



UNIVERSITY OF CALCUTTA
DEPARTMENT OF MARINE SCIENCE
FACULTY ACADEMIC PROFILE/ CV

1. **Full name of the faculty member:** Dr Tarun Kumar De
2. **Designation:** Professor
3. **Specialisation :** Marine Microbiology, Plankton Biodiversity , Mangrove Ecology and GIS & Remotesensing.
4. **Passport size photograph :**



5. **Contact information :**
Department of Marine Science; Calcutta University; 35, Ballygunge Circular Road;
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6. **Academic qualifications:**

College/ university from which the degree was obtained	Abbreviation of the degree
Ramananda College, Bishnupur, Burdwan university	B.Sc Hons in Botany
Dept. of Marine Science, Calcutta University	M.Sc in Marine Science
David Hare Training College, C.U.	B.Ed
Dept. of Marine Science, Calcutta University .	Ph.D.

7. **Positions held/ holding:**
Professor in Marine Science

8. **Research interests:**
Please cite briefly the areas of research interests

- Marine microbiology;
- Population biology of marine organisms.
- Estuarine Bio-geo-chemistry,
- Marine pollution;
- Mangrove and plankton ecology.
- GIS & Remote Sensing

9. **Research guidance :**

Number of researchers awarded M.Phil/ Ph.D degrees	: 12(Twelve)
Number of researchers pursuing M.Phil/ Ph.D	: 08 (Eight)
Number of researchers awarded M.Phil/ Ph.D degrees	: 01 (One)
Mentor of National Post Doctoral (SERB-DST) Fellow	: 03 (Three)

10. **Projects :** **Completed projects :**

- ❖ D.O.D sponsored major project entitled “Investigation on the Physiological ecology of phytoplankton in the sundarban mangrove environment, North-West coast of Bay of Bengal”. Sanc. No. DOD/II-MRDF/4/11/UNI/97(P-II), Dt. 31.03.2000
- ❖ D.O.D sponsored major project entitled “ Biogeochemical control and Feedbacks on primary production in the NE Coast of Bay off Mahanadi estuary, Orissa.” Sanction No. MoEs/11-MRDF/1/32/P/06, Dt. 27. 1.07
- ❖ DST Funded Major Project entitled, “Foraminiferal calcium carbonate pump response to temporal changes of carbon dioxide systems in the Sunderban mangrove environment, North –East coast of Bay of Bengal, India.” Sanc,. No. SR/S4/Es-256/2007 dated 24.04.08
- ❖ DOEn (W.B.) Funded Major Project entitled, “ Sensitivity of the Sunderban mangrove ecosystem to Global change.”, sanc. no. EN/P/1466/T-VIII-2/004/2008 dated 21.05.09
- ❖ UGC Funded Major Project entitled , “Blooming of Phytoplankton, biological indicators, biological pump in Hooghly Estuary.” Sanc No. 39-567/2010(SR)dt 12.1.11.

- ❖ CSIR Funded Major Project entitled, “Time series observation on phytoplankton dynamics in the coastal waters of Indian Sundarban mangrove forest, NE coast of Bay of Bengal”. Sanction No.24(0330)/14/EMR-II.dated.. 23.04.2013
- ❖ DST funded DST-INSPIRE Research Scheme entitled , “Assessment of Environmental Stresses on Mangrove Ecosystems of Sundarbans, India” Sanc No: DST/INSPIRE Fellowship/IF140969 Date: 21.09.2015
- ❖ ISRO – AVRIS-NG AO Space Application Centre Funded Reseach Project entitle , “Water quality assessment usingAVIRIS-NG derived data along the Hooghly (Ganges) River Estuary, Eastern Part of India .” Sanc Ref No. EPSA/4.20/2017 dated 15.12.2016 & 19.12.2017

Current projects :

- UGC Sponsored UGC-NET Research Scheme entitled, “ Phytoplankton derived mesoporous nano-silica loaded with Zinc salts: Effect on the growth of enteric flora” Sr. No. 2061130864; Ref. No.- 19-06/2011(i) EU-IV
- DST funded DST-INSPIRE Research Scheme entitled, “Impact of Climate Change on Coral bleaching in Andaman Sea using RS and GIS”. Sanc No. IS & FA/1994 dated 31.12.2013.
- DST-SERB N-PDF Research Scheme Project entitled, “ Study of heavy metal resistant Plant Growth Promoting Rhizobacteria (PGPR) isolated from the industrial belt of Burdwan district, WB and the characterization for bioremediation and agricultural application “ Sanction File No: NPDF/2016/000323 dt 21.09.2016
- DST funded DST-INSPIRE Research Scheme entitled, “Studies on dynamics of a few dissolved constituents in bidyadhari- matla river complex under the sundarbans estuarine system with special reference to the influence of urban waste water from kolkata,india” Sanc No: DST/INSPIRE Fellowship IF160204 dt 04.01.2017.
- DST-SERB N-PDF Research Scheme Project entitled,“ Estimating Carbon Sequestration Potential of Indian Sundarban Mangrove Forests: A Remote Sensing Approach” . Sanction File Number: PDF/2017/000708 dt 31.07.2017

- UGC Funded NFHE scheme Research project entitled," Taxonomy and phylogenetic study of ray fishes (Order: Myliobatiformes) of Indian Coast with possible application of DNA barcoding" Sanc No. F1-17.1/2015-16/NFST-2015-17-ST-ASS-3935 /(SA-III/Website) April, 2016.
- DST funded DST-INSPIRE Research Scheme entitled," Analytical & numerical study of tsunami wave propagation and run-up with respect to west benal and orissa coast of india". " Sanc No: DST/INSPIRE Fellowship/ I.F. 170930 dt.30.08.2018

11. Select list of publications:

a) *Journals:*

1. T.K. De, T.K. Jana and A. Choudhury, 1990. Control of primary productivity by suspended particulate matter in the Hooghly estuary, India. *Trop. Eco.* 31(2): 98-103.
2. T.K. De, S.K. Ghosh, T.K. Jana and A. Choudhury, 1991. Phytoplankton bloom in the Hooghly estuary, India. *Indian J. Mar. Sci.*, 20: 134-137.
3. T.K. De, S.K. Ghosh, T.K. Jana and A. Choudhury, 1991. Extinction coefficient and primary productivity in the mixing zone of Hooghly estuary. *J. Aqua. Trop.*, 6 : 201-206.
4. S.K. Ghosh, T.K. De, A. Choudhury and T.K. Jana, 1991. Oxygen deficiency in Hooghly estuary, east coast of India. *Indian J. Mar. Sci.*, 20:216-217.
5. S.K. Ghosh, T. K. DE, A. Choudhury and T.K. Jana, 1991. Semi conservative behavior of Ca and Mg in the Hooghly estuary, India. *Indian. J. Mar. Sci.*, 20:218-220.
6. T. K. DE, S. K. Ghosh, T. K. Jana and A. Choudhury. 1991. Size-fractionated primary productivity in Hooghly estuary. *Mahasagar*, 24(2):127-131.
7. T.K. De and A. Choudhury. 1991. Community structure of Estuarine Net- phytoplankton. *Environment and Ecology*. 9(4): 934-944.
8. S.K. Ghosh, T.K. De, A. Choudhury and T.K. Jana. 1992. Distribution of nutrients in estuarine waters of Hooghly River. *Trop. Eco.*, 3(1) : 72-77.
9. S.K. Ghosh, B. Mahapatra, T. K. DE. A. Choudhury and T.K. Jana, 1992. Calcite and aragonite saturation in the Hugli estuary (Bay of Bengal). *Indian J. Mar. Sci.*, 21:207-209.

10. T.K. De, A. Choudhury and T.K. Jana, 1994. Phytoplankton community organization and species diversity in the Hugli estuary, North East Coast of India. *Indian J. Mar. Sci.*, 23:152-156.
11. T.K. De and T.K. Jana, 1996. Phytoplankton pigments in the Hugli estuary (North western Bay of Bengal), India. *Sea Explorer Res*, 3:16-26.
12. T.K. De, A. Mitra and D.P. Bhattacharya, 1999. Physico-chemical characteristics of sewage polluted Kulty estuary, West Bengal, India. *Environment and Ecology*, 17(4):808-813.
13. S.K. Mukhopadhyay, T.K. Jana, T.K. De and S. Sen, 2000. Measurement of exchange of CO₂ in mangrove forest of sundarbans using micro-meteorological method. *Tropical Ecology*, 41(1):57-60.
14. S.K. Mukhopadhyay, H. Biswas, K.L. Das, T.K. De and T.K. Jana, 2001. Diurnal variation of Carbon dioxide and methane exchange above sundarban mangrove forest in North-West coast of India. *Indian J. Mar. Sci. (CSIR)*, 30:70-74.
15. S.K. Mukhopadhyay, H. Biswas, T. K. De, S. Sen and T.K. Jana, 2001. Seasonal effects on the air-water carbon dioxide exchange in the Hooghly estuary, NE coast of Bay of Bengal, India. *Journal of Environmental Monitoring (The Royal Society of Chemistry, U.K.)*. 4(4): 549-552.
16. S.K. Mukhopadhyay, H. Biswas, T.K. De, B.K. Sen, S. Sen and T.K. Jana, 2002. Impact of Sundarban mangrove biosphere on the carbon dioxide and methane mixing ratios at the NE coast of Bay of Bengal, India. *Atmospheric Environment (Elsevier Science Ltd, U.K.)*, 36: 629-638.
17. H. Biswas, S.K. Mukhopadhyay, T.K. De, B.K. Sen, S. Sen and T.K. Jana, 2004. Biogenic controls on the air water carbon dioxide exchange in the Sundarban mangrove environment, northeast coast of Bay of Bengal, India. *Limnology Oceanography*, 49(1): 95-101.
18. H. Biswas, A. Chatterjee, S. K. Mukhopadhyay, T. K. De, S. Sen and T. K. Jana. 2005. Estimation of ammonia exchange at the land-ocean boundary condition of sundarban mangrove, north-east coast of Bay of Bengal, India. *Atmospheric Environment (Elsevier Science Ltd, U.K.)*, 39: 4489-4499.
19. H. Biswas, S.K. Mukhopadhyay, T.K. De, S. Sen and T.K. Jana, 2006. Methane Emission from the Wetland Rice Fields in Sagar Island, NE Coast of Bay of Bengal, India. *International Journal of Agricultural Research* 1(1):76-84, 2006 Academic Journals Inc., USA.

20. S.K. Mukhopadhyay, H. Biswas, T. K. De, and T. K. Jana, 2006. Fluxes of nutrients from the tropical river Hooghly at the land-ocean boundary of sundarbans, NE Coast of Bay of Bengal, India. *Journal of Marine Systems, (Elsevier)*, 62(1-2): 9-21, 2006.
21. D. Ganguly, M. Dey, S.K. Mandal, T.K. De and T. K. Jana, 2008. Energy dynamics and its implication to biosphere - atmosphere exchange of CO₂, H₂O and CH₄ in a tropical mangrove forest canopy. *Atmospheric Environment*, 42, 4172 – 4184, doi:[10.1016/j.atmosenv.2008.01.022](https://doi.org/10.1016/j.atmosenv.2008.01.022)
22. H. Biswas, M. Dey, D. Ganguly, T.K. De, S .K. Ghosh and Jana T.K., 2009. Comparative analysis of phytoplankton composition and abundance over a two decade period at the land-ocean boundary of a tropical Mangrove Ecosystem, *Estuaries and Coasts: Special Issu*, DOI 10.1007/s12237-009-9193-5
23. T.K.De, M.De, S. Das, R. Ray and P.B. Ghosh, 2010. Level of Heavy Metals in Some Edible Marine Fishes of Mangrove Dominated Tropical Estuarine Areas of Hooghly River, North East Coast off Bay of Bengal, India. *Bull Environ Contam Toxicol (Springer link)* DOI 10.1007/s00128-010-0102-1.; .85(4) 385-390.
24. T.K.De, M.De, S.Das, C. Chowdhury, R. Ray and T.K.Jana, 2011. Phytoplankton Abundance in Relation to Cultural Eutrophication at the Land-Ocean Boundary of Sunderbans, NE Coast of Bay Of Bengal, India. (Springer link). *J Environ Stud Sci* . DOI 10.1007/s13412-011-0022-3; 1(3): 169-180
25. S. Das, M. De, R. Ray, D. Ganguly, T.K. Jana and T.K. De, 2011. Salt tolerant culturable microbes accessible in the soil of the Sunderban Mangrove Forest, India. *Open J. of Ecology*; 1 (2) : 35-40.
26. R. Ray, D. Ganguly, C. Chowdhury, M. Dey, S. Das, M.K. Dutta, S.K. Mandal, N. Majumder, T.K. De, S.K. Mukhopadhyay, T.K. Jana 2011. Carbon sequestration and annual increase of carbon stock in a mangrove forest. *Atmospheric Environment*, 45 (2011): 5016-5024.
27. T.K. De, T.K. Sarkar, M. De, T.K. Maiti, A. Mukherjee and S. Das, 2011. Abundance and Occurrence of Phosphate Solubilizing Bacteria and Phosphatase in Sediment of Hooghly Estuary, North East Coast of Bay of Bengal, India. *J. Coastal Development*. 15(1):9-16.
28. S. Das, T.K.Sarkar, M. De, D. Ganguly, T. K. Maiti, A Mukherjee, T.K. Jana and T.K. De, 2011. Depth profile exploration of enzyme activity and culturable microbial community from the oxygen-starved soil of Sundarban mangrove forest, India. *Open J. of Ecology*; 1 (3) : 65-72.

29. A. Mukherjee, M. De, S. Das, T. K. Maiti and T.K. De, 2012. Rate of salt excretion by salt excreting mangroves of Sundarban under varying environmental conditions. *Global Advanced Research Journal of Environmental Science and Toxicology* Vol. 1(1) pp. 001-009.
30. M. Dey , C. Chowdhury, A. Pattnaik, D. Ganguly, S. K. Mukhopadhyay, T. K. De & T. K. Jana, 2012. Comparison of Monsoonal change of water quality parameters between 1983 and 2008 in a tropical estuary in Northeastern India: role of phytoplankton and community metabolism; *Marine Ecology* (2012) 1–16; Blackwell Verlag GmbH doi:10.1111/j.1439-0485.2012.00519.x
31. S. Das, M. De, R. Ray, C. Chowdhury, T. K. Jana & T. K. De (2012): Microbial Ecosystem in Sundarban Mangrove Forest Sediment, North-East Coast of Bay of Bengal, India, *Geomicrobiology Journal*, 29:7, 656-666 ; <http://dx.doi.org/10.1080/01490451.2011.605988>
32. A. Mukherjee, T. K. De, S. Das, D. Rakshit and P. B. Ghosh, (2012). Variation in Relationship between Salt Ion Excretion and Accumulation of Organic Carbon in Sundarban Mangroves under Various Seasonal Conditions. *Asian Journal of Science and Applied Technology*. Volume 1 [1] Jan. 2012 pp. 20-25.
33. S. Das, M. De, D. Ganguly, T. K. Maiti, A. Mukherjee, T.K. Jana and T. K. De.,2012. Depth Integrated Microbial Community and Physico-Chemical Properties in Mangrove Soil of Sundarban, India. *Advances in Microbiology*, 2012, 2, 234-240 doi:10.4236/aim.2012.23028 .(<http://www.SciRP.org/journal/aim>)
34. A. Mukherjee, S. Das, T. K. Maiti, P. B. Ghosh and T. K. De. 2012. A Report on the variation in ratio of Salt Ion Excretion by Salt Excretory Mangrove Species of Sundarban under various spatio-temporal Conditions. *International Journal of Advanced Life Sciences*. 3: 42-49. ISSN (Online): 2277-758X, ISSN (Print): 2320-1827.
35. S. Das, M. De, T.K.De, R. Ray, T.K. Jana, P. K. Ghosh and T.K.Maiti, 2012. Distribution of Aerobic and Anaerobic Bacteria along the Intertidal Zones of Sunderban Mangrove Ecosystems, NE Coast of Bay of Bengal, India; *Indian Journal of Geo-Marine Sciences*; Vol. 41(5): 405-411..
36. A. Mukherjee, M. De, T. K. Maiti, S. Das, and T. K. De, 2013. Do dominant Diatoms regulate each other's frequency of occurrences in a well mixed Estuary? - A Study on *Coscinodiscus* and *Chaetoceros* in the waters of North Eastern Bay of Bengal, India. *The Journal of Energy and Environmental Science*. *Photon* 127 (2013) 209-218. (<https://sites.google.com/site/photonfoundationorganization/home/the-journal-of-energy-and-environmental-science>)

37. S. Pandey, P.K. Ghosh, S. Ghosh. T.K. De and T.K.Maiti, 2013. Role of Heavy Metal resistant *Ochrobacterium sp.* And *Bacillus sp.* Strains in Bioremediation of a Rice Cultivar and Their PGPR Like Activities. *Journal of Microbiology* ; (The Microbiological Society of Korea), Vol 51 (1):11-17.
38. S.Das, M.De, T.K. Jana and T.K.De , 2013.Environmental influence on cultivable microbial community in the sediment of Sundarban mangrove forest, India, *Africal J of Microbiol. Res* 7(38), pp 4655-4665.
39. A. Mukherjee, , S. Das , M. De, T. K. Maiti, and T. K. De, 2013..A Report on the Micro-Phytoplankton Size Range, Biovolume, Biomass and Geometric Shape in the Post “Aila” (Severe Cyclone) Waters of Estuarine Sundarban-Bay of Bengal, India; *J Mar Biol Oceanogr*.2: 4 <http://dx.doi.org/10.4172/2324-8661.1000118>
40. A. Mukherjee, S. Chakraborty, S. Das and T. K. De (2013). Salinity might be the most influential governing factor of cell surface size of *Coscinodiscus* in well mixed tropical estuarine waters. *International Journal for Life Sciences and Educational Research*. Vol.1 (2), pp. 81 - 90, 2013. E-ISSN: 2321-1229; P – ISSN: 2321-1180. <http://www.ijlser.com>
41. S. Das, D. Ganguly, T. K. Maiti, A. Mukherjee, T. K. Jana and T. K. De (2013). A Depth Wise Diversity of Free Living N₂ Fixing and Nitrifying Bacteria and Its Seasonal Variation with Nitrogen Containing Nutrients in the Mangrove Sediments of Sundarban, West Bengal; India. *Open Journal of Marine Science*. Vol. 3, pp.-112-120 (doi:10.4236/ojms.2013.32012. <http://www.scirp.org/journal/ojms>
42. S. Pandey, P.K. Ghosh, S. Ghosh. T.K. De and T.K.Maiti, 2013. Role of Heavy Metal resistant *Ochrobacterium sp.* And *Bacillus sp.* Strains in Bioremediation of a Rice Cultivar and Their PGPR Like Activities. *Journal of Microbiology*; Vol 51 (1):11-17.
43. P.K. Ghosh, P.K.Bhattacharyya, T.K.De and T.K. Maiti. 2014 . Ascorbic acid production in root, root nodule and in culture by *Rhizobium undicola* isolated from the aquatic legume *Neptuna oleracea* Lour. *Int J Pharma Bio sci* .2014 July; 5(3) : 9-18.; ISSN-0975-6299.
44. A. Mukherjee, S. Das, T. Bhattacharya, M. De, T. K. Maiti and T. K. De. 2014. Optimization of phytoplankton preservative grades through experimental correction to reduce shelf damage during long term storage. *Biopreservation and Biobanking* . 12 (2) : 139-147. Mary Ann Liebert, Inc., ISSN (online) 1947-5543; ISSN (Print) 1947 -5535. DOI: 10.1089/bio.2013.0074
45. A. Mukherjee, M. De, T.K. Maiti and T.K. De, 2014. Use of dominant centric diatoms of well mixed tropical estuaries as indicators to nutrient rich environments. *International Journal of Advanced Life Sciences (IJALS)*, 7 (2) : 329-337.

46. A. Mukherjee, T K De, S Das, and M. De.2014. Tropical cyclones might seem to affect pennate diatoms more than their centric counterparts in well mixed estuaries. *American International Journal of Research in Formal, Applied & Natural Sciences*. 8(1) 31-40; ISSN (Print) 2328-3777, ISSN (online) 2328-3785, ISSN (CD-ROM) 2328-3793. <http://www.iasir.net>
47. S. Das, T. K. Jana and T. K. De, 2014. Vertical profile of Phosphatase activity in the Sundarban mangrove forest, North East Coast of Bay of Bengal, India. *Geomicrobiology Journal* Vol. 31, 716-725.
48. T.K. De, A. Mukherjee, S. Das, S. Chakraborty, M. De and T.K. Maiti, 2015. Interrelationship Between Planktonic Diatoms and Selected Governing Physicochemical Parameters of the Hooghly Estuary, Bay of Bengal. *International Journal of Marine Science* 2015, 5 (47) : 1-9
49. A. Mukherjee, S. Das, S. Chakraborty and T K De,2015 . Laboratory experiment reveals some key factors behind auxospore induction in two ubiquitous centric diatoms of Hooghly Estuary, Bay of Bengal, India . *Int. J. Pure App. Biosci.* 3 (3):94-104
50. A. Mukherjee, S. Das, S. Chakraborty and T K De. 2015. Study on mangrove associated estuarine waters of Northeastern Bay of Bengal reveals potential diatom indicators of dissolved inorganic compounds. *Brazilian Journal of Biological Sciences*, 2015, 2 (3) :. 155-168.
51. P.K. Ghosh, T.K. De and T.K. Maiti, 2015. Production and Metabolism of Indole Acetic Acid in Root Nodules and Symbiont (*Rhizobium undicola*) isolated from Root Nodule of Aquatic Medicinal Legume *Neptunia oleracea* Lour. *Journal of Botany*, Hindawi Publishing Corporation, volume 2015,Article ID 575067, 11pages, <http://dx.doi.org/10.1153/2015/575067>.
52. S. Das, M. De, A. Mukherjee, S. Chakraborty, T. K. Maiti and T. K. De. 2015. Influence of varying degree of salinity-sodicity stress on phytoplankton and cultivable microbes in the estuarine water of the Sundarban Mangrove Forest, India. *International Journal of Advanced Life Sciences*. Vol (8) Issue (4), page no. 424-429.
53. A. Mukherjee, S. Chakraborty, S. Das, R. Mondal, S. Basu, S. Thakur and T. K. De., 2015. A report on salinity-governance of auxospore size in euryhaline diatoms of a well mixed estuary on North-Eastern coastal Bay of Bengal, *Brazilian Journal of Biological Sciences*, 2015, 2 (4) : 321-331.
54. A. Mukherjee, T K De S. Das, and. S. Chakraborty 2015..Influence of unidirectional circulation of nutrient - enriched water on chain length ofselected diatom species in estuarine environment - a batch culture buttressed case study; *Int. J. Adv. Lif. Sci.*, 8(4): 509 – 519.

55. S. Chakraborty, A. Mukherjee, S. Mondal, S. Das, M. De and T.K.De . 2016. A case study to understand the feeding strategy of some selected estuarine copepods in response to mixed phytoplankton diet. *Int. J. Res Applied Sci & Eng. Techno.* 4(9) 43-54
56. A. Mukherjee, S. Chakraborty, S. Dutta, S. Das, T.K.De. 2016. Salinity tolerance tests on selected estuarine copepod Species to understand the effect of dilution and their Response to changing environment. *International Research Journal of Natural and Applied Science*, 3(9): 28-43. ISSN: 2349-4077
57. S. Das, A. Mukherjee, T. K. De, M. De and T. K. Jana, 2016. Influence of microbial composition on the carbon storage capacity of the mangrove soil at the land-ocean boundary in the sundarban mangrove ecosystem, India. *Geomicrobiology Journal*, VOL. 33, NO. 9, 743–750.
58. A. Mukherjee, S. Das, S. Chakraborty, T.K.De. 2016. A case study on variation in Biovolume of the phytoplanktonic flora in the estuarine waters around Sagar island, Bay of Bengal. *IJALS*, Volume (9) Issue (3) August pp- 402 -427.
59. A. Mukherjee, S. Das, S. Chakraborty, T.K.De. 2016. An ex situ and in vitro approach to delineate pennate diatom species with bioindicator potentials in a well mixed tropical estuarine ecosystem. *Brazilian Journal of Biological Sciences*, v. 3, no. 6, p. 299-317
60. S. Das, D. Ganguly, A. Mukherjee, S. Chakraborty and T. K. De. Soil Urease Activity of Sundarban Mangrove Ecosystem, India. *Advances in Microbiology*, 2017,vol.-7:617-632.
61. Subhajit Das, Dipnarayan Ganguly, Raghav Ray, Tapan Kumar Jana and Tarun Kumar De, 2017. Microbial activity determining soil CO₂ emission in the Sundarban mangrove forest, India . *Tropical Ecology* [IF: 1.12] 58 (3): 527-538.
62. Abhishek Mukherjee, Subhajit Das, Sabyasachi Chakraborty, Anwesa De and Tarun Kumar De. 2017. First ever report on the antimicrobial activities of some selected mangrove halophytes of Sundarban against milk spoilage microflora. *Brazilian Journal of Biological Science*. Vol. 4 (8), 273-292.
63. Mukherjee, A, G. Basumatary, S. Chakraborty, S. Sarkar, S. Das and T.K.De. 2017. First ever proximate analysis of some selected biochemical variables of three stingray species from eastern Indian Coastal Bay of Bengal,; *International Journal of Advanced Life Sciences* , 10 (3) : 369-376; ISSN (Online): 2277-758X, ISSN (Print): 2320-1827. <http://www.ijals.com>

64. Thakur S , Dharanirajan K , P. B. Ghosd, P. Das and T.K. De, 2017. Influence of anthropogenic activities on the land use patterns of South Andaman Islands. *Research Journal of Marine Sciences*; Vol. 5(1), 1-10,
65. Nandi, S., Ghosh, S. K. and T K De, 2017. *Journal of Environmental Science , Computer Science and Engineering & Technology*; Enhanced Rate of Fish Production by Inducing Probiotics in Wastewater Aquaculture Ponds In East Kolkata Wet Lands , West Bengal , India : A Brief Study ., 6(4), 464–475. <https://doi.org/10.24214/jecet.A.6.4>
66. S. Thakur, D. Dey, P. Das , P.B. Ghosh and , T.K. De, 2017. Shore line change detection using Remote Sensing in the Bakkhali Coastal Region, West Bengal , India. *Indian Journal of Geosciences*, Volume 71, No. 4 October - December, 2017; pp. 611-626
67. Subhajit Das and Tarun Kumar De. 2018. Microbial assay of N_2 fixation rate, a simple alternate for Acetylene Reduction Assay *Microbi X* 5 (2018) 909 – 914.
68. M. Roy Chowdhury, S. K. Sarkar and T. K. De. Above-ground biomass production of mangrove forest in Indian Sundarbans. *International journal of basic and advanced research*, 2018, 8(1), 74-84.
69. M. Roy Chowdhury, S. K. Sarkar and T. K. De, 2018. Role of edaphic factors on the growth of dominant mangrove species in Indian Sundarbans. *International Journal of Advanced Science and Research*, 2018, 3(2), 25-30. IF-
70. P.K. Ghosh, T K Maiti , K. Pramanik, S K Ghosh, S. Mitra and T K De, 2018. The role of arsenic resistant *Bacillus aryabhatai* MCC3374 in promotion of rice seedlings growth and alleviation of arsenic phytotoxicity. *Chemosphere* 211 (2018) 407e419 IF-5.77
71. S Sinha, S K Agarwal, T K De and S K Sarkar 2018. Phytoplankton dynamics in the estuarine waters of the World Heritage Site of Indian Sundarbans, *International journal of basic and applied research* July 2018 , 8 (7) : 761 – 775.
72. S Sinha, S K Sarkar and T K De, 2018. Impact of suspended solids on phytoplankton Community in the lower Gangetic estuaries, 2018 Sept - Oct *RJLBPCS* 4(5) :.24 -32
73. A. Mukherjee, S. Chakraborty, S. Das, and T.K.De. 2018. Dynamics of dissolved inorganic nitrogen in bioturbated littoral surface sediments at a selected tourist destination of Northern Coastal Bay of Bengal, India: An ecologically significant case study. *Brazilian Journal of Biological Sciences*, 2018, v. 5, No. 11, p. 799-814.

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2. S. Sett, T K De, A K Mitra and N B Mondal, 2016. Antifungal activity of purified aegialities rotundifolia extract against pathogenic fungi mycovellosiella. *Conservation, cultivation, diseases and therapeutic importance of medicinal and aromatic plants (2016) : 465-485; Editor : Dr H. K. Chowrasia and Prof. A. K. Roy, ; Today & Tomorrow's printers and publishers, New Delhi – 110 002, India.*
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6. Mondal, I. Thakur, S. Ghosh, PB. Bandyopadhyay, J. De, T.K. (2018): Morphodynamic Study of Ichamati River Basin Using Geospatial Tehniques and its Impact on the Local Environment, Emerging Trends in Science and Technology, Narosa Publishing House Pvt. Ltd., 2018, ISBN 978-81-8487-642-0, Chapter-36, pp-36.1-36.7

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1. T.K. De, A. Mitra and A. Choudhury, 1987. Studies on phytoplankton and productivity around Sagar Island and Prentice Island, Sunderbans. **Proc. Nat. Sem. Est. Management, Trivundrum.** 327-329.
2. T.K. De, S. Ghosh, T.K. Jana and A. Choudhury, 1987. The physico-chemical characteristic and primary productivity in waters around lower long sands, Hooghly Estuary, Sunderban, India. **Proc. Nat. Symp. Mar. Res. Tec Eval & Management, Waltair,** 19-21.
3. A. K. Sarkar & T. K. De, 1999. Qualitative study of tropic interactions in the mixing zone of Hooghly estuary, India. **2nd European Ecological Modeling Conference, Pula, Croatia,** 20-24 September, 1999.
4. N. Ghosh, M. Mondal. S, Bhattacharya, T. K. De, D.P. Bhattacharya and A. Mitra, 1999. Inter-relationship between phytoplankton and fish seed diversity around Sagar Island. National Seminar on Eco-friendly Management of resources for doubling fish production-Strategies for 21st Century. **Inland Fish. Soc. India & Cent. Inland Fish. Res. Inst., Barrackpore,** 22-23 December, 1999.
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6. M. Bhattacharya, K. Banerjee, A. Roy, D.P. Bhattacharya, T. K. De and A. Mitra, 2000. Inter-relationship between phytoplankton and ichthyo-plankton diversity at the confluence of the river Hugli and the Bay of Bengal. **National Symposium on microbes in bioremediation for eco-friendly environment in the New Millennium held at CAS in Botany, university of Madras, Chennai, India** from 6th to 7th January,2000
7. K. Banerjee, A. Roy, M. Bhattacharya, D.P. Bhattacharya, A. Mitra and T.K. De, 2000. Abundance of microbial population in deltaic Sundarbans. **National Symposium on microbes in bioremediation for eco-friendly environment in the New Millennium held at CAS in Botany, university of Madras, Chennai, India** from 6th to 7th January,2000
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13. S.Das, D.N. Ganguly, T.K. Jana and Tarun K De. 2010. Depth Integrated microbial diversity in different tidal zone and its interaction with nutrients in the sediments of Sunderban mangrove forest, along the shore of north east coast of bay of Bengal, India. AMSCO2010. International Conference on Aquatic Microbiology (Status, Challenges and Opportunities) held at the Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai, Tamilnadu, during September 2- 4, 2010.
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15. S.Das, T.K. Jana and T.K. De. 2013. Vertical Distribution of Cultivable Microbes and Nutrient in the sediment of Sundarban Mangrove Forest, West Bengal, India. 4th **International Congress of Environmental Research , December 15-17, 2011**, held at Sardar Vallabhbhai National Institute of Technology (SVNIT) , Surat (India)
16. S.Das, T.K. Jana and T.K. De. 2013. Enzyme activity, CO₂ emission from the mangrove soil, relating it to microbial diversity of the Sundarban Mangrove forest, along the North-East coast of Bay of Bengal , India. National seminar on Recent Trends in Marine and estuarine Sciences (NSRTMES – 2013) held at Technology Campus (CRNN), University of Calcutta from 21 to 22 June, 2013.
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18. S. Nandi, I. Nandi, S. K. Ghosh, S. Das and. T. K. De, 2016. Urban Waste Water Recycle in East Kolkata Wet Lands, West Bengal : A Brief Study ; NASI, Bhubaneswar, Orissa.
19. Thakur S, Maity D, Ghosh PB, Das P & De TK 2017. Analyzing Land Surface Temperature Distribution From Land Use Landcover Changes In Sundarbans, India; Asian conference on Remote Sensing (ACRS) 2017, The Ashok hotel, New Delhi - 23-27 Oct' 2017
20. S. Thakur, I. Mondal, P.B Ghosh, P Das & TK De , 2018. Time Series Analysis Of Shoreline Oscillations And Its Repercussion On The Mangrove Ecosystems Around Bakkhali Island In Sundarban Delta, Eastern India. Int. Conference on Biodiverse 2018, IIT Guwahati 27-29 jan 2018

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25. SohaniyaMandal, T.K. Saha and T.K. De, 'STUDY OF TSUNAMI WAVE PROPAGATION',4th Regional Science and Technology Congress (Southern Region), 2019, MAKAUT, WB. 23rd -24th December, 2019
26. SohaniyaMandal, T.K. Saha and T.K. De, 'NUMERICAL STUDY OF TSUNAMI WAVE PROPAGATION', TERI-NORCE, Climate Research School, New Delhi, India, 5th -8th August, 2019
27. Sohaniya Mandal , T. K. Saha and T. K. De . 'SIMULATION OF TSUNAMI WAVE PROPAGATION', Challenges in Earth System Science for Global Sustainability (CESS-GS) , IIT, Kharagpur, 15th – 16th January, 2020.

Other publications : Book Published by International Publisher :

1. Abhishek Mukherjee and Tarun Kumar De (2017): **A Scholastic Guide to Indian Seaweeds**. ISBN - 978-3-330-02453-3. Published by Lambert Academic Publishing House, Germany. Copyright@ OmniScriptum GmbH & CO. KG. pp. 421.
2. Abhishek Mukherjee and Tarun Kumar De (2017): **Use of Diatoms as Biomonitors in Hooghly Estuary, Bay of Bengal, India**. ISBN - 978-3-330-02831-9. Published by Lambert Academic Publishing House, Germany. Copyright@ OmniScriptum GmbH & CO. KG. pp. 205.

12. **Membership of Learned Societies:**

- Life Member of The Indian Science Congress Association
- Member of the PG Board of Studies of the Department of Ocean Studies and Marine Biology, Pondicherry University w.e.f 2017.
- Member of Ph.D. Committee in Environmental Studies, Vidyasagar University.
- Life Member of Probir Chatterjee Research Foundation.
- External Member in the “Expert Selection Committee” of MoEF & CC, Govt. Of India.
- Life Member of Susama Devichoudhurani Marine Biological Research Organization.
- Member of the Post Graduate Board, Department of Marine Sc., Calcutta University
- Ex-Syndicate Member, Calcutta University
- Synate Member, Calcutta University
- Faculty Council member of Calcutta University

15. **Awards :**

- Awarded **National Merit Scholarship** in1983.
- Awarded “**Two Star**” in the National Physical Efficiency Test conducted by Ministry of Education and Social Welfare, Govt. of India.

16. **Other notable activities :**

- Invited and **selected** from the Eastern Zone in the UNU-UNESCO INTERNATIONAL COURSE ON BIODIVERSITY IN MANGROVE ECOSYSTEM held on 10-24 march, 2003 at CAS in Marine Biology, Annamalai University, India.
- Expert Committee Members of UGC-SAP Evaluation Committee.
- Expert Committee Members of Faculty Selection in Various University. Environmental Studies,

➤ **Scientific Reviewer of the following journals:**

- i) J Environmental Monitoring and Assessment.
- ii) The International Journal of Agricultural Sciences (IJAS) (ISSN: 2167-0447)
- iii) Journal of Coastal Research
- iv) British Microbiology Research Journal
- v) Journal of Environmental engineering and Ecological Science
- vi) African Journal of Microbiology Research
- vii) International Journal of Low-Carbon Technologies
- viii) Asian Pacific Journal of Tropical Biomedicine
- ix) Ocean and Coastal Management
- x) Chinese Journal of Oceanology and Limnology
- xi) Journal of Basic Microbiol
- xii) Agricultural and Forest Meteorology

- xiii) International Journal of Biology and Biological sciences
- xiv) Heliyon (Cell Press)
- xv) Biodiversitas, Journal of Biological Diversity
- xvi) Journal of Cleaner Production
- xvii) Environmental Science and Pollution Research
- xviii) Tropical Plant Research
- xix) Indian J of Geo-Marine Science (IJMS)
- xx) Environmental Sustainability [Springer]

Editorial Board Member:

- Open Journal of Oceanography
- Virology & Immunology Journal
- Journal of Fisheries and Aquaculture Development
- Asian Journal of Biology, peer reviewed international journal.
- Asian Journal of Plant and Soil Sciences (<http://www.ikpress.org/journal/49>)

Chief Editor of the following Journals:

- Asian Journal of Biology, peer reviewed international journal from 30.07.2017
- Asian Journal of Plant and Soil Sciences (<http://www.ikpress.org/about-journal/49>) from 2nd Aug, 201