

# BRIEF CV OF PROF. SUBODH KUMAR MAITI

1. Name: Prof. **SUBODH KUMAR MAITI**
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3. Date of Birth: April 24,1960 [54 yr 8 months as on 2.1.2015]



## 4. Educational Qualifications

Degree	Year	Universities	Specialization
Ph.D	1995	Indian School of Mines, Dhanbad.	Environmental Sc. and Eng.
M.Tech	1986	IIT, Mumbai	Environmental Sc. and Eng.
M.Sc	1984	Calcutta University	Botany (Sp- Microbiology, Pathology & Mycology)
B.Sc (Hons)	1981	Calcutta University	Botany (Hons), Zoology , Human Physiology

Ph.D topic “*Study of some ecological aspects of reclamation in Jharia coalfield, BCCL, India.* (Guide: Professor S. P. Banerjee)

**Specialization:** Ecology; Environmental Microbiology; Ecorestoration; Biological Waste Water Treatment, EIA

## 5. Research interest:

Phytoremediation of heavy metals in metallic waste;  
Metal contamination, bioaccumulation & translocation  
Ecorestoration of Mine degraded land;  
Mycorrhiza association in coalmine degraded sites;  
Biodiversity conservation in Ecorestored sites;  
Mineclosure & planning of end use of mine degraded lands.  
Biological wastewater treatment;  
Bioremediation of Fly ash;

## 6. FELLOWSHIP/ HONOURS AND AWARDS

- **2006:** Visiting lecturer to teach Environmental Engineering for B.Tech mining and Mineral Engineering students at University of Unitech, Lae, Papua New Ginea
- **2005:** Received MGMI Institute GOLD medal in 2006 for best research paper “Maiti, S.K. (2006). Eco restoration of coalmine OB dumps – with special emphasis on tree species and improvements of dump physico-chemical, nutritional & biological characteristics. *MGMI Transactions*, Vol. 102 (1 &2): 21-36, (April 2005- March 2006). (Presented at MGMI AGM on 30<sup>th</sup> March 2006).
- **2001:** Received SIDA fellowship on An Advanced International Training Programme on “Mining and the Environment” at University of Luleo, Sweden from September 17 – October 12, 2001 (4 weeks).
- **1995:** Received ODA fellowship for EIA & Auditing at University of Bradford & EIA Centre, Univ. of Manchester, U.K (8.1.96 to 27.3.96) (13 weeks)
- **1986:** GATE fellowship with 97.8 percentile marks conducted by IIT

## 7. Past Experience in the field of research & industry

Name of Employer	Position held	From	To	Nature of responsibility
ISM, Dhanbad	Professor	1.1.2010	Continuing	Teaching, Research
ISM, Dhanbad	Associate Professor	1.1.2006	1.1.2010	Teaching, Research
ISM, Dhanbad	Assistant Professor	22.2.2000	1.1.2006	Teaching, Research
ISM, Dhanbad	Sr. Lecturer	16.3.1996	22.2.2000	Teaching, Research
ISM, Dhanbad	Lecturer	28.3.1988	16.3.1996	Teaching, Research
Kirloskar Consultancy Division, Pune.	Sr. Environmental Engineer	Feb,1987	March, 1988	EMP preparation for Hindustan Zinc Limited

## 8. List of R&D (Sponsored Research ongoing/Completed) - Selected

Period	Title	Sponsoring agency & Amount	Status
1.1.2013 – 1.1.2017	Ecological Restoration & compliance Monitoring of Solid waste disposal sites of Nalwa Steel & Power Plant , India	Nalwa Steel & Power Plant, Raigarh, India, 21 lakhs	Principal Investigator
November 2014 – Dec 2015	Carbon sequestration study of Eco-restoration sites of Bharat Coking Coal Limited	Bharat Coking Coal Limited, Dhanbad (India), 3 lakhs	Principal Investigator
2011-12	Closure design of solid waste disposal site	Nalwa Steel & Power Plant, Raigarh, India, 16 lakhs	Principal Investigator
2013-2015	Eco restoration cum integrated firming of back filled areas of coal mining sites	Central Coalfields Limited, CCL 12lakhs	Principal Investigator
July 1993- March 1995	Scientific investigations for reasons of weathering of plants in coalmine overburden dumps	BCCL, Dhanbad (BCCL (I)/93-94/036), 3 lakhs	Principal Investigator

March 1995 – December 1998	Study of greenbelt regarding its noise attenuation and dust arresting capacity in coal mining areas	Coal Science & Technology (MT/S&T/ EE12/94), 14 lakhs	Project Co-ordinator
March 2002 – March 2005	An assessment of overburden dump rehabilitation technologies adopted in CCL, NCL, MCL and SECL mines	MOEF, New Dehli (No. J-15012/38/98-1A II (M) March 2002) 11.2 lakhs	Principal Investigator
July 2001 – December 2002	Study of the possibility of using industrial solid wastes and flyash for backfilling and reclamation of opencast mines	Under EMCBT (IIA), MOEF, New Delhi (Rs. 8.65 lakhs approx.)	Team member
2004-2007	Baseline studies of Bagjata & Banduhurang sites of UCIL	Board of Research in Nuclear Sciences (BRNS) [Rs. 33.24 lakhs]	Principal Co-Investigator

### *Others*

<b>Year</b>	<b>Topic</b>	<b>Status</b>
1987-1988	Comprehensive data generation for Haldia Petrochemicals, Haldia (Kirloskar Division)	Sr Environmental Engineer
1987-1988	Environmental data generation & EMP preparation for Maton, Zawar and Rajpura-daraiba mines of HZL, Udaipur.	Sr Environmental Engineer
1988 – 1990	Preparation of Environmental Management Plan (EMP) for Murpar U/G project, Wani area, WCL. Completed on April 1990. (PCE/Cons/1352/88) Rs. 4.38 lakhs	Principal Investigator
1988 – 1990	Comprehensive environmental data generation for Murpar U/G project, WCL	Co-ordinator
1988-1991	Preparation on EMP for Ghusik U/G project, CMPDIL RI-1, Asansol	Co-ordinator
1989- 1992	Preparation of EMP for Bhargora project, BCCL (PCE/Cons./1362/89) Rs. 11.60 lakhs	Co-ordinator
1993	Rapid EIA of eight Opencast Projects of BCCL	Consultant
1993	Flora & fauna report for Nabakajora, Tilabani and Haripur project, ECL submitted to CMPDIL, RI-1, Asansol (PCE/cons/1368/89)	Consultant
1993	Comprehensive flora & fauna report of Rangamati U/G project, ECL submitted to CMPDIL, RI-1, Asansol	Consultant
1994	Comprehensive flora & fauna report of Rajmahal Opencast project, ECL submitted to CMPDIL, RI-1, Asansol	Consultant
1993	Comprehensive flora & fauna report of Dakshinkhanda U/G, ECL submitted to CMPDIL, RI-1, Asansol	Consultant
1992	Comprehensive flora & fauna report of Hura-C Opencast project, ECL submitted to CMPDIL, RI-1, Asansol (PCE/Cons. 1363/89)	Consultant
1998-2000	Preparation of Training module and Training of	Expert

	Environmental Personnel of Coal India Ltd.	
1999-2003	Environmental Management Capacity Building, Technical Assistance Project: Mining Sub-Component	Expert
2002 – 2003	Environmental and Social management Capacity Building of Coal India Limited. Preparation of Training module and Training of CIL Personnel.	Expert
2005-2006	Preparation of EMPs for Kurasia Opencast project & NCPH U/G project of SECL (Cost: Rs. 14 lakhs).	Consultant

## 9. RESEARCH GUIDANCE

Titles of Ph.D thesis being supervised (Awarded -6; Ongoing – 12; submitted = 1)

Sl No	Name of the candidates	Title of Ph.D topics
1.	Sumana Banarjee (2003)	Biodegradability of Phenol in coke oven effluent in laboratory and bench scale studies [ <b>Awarded</b> ]
2.	Dilip Markenday (1998)	Assessment of Heavy metals bioabsorption efficiencies of some microbial isolates in multi-component aqueous environment. [ <b>Awarded</b> ]
3.	Manab Das (2008)	Bioremediation of copper mine tailings with special emphasis on metal accumulation, distribution and tolerance in plants [ <b>Awarded</b> ]
4.	Sangeeta Mukhopadhyay, (2012)	Study of soil quality indicator parameters to assess the health of reclaimed coal mine degraded land [2008 DR 0002] [ <b>Awarded</b> ]
5.	Sanjoy Kumar (2012)	Reclamation capabilities of alluvial soil cover in the eastern part of Ranigunj coalfield (Sanjoy Kumar, 2008 DR 0029) [ <b>Awarded</b> ]
6.	Adarsh Kumar (2014)	Study of environmental impacts of chromite and asbestos mines waste and its phytoremediation [Adarsh Kumar, 2011DR0042] [ <b>Awarded</b> ]
7.	Lata Dora (18.2.2009)	Study of Phytoplankton community as a bioindicators of water pollution in Damodar river (Lata Dora, 2010DR 0119) ( <b>part time, On going</b> )
8.	Deblina Maiti (13.8.2012)	Ecorestoration of degraded land with emphasis of grass-legume mixture, energy plantation, nutrient cycling, biodiversity conservation and productivity enhancement (Deblina Maiti, 2012 DR 0151) ( <b>Left</b> )
9.	Subhabrata Banerjee (03.03.2012)	Study of Pollution load on Swarnrekha river by an industrial town (Jhamshepur) and its impact on Biotic Component (Subhabrata Banerjee, 2012DR1040) ( <b>part time, Submitted on 10.7.2015</b> )
10.	Abhiroop Chowdhury (25.2.2013)	Effect of Water and soil pollution on the Mangrove biodiversity with special emphasis on salinity tolerance: A case study from Sundarban Delta (WB, India)” [Abhiroop Chowdhury,2013 DR 0015] ( <b>On going</b> )
11.	Avik Banerjee (24.7.2013)	Microalgae Assisted Carbon dioxide Sequestration using Flue Gas in a Photo bioreactor and Biofuel Production [Avik Banerjee, 2013DR0153] ( <b>On going</b> )
12.	Ratnadwip Paul (23.10.2013)	Achieving Sustainability in Aluminium industry with a primary focus on control over Emission’s from Aluminium production, raw material spillage prevention & energy efficiencies [Ratnadwip Paul, Process Engineer, Madden Aluminium Company/ Alcoa] 2014DR1158 ( <b>part time, On going</b> )

13.	Rimi Das (24.7.2013)	Study of Carbon Dynamics of reclaimed coalmine chronosequence sites with emphasis on Carbon and Nitrogen Mineralization and Amendments [Rimi Das, 2013DR0215], <b>(On going)</b>
14.	Anjani Prasad Singh (6.5.2013)	Integrated water resource management for sustainable development in an iron-ore mining area, Bailadila, Chhattisgarh, India. [Anjani Prasad Singh, 2013DR 1097], <b>(part time, On going)</b>
15.	Shanti Priya Ghosh (16.3.2013)	Studies on the metal contamination in roadside soil and vegetation due to vehicular emission along the National Highways and its impact on roadside ecosystem (SP Ghosh, 633012), <b>(part-time, On going)</b>
16.	Jitendra Ahirwal (31.1.2014)	Ecorestoration- Cum- Integrated Farming (ECIF) in Backfilled Area of Opencast Coalmines [Jitendra Ahirwal 2014DR0047] <b>(On going)</b>
17.	Vivek Rana (26.7.2014)	Feasibility of using Phyto Reed Technology for Treatment and Reuse of Wastewater [2014DR 0276], <b>(On going)</b>
18.	Santosh K Verma (11.7.2014)	Impact of Fly ash in the surrounding of Thermal Power Plant with respect to heavy metals, rare earth elements and PAHs on soil biological activities and assessment of toxicity risk [Santosh Kumar Verma, 2014DR0131], <b>(On going)</b>
19.	Umesh Mudhukar Rao Sawarkar (21.11.2014)	Study of Eco-restoration and modeling of Coal mining overburden dumps in selected areas of some coalfields (Umesh Mudhukar Rao Sawarkar, 2015DR 1013) <b>(part-time, ongoing)</b>
20.	Divya Pal (9.02.2015)	Bioaccumulation of heavy metals in lentic and lotic habitats: A comparative study (Divya Pal , 2015DR 0036) <b>(ongoing)</b>

### 9.1 TITLE OF M.TECH THESIS

Sl no	Name of the candidate & year	Title
1	Salilendra Singh (1992)	Some ecological aspects of land reclamation in Jharia Coalfield
2	S.S.Reddy (1993)	A study on Nutrient Status in Reclaimed Overburden spoil dumps of ramagundum Opencast Project-1
3	M Mannan (1996)	Treatment of Synthetic phenolic wastewater through anaerobic filter and anaerobic baffled filter
4	Partha Chakroborty (1996)	Phenolic waste biodegradation by Sequential Batch Reactor
5	Anshuman singh (1997)	Treatment of synthetic coke plant effluent using Sequencing Batch Reactor
6	Pranab Ghosh (1997)	Simultaneous Carbon , Nitrogen and Phosphorus removal from domestic sewage by sequential batch reactor.
7	Nilesh Kumar (2000)	Treatment of fertiliser wastewater using Sequential batch Reactor with special emphasis on Nitrification- Denitrification.
8	SS Murthy (2000)	Treatability studies of hospital wastewater in Sequential batch Reactor
9	Suman Chattaraj (2001)	Treatment of Hospital wastewater by Sequential batch Reactor
10	Sangeeta Ganguly (2002)	Effect of BOD rate constant on design and performance of wastewater treatment process
11	Arindam Halder	Treatment of coke plant effluent by Duckweeds

	(2002)	
12	Poonam Sharma (2004)	Study of settling curve & design of settling tank for coal washery effluents using synthetic & natural coagulants/ flocculants
13	Shishir Jaiswal (2006)	Metal accumulation pattern in the naturally growing vegetation in the fly ash lagoons of Santaldih Thermal Power Plant, WB
14	Kamal Kr Jain (2006)	Assessment of heavy metals in CETPs and industrial sludge and biosorption studies using non-viable fungal biomass
15	Hasan Akhtar (2012)	Quantitative estimation of carbon sequestration in reclaimed overburden dumps (2010MT 0124)
16	Amit Kumar Mishra (2013)	Assessment of ambient PM10 and heavy metals concentration in coal mining areas: A case study from Jharia coalfields, Jharkhand (2011MT0085)
17	Rashda Khanam (2014)	Spatio-temporal change analysis of vegetation cover in Jharia Coalfield (Rashda Khanam: 2012MT 0051)
18	Md. Hamjala Alam (2014)	Assessment and Modelling of the impacts of a thermal power plant in Jharkhand region on air, water and noise environment (2012MT0207)
19	Suchita Mukhopadhyay (2015)	Assessment of bioavailable heavy metals in fly ash and their bioaccumulation in naturally growing vegetation (Suchita Mukhopadhyay: 2013MT0163]
20	Silpa Kar (2015)	Carbon sequestration potential in forest land, reclaimed minesoil and reconstructed site- A comparative study (Silpa Kar, 2013MT0154)

### 9.2 Title of M.Tech (By Research) Theses Supervised:

1997	Microbial Biotechnological approach for bioabsorption and bioaccumulation of Heavy metallic contaminants (DK Markandey, CPCB, New Delhi).
1998	Use of UASB-Macrophytes treatment system in treatment of Coke-Oven effluents (Rakesh Ranjan, CME)
1998	Trend analysis in Environmental Deterioration in Singrauli Coalfield area (Manoj Agarwal, NCL)
2000	Possibilities of and Risks involved in use of Sewage effluent for irrigation (Manoj K Singh, MECON).

## 10. PUBLICATIONS – IN JOURNALS, CONFERENCES & SEMINARS

1. Books written = 03
2. Papers published in International peer reviewed Journal = 36
3. Book Chapters written = 14
4. Papers published in National Journals = 53
5. International Conference proceedings = 44
6. National Conference proceedings = 61