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**Curriculum Vitae**  
**SUDIPTO MANDAL**

**Professional Address**

Ecology & Environmental Modelling Laboratory, Department of Environmental Science, The University of Burdwan, Golapbag, Burdwan, India, Pin-713104

**Telephone**            0342-2659255, 0342-2634975 (Extn -467)            **Mobile** +91 9433332532

**E-mail**                    [sudipto11@gmail.com](mailto:sudipto11@gmail.com), [sudiptomandal@yahoo.co.in](mailto:sudiptomandal@yahoo.co.in)

**Date of Birth**            13<sup>th</sup> October 1979

**Nationality**            Indian

**Education**

2000, B. Sc in Zoology at Ramakrishna Mission Vivekananda Centenary College of Calcutta University

2002, M. Sc in Zoology with Ecology as special paper at Presidency College of Calcutta University

2009, Ph. D. in Zoology at Visva-Bharati University, Thesis entitled-“Impact of detritus on plankton dynamics at Sagar Island of Hooghly - Matla estuarine system.”

**Scholarships and Awards**

2002 (Dec) & 2003 (Dec), Awarded Lectureship by Council of Scientific and Industrial Research and University Grants Commission, India through National Eligibility Test.

2004 (June), Awarded Junior Research Fellowship under University Grants Commission Fellowship Scheme by Council of Scientific and Industrial Research and University Grants Commission, India through National Eligibility Test.

2009 (Jan), Awarded Dr. D. S. Kothari Post Doctoral Fellowship by University Grants Commission, India.

2015 (Nov), Special Achievement Award in for excellent scientific merit of the research work and oral presentation at International Conference on India Biodiversity Meet (IBM 2015), 16-18 November, 2015, ISI Kolkata, **Kolkata, India.**

2016 (Feb), Recognized Reviewer Award from The Journal –Ecological Modelling, Elsevier, **(International Award).**

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**Professional Position**

2003 (Sep) - 2005 (Jan), Lecturer in Zoology (Part-Time Basis), Department of Zoology, Presidency College, Kolkata, Calcutta University

2005 (Jan) - 2007 (Jan), Junior Research Fellow, Ecological Modelling Laboratory, Department of Zoology, Visva-Bharati University

2007 (Jan) - 2009 (Jan), Senior Research Fellow, Ecological Modelling Laboratory, Department of Zoology, Visva-Bharati University

2009 (Feb) - 2010 (Apr), Dr. D. S. Kothari Post Doctoral Fellow, Ecological Modelling Laboratory, Department of Zoology, Visva-Bharati University. Title: -“Simulation modelling of the impact of detritus on detritus food chain at Sagar island of Hooghly-Matla estuarine system”

2010 (Apr) – 2014 (July), Assistant Professor in Zoology, Department of Zoology, Trivenidevi Bhalotia College, P. O. Raniganj, Dist. Burdwan, West Bengal. India. Pin- 713347

2014 (Aug) – Present, Assistant Professor in Environmental Science, Department of Environmental Science, The University of Burdwan, West Bengal. India. Pin- 713104

**Professional Activities**

Dynamic modeling in aquatic systems, Arctic fjord, freshwater systems using STELLA 6.0 software package. Network analysis.

Modelling biogeochemical cycles.

Field survey and estimation of various forms of nitrogen, phosphorus and carbon in soil and water

**Publications (Research Papers)**

Roy, M., **Mandal, S.**, Ray, S., 2008. Detrital ontogenic model including decomposer diversity. *Ecological Modelling*, Elsevier 215, 200-206.

Mandal, S., Ray, S., Roy, S. K., **Mandal, S.**, 2009. Concept of exergy and its extension to ecological system. In: Pelissier, G., Calvet, A., (eds.). *Handbook of Exergy, Hydrogen Energy and Hydropower Research*. Nova Science Publishers Inc. New York.

**Mandal, S.**, Ray, S., Ghosh, P. B., 2009. Modelling of the contribution of dissolved inorganic nitrogen (DIN) from litterfall of adjacent mangrove forest to Hooghly – Matla estuary, India. *Ecological Modelling*, Elsevier, 220, 2988-3000.

**Mandal, S.**, Ray, S., Sarkar A., Ghosh, P. B., 2009. Degradation of mangrove litter and its contribution as dissolved inorganic nitrogen to adjacent estuary of Sagar island, Sunderban mangrove ecosystem, India. In: Metras, J. N. (ed.) *Mangroves Ecology, Biology and Taxonomy*. Nova Science Publishers Inc. New York.

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Ray, S., Mandal, S., Mukherjee J., Roy, M., **Mandal, S.**, Saikia S. 2011. Body Size versus Rate Parameters of Zooplankton and Phytoplankton: Effects on Aquatic Ecosystems, In: Kettel, G. (ed.) Zooplankton and Phytoplankton: Types, Characteristics and Ecology. Nova Science Publishers Inc. New York.

**Mandal, S.**, Debnath, M., Ray, S., Ghosh, P. B., Roy, M., Ray, S. 2012. Dynamic modelling of dissolved oxygen in the creeks of Sagar island, Hooghly–Matla estuarine system, West Bengal, India. *Applied Mathematical Modelling*. 36, 5952-5963.

**Mandal, S.**, S. Ray, S., Ghosh, P.B. 2012. Modelling the impact of mangroves on fish population dynamics of Hooghly - Matla estuarine system, West Bengal, India. *Procedia Environmental Sciences*. Elsevier. 13, 414-444.

**Mandal, S.**, S. Ray, S., Ghosh, P.B. 2012. Comparative study of mangrove litter nitrogen cycling to the adjacent estuary through modeling in pristine and reclaimed islands of Sundarban mangrove ecosystem, India. *Procedia Environmental Sciences*. Elsevier. 13, 340-362.

**Mandal, S.**, Ray, S., Ghosh, P. B. 2012. Modeling nutrient (dissolved inorganic nitrogen) and plankton dynamics at Sagar island of Hooghly – Matla estuarine system, West Bengal, India. *Natural Resource Modeling*. 25(4), 629-652.

**Mandal, S.**, Ray, S., Ghosh, P. B., 2013. Impact of mangrove litterfall on nitrogen dynamics of virgin and reclaimed islands of Sundarban mangrove ecosystem, India. *Ecological Modelling*, Elsevier. 252, 153-166.

Goswami, R., **Mandal, S.**, Mandal S., Ray, S., Mazumder, S. 2014. Effect of temperature and arsenic on *Aeromonas hydrophila* growth, a modeling approach. (Accepted), *Biologia*, Springer. 69,1-9, DOI: 10.2478/s11756-014-0392-6

**Mandal, S.**, Goswami, A. R., Mukhopadhyay, S. K., Ray, S. 2015. Simulation model of phosphorus dynamics of an eutrophic impoundment – East Calcutta Wetlands, a Ramsar site in India. *Ecological Modelling*, Elsevier. 306,226-239.

**Mandal, S.**, Ray, S. 2015. ‘Ecosystem Services in relation to Carbon Cycle of Asansol-Durgapur Urban System, India’ In: Park. Y. S., Lek, S., Baehr, C., Jorgensen, S. E. (eds.) *Advanced Modelling Techniques Studying Global Changes in Environmental Sciences*, Elsevier. 247-269.

Ray, S. Mukherjee, J., **Mandal, S.**, 2015. “Modelling nitrogen and carbon cycles in Hooghly along with adjacent mangrove system” In: Park. Y. S., Lek, S., Baehr, C., Jorgensen, S. E. (eds.) *Advanced Modelling Techniques Studying Global Changes in Environmental Sciences*, Elsevier. 289-320.

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**PUBLISHED BOOK**

**Mandal Sudipto.**, 2012. Impact of Detritus on Plankton Dynamics of Hooghly-Matla Estuary, India –A Modelling Approach, LAP, LAMBERT Academic Publishing, Germany, ISBN: 978-3-659-14949-8.

**EDITED BOOKS**

**Mandal Sudipto.**, 2014. Environica. Compiled Volume of the Second International Conference on Mother Earth: Save It to Achieve a Sustainable Future for All. Levant Books, India.

**Posters**

**Mandal, S.**, 2006. Dynamic modelling of dissolved oxygen in Hooghly – Matla estuarine system. International Conference on Ecological Modelling (28<sup>th</sup> August -1<sup>st</sup> September, 2006) at Yamaguchi University, Japan

**Mandal, S.**, 2009. Simulation modelling and its application in ecology. National Symposium on Theoretical and Mathematical Biology, October 10-11, 2009 organised by NCL, Pune.

**Mandal, S.** 2010. Comparison of nitrogen dynamics in virgin and reclaimed islands in Sundarban ecosystem, India. The Abdus Salam International Centre for Theoretical Physics (ICTP), Italy, 18-27 October, 2010, at Miramare, Trieste, Italy.

**Mandal, S.**, 2011. Modelling plankton dynamics at Sagar island of Hooghly- Matla estuary, West Bengal, India. International Conference Sundarban Pavilion, April 13-14, 2011, Indian Institute of Science Education and Research (IISER) Kolkata, West Bengal, India.

**Oral Presentations**

**Mandal, S.**, 2007. Determination of net primary productivity in Hooghly-Matla estuarine system, W.B., India: a modelling approach. National Seminar on Environment and Sustainable Development (ESD-2007) (17-18 March 2007) organised by Department of Environmental Science Sambalpur University, Orissa

**Mandal, S. and Paul, D.**, 2010. Optimization of spider web structure. 2nd IMSc Complex Systems School, January 4-29, 2010 at the Institute of Mathematical Sciences, Chennai.

**Mandal, S.**, 2011. Importance of mangrove in maintaining the grazing and detritus food chain at Sagar island of Sundarban, India. UGC Sponsored National Level Conference, January 27-28, 2011, T. D. B. College Raniganj, West Bengal, India.

**Mandal, S.**, 2011. Modelling the impact of mangroves on fish population dynamics of Hooghly - Matla estuarine system, West Bengal, India. The 18th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2011), 20-23 September 2011, Beijing, China.

**Mandal, S.**, 2011. Comparative study of mangrove litter nitrogen cycling to the adjacent estuary through modelling in pristine and reclaimed islands of Sundarban mangrove ecosystem, India. The 18th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2011), 20-23 September 2011, Beijing, China.

**Mandal, S.**, 2012. Dynamic model for prediction of fish population in Hooghly-Matla estuarine system, West Bengal, India. International Conference on Mathematical and Theoretical Biology (ICMTB, 2012), 23-27 January 2012, Pune, India.

**Mandal, S.**, 2013. Study of the phosphorus dynamics of a shallow eutrophic impoundment, East Calcutta Wetlands –a Ramsar site in India through simulation model. The 19th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2013), 27-31 October, 2013, **Toulouse, France.**

**Mandal, S.**, 2013. Effect of salinity and temperature on plankton dynamics of Hooghly-Matla estuarine system, India. The 19th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2013), 27-31 October, 2013, **Toulouse, France.**

**Mandal, S.**, 2014. Development of carbon cycle model of an urban system. International Conference on Environmental Biology and Ecological Modelling (ICEBEM – 2014), 24-26 February, 2014, **Santiniketan, India.**

**Mandal, S.**, 2014. Carbon sequestration model of an urban forest ecosystem. International Conference on India Biodiversity Meet (IBM 2014), 21-23 November, 2014, ISI Kolkata, **Kolkata, India.**

**Mandal, S.**, 2015. Ecosystem services and disservices of Burdwan District in relation to greenhouse gas emission. International Conference on India Biodiversity Meet (IBM 2015), 16-18 November, 2015, ISI Kolkata, **Kolkata, India.**

#### **Invited Lectures**

**Mandal, S.**, 2014. “Best Practices Inside Institution Campus Through Environmental Study”, Spetember 19, 2014. Seminar on “ Conservation of Health and Hygiene by the way of Greenery and Cleanliness as ‘Swachh Bharat Abhiyan’ Initiatives by TDB College Raniganj, **Burdwan, India.**

**Mandal, S.**, 2015. “Population Properties and Dynamics of Animals” , Indas Mahavidyalaya, Burdwan, December 22, 2015. College Level Seminar

**Mandal, S.** 2016. “Phytoremediation,” at the State Level Seminar entitled-“ Application of mdicinal plants in the diagnosis of different diseases” organized by TDB College Raniganj, India, March 1, 2016.

**Mandal, S.** 2016. -" Exploring Arctic- A new dimension of scientific research", A Regional Level Seminar entitled "One day Seminar on Arctic Biology" organized by IQAC, Katwa College, 17 March 2016, Katwa, **Burdwan**, India

**Mandal, S.**, 2016. "Environmental Modelling" in the workshop entitled "Quality Standardization in Air and Water...Parameters". Organized by Department of Environmental Science and sponsored by DST-Govt. of West Bengal.

**Mandal, S.**, 2016. "Potential Role of Aquatic Plants in Phytoremediation", Indas Mahavidyalaya, Burdwan, September 27, 2016. College Level Seminar.

#### **Workshops and Conferences (National)**

- National Workshop on Biodiversity and Conservation, December 9-10, 2006 organised by Centre for Environmental Studies , Visva-Bharati in collaboration with WB Renewable Energy Development Agency and West Bengal Biodiversity Board.
- Quantitative Analysis and Modelling in Animal Sciences (QAMAS), October 6-11, 2009 at Yashwantrao Chavan Academy of Development Administration, Pune, organised by IISER Pune, CCMB Hyderabad and NCL Pune.
- 2nd IMSc Complex Systems School, January 4-29, 2010 at the Institute of Mathematical Sciences, Chennai.
- Workshop and Symposium on Mathematical Ecology, December 7-14, 2010 at IISER Kolkata, India.
- National Level Conference on Climate Change : A Dagger in Disguise Affecting Biodiversity organized by Department of Zoology, T. D. B. College, Raniganj and Department of Environmental Science, University of Burdwan, 27-28 January, 2011.
- UGC Sponsored Orientation Programme – Organized by UGC-Academic Staff College, Jadavpur University. 19-11-2012 to 17-12-2012
- UGC Sponsored Refresher Programme – Organized by UGC-Academic Staff College, The University of Burdwan. 07-27 March, 2014
- One day workshop of UG Teachers Training- Organized by Department of Environmental Science, The University of Burdwan. 30 March 2015
- Short Term Course in Environmental Science- Organized by UGC-HRD Centre, The University of Burdwan. 24-30 May, 2016
- UGC National Level Seminar on "The Biggest Challenge of Green Chemistry: To Use its rule in Practice". 8-9 October, 2015 organized by A.K.P.C College, Bengai, Hooghly, India

**Workshops and Conferences (International)**

- Advanced School on Complexity, Adaptation and Emergence in Marine Ecosystems, 18-27 October, 2010, at Miramare, Trieste, Italy. organized by The Abdus Salam International Centre for Theoretical Physics (**ICTP**), **Italy**.
- The 18th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2011), 20-23 September 2011, **Beijing, China**.
- International Conference on Mathematical and Theoretical Biology (ICMTB, 2012), 23-27 January 2012, **Pune, India**.
- The 19th Biennial Conference of International Society for Ecological Modelling, (ISEM, 2013), 27-31 October, 2013, **Toulouse, France**.
- International Conference on Environmental Biology and Ecological Modelling (ICEBEM – 2014), 24-26 February, 2014, **Santiniketan, India**.
- International Conference on India Biodiversity Meet (IBM 2014), 21-23 November, 2014, ISI Kolkata, **Kolkata, India**.
- The 2<sup>nd</sup> International Conference on the Theme –“Mother Earth: Save it to achieve a sustainable future for all”, 10-12 December, 2014, **Burdwan, India**
- International Conference on India Biodiversity Meet (IBM 2015), 16-18 November, 2015, ISI Kolkata, **Kolkata, India**.

**Ph.D./M. Phil./ M.Sc. Thesis Supervision**

<b>Ph.D.</b>	<b>Thesis Title</b>	<b>Registered/Ongoing</b>
Mr. Santu Ghosh	Study of Toxicological Dynamics of Cadmium and Lead in Mussel through Simulation Modelling	2015
<b>M. Phil.</b>		
Miss Sunanda Batabyal	Modelling the Role of Green Patches of Urban System in Carbon Sequestration	2015
<b>M. Sc.</b>		
Miss. Sazia Parween	Carbon Footprint of an Institution-A case study based on The University of Burdwan, west Bengal, India	2015
Mr. Mrinmoy Chandra	Categorization of Ecosystem Services and disservices of Burdwan Municipality, West Bengal, India	2015
Miss Sadhana Soren	Development of Ecotoxicological Model in	2016

	Mussel ( <i>Lamellidens marginalis</i> ) using cadmium as a toxic agent	
Miss Rituparna Banerjee	Application of artificial neural network model for prevention of noise pollution in Burdwan city, west Bengal, India	2016
Mr. Debrup Sarkar	Life Cycle Assessment of Eastern Coalfields Limited, Raniganj, India	2016
Miss. Puja Kumari	Calculating embodied Energy of the Composite Building in Golapbag Campus, The University of Burdwan-A Green Building Approach	2016

### Expedition

Participant from India in 3<sup>rd</sup> Winter Expedition to Arctic at International Arctic Research and Monitoring Station at 79°N, Ny-Alesund, Svalbard, **Norway** (19 March 2010 to 22 April 2010) working on project entitled-“Time series and dynamic modeling of phytoplankton organic carbon cycling at the marginal ice edge zone”.

### Other Activities

- Acted as **Joint Secretary** in UGC Sponsored National Level Conference on Climate Change : A Dagger in Disguise Affecting Biodiversity organized by Department of Zoology, T. D. B. College, Raniganj and Department of Environmental Science, University of Burdwan, 27-28 January, 2011.
- Acted as **Organizing Secretary** in -“Current trends in the research on Aquatic Ecosystems- Application of Ecological Modelling”, Organized by the Department of Zoology, TDB College, Raniganj. 20<sup>th</sup> July 2013. Speakers: Prof. Sovan Lek, University of Toulouse, France & Prof. Santanu Ray, Visva-Bharati University, India.
- Acted as **Judge** at State level competitions in Bongiyu Bijnan Utsav (West Bengal Science Fair), 19<sup>th</sup> February 2015, Rampurhat College, Birbhum
- Acted as **Treasurer** in the The 2<sup>nd</sup> International Conference on the Theme –“Mother Earth: Save it to achieve a sustainable future for all”, 10-12 December, 2014, **Burdwan, India**
- Acted as **Session Chairperson** in UGC National Level Seminar on “The Biggest Challenge of Green Chemistry: To Use its rule in Practice”. 8-9 October, 2015 organized by A.K.P.C College, Bengai, Hooghly, India



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### **Administrative Responsibilities**

- **Assistant Teachers Council Secretary** (Aug 2011 – July 2014), Trivenidevi Bhalotia College, P. O. Raniganj, Dist. Burdwan, West Bengal. India. Pin- 713347
- **University Confidential Assignments** – Examiner/Question Setter (Theory and Practical Examination of Undergraduates, B. Sc. Zoology (Hons.) and B.Sc. Zoology Pass Courses under The University of Burdwan, Visva-Bharati University
- **Member**-Academic Committee, (July 2012 –July 2014), Trivenidevi Bhalotia College, P. O. Raniganj, Dist. Burdwan, West Bengal. India. Pin- 713347
- **Convener** – Computer and Internet Development Committee (July 2013 –Present), Trivenidevi Bhalotia College, P. O. Raniganj, Dist. Burdwan, West Bengal. India. Pin- 713347
- **University Confidential Assignments** – Examiner/Question Setter (Theory and Practical Examination of Post Graduate Courses (M. Sc and M. Phil) in Environmental Science under The University of Burdwan, Visva-Bharati University
- **Member**- Committee for Biodiversity Heritage Site, The University of Burdwan
- **Member**- PGBS and UGBS, The University of Burdwan
- **Member**-UGBS, Environmental Science, Kazi Nazrul University, Asansol, India Pin-713340
- **Teacher-in-Charge (Head of the Department)** – (April 2016-Present), Department of Environmental Science, The University of Burdwan, Pin 713104

### **Completed Research Projects**

**Principal Investigator** –Minor Research Project- “Estimation of sustainability of an industrialized area using carbon cycle model” March 2012-March 2015, funded by University Grants Commission, India Project Scheme, Sanction no. F. PSW-128/11-12 (ERO) dated 25 Jan 2012.

### **Review Assignments (International and National Peer Reviewed Journals)**

1. Ecological Modelling, Elsevier
2. Ecological Informatics, Elsevier
3. Ecological Indicators, Elsevier
4. Marine Coast and Shelf Science, Elsevier
5. Current Science, India

### **Memberships**

Member of Association of Polar Early Career Scientists (APECS), **Tromso, Norway**

([www.apecs.is](http://www.apecs.is))

Member of International Society for Ecological Modelling (ISEM), **USA**

([www.isemna.org](http://www.isemna.org))

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