24.12.2023