BIODATA

Sl	Particulars	Details		
1.	**Name :**	Prof. Biswajit Paul		
2.	**Date of Birth :**	25.12.1971		
3.	**Current Position and Address :**	**Professor & Head**, **Centre for Mining Environment**, Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad-826004, Jharkhand. Email: biswajit@iitism.ac.in; Mobile: 9431125959 **Director,** Tamil Nadu Minerals Ltd (TAMIN) : DIN No. 10541935 (in the Board of Directors, nominated by Govt of Tamil Nadu), http://www.tamingranites.com/		
4.	**Educational Qualification:**	• PhD (Environmental Sc & Engg, IIT(ISM)), • B.Tech (Mining Engg, IIT(ISM), • FCC (Coal), DGMS, • RQP (Coal & Lignite), • RQP Metalliferrous Mines)		
5	**Degree/Certificate**	**Year of Passing**	**University/Institute**	**Subjects**
i.	B.Tech (Mining Engg)	1994	IIT(ISM) Dhanbad	Mining Engg (Environmental Aspects of Mining, Mineral Engineering, Mineral Beneficiation, Method of Mining, Ventilation, Rock Mechanics, Mining Machinery), Mine Electricals, Survey, Innovative Mining), Explosives and Blasting, etc.
ii.	Ph.D (Environmental Sc & Engg)	2002	IIT(ISM) Dhanbad	Mining Land Reclamation related, using mining/mineral wastes/residue
	PhD Thesis Title:-*Investigation into utilization of fly-ash in economic management of **mining degraded land** with special reference to TISCO lease hold area in Jharia Coalfields*			
iii.	First Class Mine Manager's Examination of Competency (Unrestricted)	2003	Directorate General of Mines Safety	Mine Legislation and Safety
iv.	Recognised Qualified Person for Coal Mine Planning (RQP-Coal)	2004	Ministry of Coal	Coal Mine Planning/Environmental Planning
v.	Recognised Qualified Person for Metalliferous Mine Planning (RQP-Metalliferous)	2009	Ministry of Mines (IBM)	Metalliferous Mine Planning/Environmental Planning

6.	**Academic/Research Experience / Employment:** (7.5 Years Mining Industry -Tata Steel + 3.5 Years CSIR-CIMFR + 20 Years – Academics & R&D at IIT(ISM) Dhanbad)**; Total :** ***31Yrs***			
Sl.	**From**	**To**	**Name of Organization**	**Position Held**
i.	01.07.1994	25.12.2001	Tata Steel **(INDUSTRY EXPERIENCE)** ***(7.5 Years)***	**Raw Material Division** of Tata Steel:-Manager Mines (Mining Environment, Mineral Production, Beneficiation Plant, Mine Filling, Reclamation, Mine Ventilation, Exploration for deeper seams, Shaft Sinking),. Conducted several value engineering projects to reduce cost and energy in the industry. (**See pg-20-27)**
ii.	26.12.2001	15.08.2005	CSIR-CIMFR **(CSIR R&D EXPERIENCE)** ***(3.5 Years)***	Scientist (Gr. IV), Patent Division (Improved Patent Filing-from almost nil to 24patents a year); Motivated many Senior and Junior Scientists to innovate and file patents. **(See Pg20-27).**
iii.	16.08.2005	15.08.2008	IIT(ISM) Dhanbad **(ACADEMIC, R&D & INDUSTRY EXPERIENCE)** ***(20 Years)***	Assistant Professor; Teaching Environmental Impact Assessment, Environmental Audits; Occupational Health, Safety and Risk Assessment, Environmental Aspects of Metallurgical and Mineral Industry, Environmental Geotechnology, Mining and Mineral Processing Conducted several Executive Development Courses; Consultancy and R&D Projects, Hostel Warden.
iv.	16.08.2008	11.04.2021		Associate Professor; (Same Jobs as above)
v.	12.04.2021	Till Date		Professor; (Same Jobs as Above; Member of Expert Committee as per National Green Tribunal, Planning Commission for Policy Making, Just Transition, etc); Head, Centre for Mining Environment (A Centre of Excellence-MOEF&CC) **See pg-20-27**

vi	12.01.2024	Till Date		**Director,** Tamil Nadu Minerals Ltd (TAMIN) : **DIN No. 10541935** (in the Board of Directors, nominated by Govt of Tamil Nadu), http://www.tamingranites.com/
	Total Experience: -		**31 Years**	***Industry, Research & Academics***
7.	**Area of Specialization**	Environmental issues of Mineral, Mining, Metallurgical & Thermal Power Sector, Mineral/ Mine Environmental Planning, Mining Environment, Mine Land Reclamation, Mine Closure, Environmental Audit, Environmental Impact Assessment, Environmental Geotechnology, Occupational Health, Safety and Risk Assessment, Intellectual Property Management.		
8.	**Honors/Awards/Recognitions Received:**			
Sl.	Year	Name of the Award/Honour		Name of the Organization
i.	1990	All India Rank 37th ISM Entrance Examination		IIT(ISM) Dhanbad
ii.	1990-94	Coal India Merit Scholarship for study in IIT(ISM), Dhanbad {B.Tech (Mining Engg)}		Coal India Limited
iii.	1996	Selected in Tata Steel Task Force for Productivity Improvement		Tata Steel Limited
iv.	1997	Value Engineering Award**:** For Utilization of Waste Belt Conveyors as Liner Material in Mixing Chamber in Stowing Plant		Tata Steel Limited
v.	1998	Value Engineering Award**:** For Optimization of Pumping Network through Exploration Boreholes in Digwadih Colliery (Reducing Carbon Footprint)		Tata Steel Limited
vi.	2005	Patent Awards for filing 12 CSIR Patents (self)		Central Institute of Mining and Fuel Research (CSIR-CIMFR)
vii.	2019	Duo India Fellowship for UK-University of Sheffield, UK/ University of York, UK		ASEM-DUO (As per Asia-Europe Cooperation Framework)
9.	**Professional Affiliations :**			
	Professional Body		Membership Type	No
i.	Institution of Engineers		Fellow; (Secretary, Dhanbad)	F-1280542
ii.	Mining Geological and Metallurgical Institute of India		Life Member	LM-9995 MGMI
iii.	Mining Engineers' Association of India		Life Member	LM.5363/DHANBAD
*	VIDWAN (Expert Database and National Researcher's Network)		---	ID : 97633
*	Orcid		---	ID : 0000-0002-4077-5789
*	Web of Science Researcher		---	ID: AAD-4060-2020;

*	Google Scholar	---	ID : 9Xes_oAAAAJ
10.	**Number of Books Authored/Edited :** Book Chapter : Priti Saha, **Biswajit Paul,** 2019, Water Quality Assessment Techniques, Sustainable Agriculture Reviews 40, , (179-216) Springer.		
11.	**(a) Number of Patents/Copy rights/Trade Mark/IPR Granted/applied for & highlights of translational research contributions : 13**		
Sl	**PATENT TITLE**	**STATUS**	**Patent/ FILE NO**
1	A device for loading blasted coal/minerals from the working face in conventional longwall mining	***Granted 05-02-2014***	**IN258763**
2	A device for providing centerlines in a continuous manner during construction in underground mine/ tunnels.	***Granted 29-10-2015***	**IN269614**
3	A rock bolt for reinforcing rock strata in a roof or side of mine/tunnel.	***Granted 31-07-2013***	**IN256831**
4	A comb for temperature and volume controlled oiling and massaging of scalp.	***Granted 14-03-2014***	**IN259516**
5	A movable canopy for immediate front face of mine or tunnel workings along with roof bolting system of support	***Granted 11-03-2015***	**IN265746**
6	A movable roof support canopy as a safeguard for working under fresh roof in an advancing mine or tunnel.	***Granted 28-04-2014***	**IN260373**
7	A multi-point anchoring system for grouted-type borehole extensometers using quick or slow setting cement capsules.	***Granted 27-08-2015***	**IN258353**
8	A non-air based permanent floating device useful for life saving in natural calamities situations.	***Granted 18-05-2018***	**IN296760**
9	A process for making an artificial aquifer over a land damaged by mining activities (Using Fly-ash). CSIR, **My PhD Thesis Work**	Published	
10	A very light permanent type life saving vest for an individual in case of any sort of flood or tsunami like calamities and also for water sports / sea bathing. CSIR.	Published	
11	A very light permanent type life saving vest particularly for children in case of any sort of flood or tsunami like calamities and also for water sports / sea bathing. CSIR	Published	
12	A novel flexible non-rustable quick stabilisation device for sandy sea shore as well as useful for temporary fixing up of safety devices like life saving vests, umbrella tops, etc., also working as artificial barriers like mangroves. CSIR	Published	
13	A device and Method for producing controllable and directable concentrated beam of solar radiation (NRDC)	Published	
	(b) Technologies developed, Licensed and /or commercialises with details. (More than 5)		
	i) Agreement for licensing of an improved roof bolt useful for supporting mine/tunnel roofs instantly and compactly- Dhanbad Engineering, Dhanbad (2003-05), CSIR		
	ii) Agreement for Roof Drilling cum Boring Machine, for designing, manufacturing and marketing- Indian Drilling and Mining Company (IDMC), 19/2A Monohar Pukur Road, Kolkata – 700 029 (2003-05); CSIR		
	iii) Agreement for licensing of high support steel cog- M/s Diesel Pump Engineers, Kolkata		
	iv) Agreement for Development & performance evaluation of Dust Suppression Chemicals for application in Mining (Opencast & Underground), M/S Syntron Industries, Ahmedabad, Gujarat (2003-05); CSIR		

	v) Agreement for making/designing of a Mine Environmental Monitoring System- M/s Jagadamba Tyre Retreading Company, Dhanbad (2003-05); CSIR		
12.	**Dissertations supervised : Supervised more than 11 (Completed 11; Ongoing 8)=18**		
12a	(a) Ph.D		
Sl	**Title**	**Year of completion/ Date of Award**	**Role**
1	Spectroscopic Analysis, Performance and Emissions Studies of Extracted Biodiesels For Clean Environment, Ms Rajeswari Chatterjee, 17DP000240	23.09.2022	Guide
2	"Engineered Metal Oxide Based Nano-Structures for Remediating Arsenic from Potable Water", Mr.Arpan Sarkar, 2015DR0031	11.11.2020	Guide
3	"Water Quality Assessment and Geo Spatial Mapping in and around Durgapur Industrial City, West Bengal, India", Ms Priti Saha, 2014DR0213	20.06.2020	Guide
4	"Evaluation of Sediment Yield Characteristics and Fixed Nutrient in Middle Stretch of Damodar River, Eastern India", Ms Juli Kumari, 2014DR0019	09.12.2019	Guide
5	"Investigation and utilisation of LD slag waste from different steel industries in India" Ms Sasmita Chand, 2013/DR/0144	16.11.2018	Guide
6	Utilization of Coal mine overburden dump waste as overburden mine filling material at Jharia Coalfields, Mr Anup Kumar Gupta, 2013DR0019	05.05.2018	Guide
7	"Investigation of Environmental and Socio-economic Impact of Mine Closure with reference to Kolar Gold Fields", Mr.A. Manjunath, 2014DR1000	04.09.2017	Co-Guide
8	"Geotechnical Assessment of Overburden for Utilization as Landfill Material in Chasnalla Opencast Colliery, Jharia Coalfield, Eastern India" Mr. Sampurna Nand, 2010 DR 0132	08.02.2016	Guide
9	"Geotechnical assessment of Geoliner using flyash of thermal power plants around Jharia Coalfields India", Ms Neha Shreya, 2011DR0052	02.12.2016	Guide
10	"Investigation into Microbial Degradation of Commercial Explosives and Their Conversion into Bio-Products" Ms Anuradha Kumari, 2012DR0052	09.12.2015	Guide
11	"Investigation Into Backfill Design of Opencast Mines with Reference to Jharia Coalfield, Eastern India" Mr. Arvind Kumar Rai, 0250/2007	26.06.2012	Guide

12b	(b) Post-Graduation **(M.Tech-Environmental Science and Engineering) : More than 24**	
Sl	**Year**	**Topics**
1	**2024**	Study on the recycling and extraction of lithium and other metals from lithium-ion batteries (LIBs), Mr Chandan Kumar Tiwary, 22MT0105
2	**2024**	Extraction of Sand from Coal Mine Wastes, Mr Atul Rajore, 22MT0040
3	**2023**	Study on the use of Kaolin Clay with Flyash for their use as Geoliner, Mr Kshitij Kumar, 21MT0193
4	**2023**	An investigation on slope stability of fly ash mixed coal mine dumps, Mr Sreehari.U.S, Adm No 21MT0418
5	**2020**	Utilization of steel slag in various geotechnical Applications – a case study of waste management through circular economy, Ms. Kriti –Adm No. 18MT0129
6	**2020**	Municipal solid waste management and planning using GIS technology in Sehore City, Madhya Pradesh, Adm No. Ms.Kiran Singh 17MT001985

7	**2020**	Assessment of the water quality of small water bodies in Jharia Coalfields, Mr. Neeraj Kr. Bhardwaj, Adm No.17MT001694
8	**2019**	A comparative study on overburden dump slope stability in Barora area Open cast Coal Mines of Jharia Coalfield Using Flyash and Linz-Donawitz (LD) slag, Mr.Nayan Chand Dhibar, Adm No 17MT001996
9	**2019**	Land design & restoration emphasizing slope stability of opencast mines, Mr.Kishore Kunal 17MT001690
10	**2018**	Slope Stability Analysis of Coal Mine Overburden Dump, Ms Joba Goswami, Adm No 16MT001450
11	**2018**	Utilization of Thermal Power Plant Flyash for Pelletization, Mr.Naveen Prakash Rao, Adm No. 16MT001093
12	**2018**	Removal of Chromium from Drinking Water using Rice Husk, Mr.Ashish Ranjan, Adm No. 16MT000965
13	**2017**	Slope Stability Analysis of Overburden Dumps and Improvement Techniques in a Highly Mechanised Opencast Coal Mine of Raniganj Coalfields, Mr.Gaurav Bhatt, Adm No. 15MT000137
14	**2016**	Utilization of coal mine overburden materials along with flyash for the construction of embankment, Mr Sambhav Anand, And No. 14MT000485
15	**2016**	Characterization and Use of Flyash for sustainable Development, Mr.Vivek Kumar, 14MT000101
16	**2015**	Assessment of exhaust emission of diesel engine with different blends of biodiesel, Mr Ankur Nalgundwar, Adm No.2013MT0159
17	**2015**	Utilization of LD Slag to enhance the geopolymeric properties of coal combustion residues, Mr Jagdeep Nayek, Adm No 2013MT0131
18	**2014**	Physico-chemical Characterisation and Estimation of Fluoride in Agricultural soil of Sidhi District, Madhya Pradesh, India- Mr Bijendra Kumar, Adm No 2012MT0206
19	**2014**	Geospatial Assessment of Mining Activities in Jharia Coalfield and its Environmental Planning., Priti Saha Adm No 2012MT0133
20	**2013**	Multi-Criteria Evaluation of Sustainability of Coal Mining Areas Using Analytical Hierarchical Process (AHP) and Global Reporting Initiative (GRI) Guidelines- Ms Manjari Singh, Adm No 2011MT0098
21	**2013**	Evaluation of Spatial Distribution of Erosion Potential of Jharia Coalfields by Geographical Information System- Mr Vinod Babu.V Adm No 2011MT0037
22	**2012**	Assessment of Fugitive Emissions and Selection of Cost Based Mitigation Methods in Cement Plant- Mr.Brajesh Sharma Adm No. 2010MT0123
23	**2012**	Geotechnical Assessment of Natural Liners Using Flyash as Constituent Material- Mr Aviral Singh Rana, Adm No 2010MT0126
24	**2006**	Investigation into Hydraulic Characteristics and Leachates of Minefill Material-Mr. Devendra Kumar Yadav, Adm No 612932, May 2006

13 (a) List of Research Publications: ***Ref: Google Scholar*** **-9Xes_oAAAAJ**

Sl	Name of the Authors as appeared in the original manuscript	Title of the Paper	Vol.	Year of Publication	Name of the Journal	Name of publishers	Indexed in	Impact factor	Citation
1.	Rani, J., Kumari, S., Paul, B.	Extraction and chemical characterization of Humic acid produced from lignite coals of arid region of Gujarat, Western India	*14*	2024	Scientific Reports	Nature Publications	Q1	4.3	
2.	Rani, J., Paul, B.	Ecological risk assessment of heavy metals in soils of lignite mining area of Kutch district of Gujarat, India.	*196*	2024	Environmental Monitoring and Assessment	Springer	SCI Q2	3.1	
3.	Kumar, K., Paul, B.	Towards a sustainable geoliner construction in landfills by potential blending of fly ash with kaolin clay alternative: a review with an insight to Indian scenario.	*6*	2024	Waste Disposal and Sustainable Energy	Springer	SCI Q2	4.1	1
4.	Rani, J., Paul, B	Challenges in arid region reclamation with special reference to Indian Thar Desert—its conservation and remediation techniques.	*20*	2023	Int. J. Environ. Sci. Technol	Springer	SCI Q2	3.0	7
5.	Chand, S., Chand, S.K., Paul, B., Kumar, M., Rout, P.R.,	Indirect Aqueous Mineral Carbonation of Samples of Linz–Donawitz Slag from the Steel Industry in Eastern India	*27*	2023	Journal of Hazardous, Toxic, and Radioactive Waste	ASCE	SCI Q2	2.1	
6.	Chatterjee, R., Mukherjee, S.K., Paul, B	Evaluation of spectroscopic analysis, performance and emissions of enriched Jatropha and Madhuca methyl ester for clean environment	*24*	2022	Clean Techn Environ Policy	Springer	SCI Q1	4.2	5
7.	Sarkar, A., Paul, B., Darbha, G.K.,	The groundwater arsenic contamination in the Bengal Basin-A review in brief	*299*	2022	Chemosphere	Elsevier	SCI **Q1**	8.1	47
8.	Chatterjee, R., Mukherjee, S.K., **Paul, B,** S Chattopadhyaya	Comparative spectroscopic analysis, performance and emissions evaluation of Madhuca longifolia and Jatropha curcas produced biodiesel.		2021	Environmental Science and Pollution Research.	Springer Nature	SCI, **Q2**	4.306	9
9.	Saha, P., Paul, B.	Identification of potential strategic sites for city planning based on water quality through GIS-AHP-integrated model.		2021	Environmental Science and Pollution Research.	Springer Nature	SCI, **Q2**	4.306	19
10.	Arpan Sarkar, **Biswajit Paul**	Synthesis, Characterization of Iron-Doped TiO2(B) Nanoribbons for the Adsorption of As(III) from Drinking Water and Evaluating the Performance from the Perspective of Physical Chemistry	322, (11 455 6)	2021	Journal of Molecular Liquids	Elsevier	SCI **Q1**	5.065	15

11.	Sasmita Chand, Biswajit Paul, Manish Kumar	Indirect Aqueous Mineral Carbonation of Linz-Donawitz Slag Samples of Indian Steel Industries	*Under revision*	2020	Journal of Material Cycles and Waste Management	Springer Japan	SCI, Q2	1.693	
12.	Arpan Sarkar, **Biswajit Paul**	Analysis of the performance of zirconia-multiwalled carbon nanotube nanoheterostructures in adsorbing As(V) from potable water from the aspects of physical chemistry with an emphasis on adsorption site energy distribution and density functional theory calculations	*302 (110 191)*	2020	Microporous and Mesoporous Materials	Science Direct	SCI **Q1**	4.551	5
13.	Arpan Sarkar, **Biswajit Paul**	Evaluation of the performance of zirconia-multiwalled carbon nanotube nanoheterostructures in adsorbing As(III) from potable water from the perspective of physical chemistry and chemical physics with a special emphasis on approximate site energy distribution	*242* (125234)	2020	Chemosphere	Elsevier	SCI **Q1**	8.1	4
14.	Priti Saha, **Biswajit Paul**	Water Quality Assessment Techniques	*40* (179-216)	2019	Sustainable Agriculture Reviews 40	Springer	SCI	Book Chapter	
15.	S Chand, SK Chand, **B Paul**, M Kumar	Long-term leaching assessment of constituent elements from Linz–Donawitz slag of major steel industries in India	*16(10)* 6397-6404	2019	International Journal of Environmental Science and Technology	Springer	SCI Q2	2.540	3
16.	A Sarkar, A Sarkar, **B Paul,** GG Khan	Designing of Functionalized MWCNTs/Anodized Stainless Steel Heterostructure Electrode for Anodic Oxidation of Low Concentration As (III) in Drinking Water	*4(32)* 9367-9375	2019	Chemistry Select	Wiley	SCI *Q3*	1.811	2
17.	Priti Saha, **Biswajit Paul**	Groundwater quality assessment in an industrial hotspot through interdisciplinary techniques	*191 (2) 326*	2019	Environmental monitoring and assessment	Springer	SCI *Q3*	1.903	2
18.	Juli Kumari, Biswajit Paul	Spatiotemporal variation in primary nutrients amassing in peninsular river sediment: India	*78(10) 326*	2019	Environmental Earth Sciences	Springer	SCI Q2	2.180	1
19.	Arpan Sarkar, Ashish Ranjan, **Biswajit Paul**	Synthesis, characterization and application of surface-modified biochar synthesized from rice husk, an agro-industrial waste for the removal of hexavalent	*21, 447 - 462*	2019	Clean Technologies and Environmental Policy	Springer	SCI Q2	2.429	12

		chromium from drinking water at near-neutral pH							
20.	Priti Saha, **Biswajit Paul**	Assessment of heavy metal toxicity related with human health risk in the surface water of an industrialized area by a novel technique	*25*	2018	Human and Ecological Risk Assessment: An International Journal	Taylor & Francis	SCI *Q3*	1.306	14
21.	Priti Saha, **Biswajit Paul**	Suitability Assessment of Surface Water Quality with Reference to Drinking, Irrigation and Fish Culture: A Human Health Risk Perspective	101	2018	Bulletin of environmental contamination and toxicology	Springer US	SCI *Q3*	1.48	4
22.	Pawan Kumar Rajak, Shibayan Sarkar, **Biswajit Paul**	Comparison of the dewatering of underground and open pit coal mine pumping systems in (BCCL), Dhanbad, Jharkhand, India	377	2018	IOP Conference Series: Materials Science and Engineering	IOP Publishing			
23.	S Chand, SK Chand, **B Paul,** M Kumar	Long-term leaching assessment of constituent elements from Linz–Donawitz slag of major steel industries in India	16	2018	International Journal of Environmental Science and Technology	Springer Berlin Heidelberg	SCI Q2	2.037	3
24.	A Sarkar, **B Paul,** G.G Khan	Fabrication of One Dimensional MnO2-TiO2 Nano-heterostructures for Enhanced Hole Mediated Oxidation of As(III) in Potable Water	*11*	2018	Chemcatchem	Wiley	SCI **Q1**	4.674	5
25.	Sasmita Chand, **Biswajit Paul,** Manish Kumar	Short-term leaching study of heavy metals from LD slag of important steel industries in Eastern India	19	2017	Journal of Material Cycles and Waste Management	Springer Japan	SCI *Q3*	1.693	1
26.	Juli Kumari, **Biswajit Paul**	Geochemical and environmental risk assessment of hazardous elements in river sediment	76	2017	Environmental Earth Sciences	Springer Berlin Heidelberg	SCI Q2	1.765	6
27.	Anup Kumar Gupta, **Biswajit Paul**	Comparative analysis of different materials to be used for backfilling in underground mine voids with a particular reference to hydraulic stowing	15	2017	International Journal of Oil, Gas and Coal Technology	Inderscience Publishers Ltd	SCI Q2	0.563	2
28.	Arpan Sarkar, **Biswajit Paul**	The global menace of arsenic and its conventional remediation-A critical review	158	2016	Chemosphere	Elsevier	SCI **Q1**	8.1	547
29.	Ankur Nalgundwar, **Biswajit Paul,** Sunil Kumar Sharma	Comparison of performance and emissions characteristics of DI CI engine fueled with dual biodiesel blends of palm and jatropha	173	2016	Fuel	Elsevier	SCI **Q1**	5.033	209
30.	Bruno Valentim, Neha	Characteristics of ferrospheres in fly ashes derived from	153	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.451	43

	Shreya, **Biswajit Paul,** Celeste Santos Gomes, Helena Sant'Ovaia, Alexandra Guedes, Joana Ribeiro, Deolinda Flores, Sílvia Pinho, Isabel Suárez-Ruiz, Colin R Ward	Bokaro and Jharia coals (Jharkand, India)							
31.	Bruno Valentim, Deolinda Flores, Alexandra Guedes, Renato Guimarães, Neha Shreya, **Biswajit Paul**, Colin R Ward	Notes on the occurrence of phosphate mineral relics and spheres (phosphospheres) in coal and biomass fly ash	154	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.451	17
32.	S Chand, **B Paul,** M Kumar	Sustainable Approaches for LD Slag Waste Management in Steel Industries: A Review	60	2016	Metallurgist	Springer	SCI *Q3*	0.347	25
33.	Sasmita Chand, **Biswajit Paul,** Manish Kumar	A comparative study of physicochemical and mineralogical properties of LD Slag from some selected steel plants in India	9	2016	J Environ Sci Technol	Asian Network for Scientific Information	Scopus Q3	0.18	6
34.	Anup Kumar Gupta, **Biswajit Paul**	Augmenting the Stability of OB Dump by Using Fly Ash: A Geo Technical Approach to Sustainably Manage OB Dump at Jharia Coalfield, India	11	2016	Current World Environment	Enviro Research Publishers	TR		15
35.	Colin R. Ward Bruno Valentim, Deolinda Flores, Alexandra Guedes, Neha Shreya, **Biswajit Paul**	Vermicular kaolinite relics in fly ash derived from Bokaro and Jharia coals (Jharkhand, India)	162	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.451	7
36.	Bruno Valentim, Deolinda	Notes on the occurrence of char plerospheres in fly ashes derived from Bokaro and	158	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.451	2

	Flores, Alexandra Guedes, Neha Shreya, **Biswajit Paul,** Colin R Ward	Jharia coals (Jharkhand, India) and the influence of the combustion conditions on their genesis							
37.	A. Manjunath, P.S.Paul, **B.Paul**	Assessment of socio-economic impacts due to mine closure -A conceptual model	64	2016	Journal of Mines, Metals and Fuels	International Information and Engineering Technology Association (IIETA) and Books & Journals Pvt. Ltd	Scopus Q4		
38.	P Priti, **Biswajit Paul**	Assessment of Heavy Metal Pollution in Water Resources and their Impacts: A Review	3	2016	Journal of Basic and Applied Engineering Research	Krishi Sanskriti			
39.	Sampurna Nand, **Biswajit Paul,** Mrinal K Ghose	Investigations of Overburden Dump Characteristics for Reclamation in a Critical Coal Mining Area in India	25	2015	Environmental Quality Management	Wiley	SCI *Q3*		
40.	Sampurna Nand, **Biswajit Paul**, Mrinal K Ghose	Development of the Method of Simultaneous Backfilling in Highly Inclined and Deep Opencast Mines: A Case Study of India.	14	2015	TIDEE (TERI Information Digest on Energy & Environment)	TERI Press			
41.	Neha Shreya, Bruno Valentim, **Biswajit Paul,** Alexandra Guedes, Sílvia Pinho, Joana Ribeiro, Colin R Ward, Deolinda Flores	Multi-technique study of fly ash from the Bokaro and Jharia coalfields (Jharkhand state, India): a contribution to its use as a geoline	152	2015	International Journal of Coal Geology	Elsevier	SCI Q1	5.451	8
42.	S Chand, **B Paul,** M Kumar	An overview of use of linz-donawitz (LD) steel slag in agriculture	10	2015	Curr. World Environ	Enviro Research Publishers	TR		6
43.	Shashikanta Keisham, **Biswajit Paul**	A review on the recent scenario of municipal solid waste management in India	3	2015	International Journal of Engineering				5

					Research and General Science				
44.	Anuradha, **Biswajit Paul**, Jagdish	Microbial degradation of expired slurry explosives in mines: a review	72	2015	International Journal of Environmental Studies	Routledge, Taylor & Francis	SCI Q3		4
45.	Anup Kumar Gupta, **Biswajit Paul**	A review on utilisation of coal mine overburden dump waste as underground mine filling material: a sustainable approach of mining	6	2015	International Journal of Mining and Mineral Engineering	Inderscience Publishers (IEL)	SCOPUS Q3		4
46.	Arvind Kumar Rai, **Biswajit Paul,** Gurdeep Singh	A study on physico chemical properties of overburden dump materials from selected coal mining areas of Jharia coalfields, Jharkhand, India	1	2011	International Journal of Environmental Sciences	Integrated Publishing Association			22
47.	Arvind Kumar Rai, **Biswajit Paul,** Gurdeep Singh	A study on the Bulk density and its effect on the growth of selected grasses in coal mine overburden dumps, Jharkhand, India	1	2010	International Journal of Environmental Sciences	Integrated Publishing Association			18
48.	Arvind Kumar Rai, **Biswajit Paul,** Gurdeep Singh	A study on backfill properties and use of fly ash for highway embankments	1	2010	Journal of advanced laboratory research in biology	Society of Open Science			16
49.	Arvind Kumar Rai, **Biswajit Paul,** Nawal Kishor	A study on the sewage disposal on water quality of Harmu river in Ranchi city, Jharkhand, India	2	2012	International Journal of plant, Animal and Environmental Sciences.(ISSN 2231-4490)				13
50.	Arvind Kumar Rai, **Biswajit Paul,** Lopa Mudra, Nawal Kishor	Studies of selected water quality parameters of River Ganges at Patna, Bihar	2	2011	Journal of advanced laboratory research in biology				12
51.	Mrinal K Ghose, **Biswajit Paul**	Underground coal gasification: a neglected option	64	2007	International Journal of Environmental Studies	Routledge, Taylor & Francis	SCI		11
52.	Neha Shreya, **Biswajit Paul**	Effective utilization and environmental management of fly ash as a geoliner constituent material	6	2015	Journal of Biodiversity and Environmental Sciences				2
53.	Anup Kumar Gupta, **Biswajit Paul**	Ecorestoration of Coal Mine Overburden Dump to Prevent Environmental Degradation: A Review	9	2015	Research Journal of Environmental Sciences	Academic Journals Inc			3
54.	Md Asif Ekbal, Shashikanta Keisham, **B Paul**	Assessment of Water Quality in North-Eastern Jharia Coalfield-Jharkhand by WQI and GIS Mapping	14	2015	International Journal of Technology Innovations and Research (IJTIR)	HCTL			

55.	Neha Shreya, **Biswajit Paul,** B Valentim, J Ribeiro, Deolinda Flores	Fly ash Characterization of Jharkhand (India) by Laser granulometry and SEM-EDS	101	2014	Comunicações Geológicas	LNEG Research for Sustainability, Portugal	Q3		4
56.	Arvind Kumar Rai, Farah Diba, **Biswajit Paul**	A study on the seasonal variations of different physic-chemical water quality parameters of Indrapuri Dam Rohtas District Bihar	2	2013	International Journal of Environmental Sciences				1
57.	Neha Shreya, **Biswajit Paul**	Compaction and Hydraulic Conductivity Analysis of Fly ash of BTPS for the construction of a Natural Geoliner		2012	IGWC 2012, Conference				1
58.	Arvind Kumar Rai, **Biswajit Paul,** Gurdeep Singh	A short note on the characterization of fly ash from Chandrapura Thermal Power Station, Bokaro, Jharkhand, India	6	2011	Journal of Environmental Research And Development				6
59.	Arvind Kumar Rai, **Biswajit Paul**	Degradation of soil quality parameters due to coal mining operations in Jharia coalfield, Jharkhand, India	2	2011	Journal of Advance d Laboratory Research in Biology				6
60.	AK Rai, **Paul Biswajit,** Singh Gurdeep	A study on the physico-chemical analysis of water quality parameters of Patna district, Bihar, India.	11	2011	Plant Archives	--			2
61.	AK Rai, **Biswajit Paul,** Gurdeep Singh	The Preliminary Characterisation of Flyash From Jamadoba Thermal Power Station (JTPS), Jharia Coalfields, Jharkhand	9	2011	Indian Journal of Environmental Protection	Kalpana Corporation			1
62.	Arvind Kumar Rai, **Biswajit Paul,** Gurdeep Singh	Physico chemical properties of fly ash and soil from TISCO power plant, Jharia coalfield, Jharkhand, India	10	2010	Journal of Report and Opinion				5
63.	A K Rai, **B Paul,** G Singh	A Study on the Environmental Aspects of Coal Ash Disposal	30	2010	Indi Jour of environmental protection	Kalpana Corporation			2
64.	**Biswajit Paul**	Utilization of Coal Combustion Residue in Reclamation of Mining Degraded Lands in Jharia Coal Field, India-A Case Study.	36	2010	Journal of Solid Waste Technology & Management	Widener University School of Engineering.			
65.	MK Ghose, **B Paul**	A perspective of petroleum, natural gas, and coal bed methane on the energy security of India	3	2008	Energy Sources, Part B	Taylor & Francis Group	SCI Q2	0.976	4

66.	Sasmita Chand, **Biswajit Paul**, Manish Kumar, B,. et.al.	Chemical, mineralogical and morphological properties of steel slag.	9	2007	Journal of Environmental Science and Technology	orgz			
67.	Niraj Kumar, **Biswajit Paul**	Planning of risk assessment and safety management in Indian surface mines	52	2006	Journal of Mines Metals and Fuels	Indian Mine Managers Association.	Scopus		4
68.	**Biswajit Paul**	Utilization of coal ash in bio-reclamation of mining degraded lands/abandoned opencast mines	52	2004	Journal of Mines, Metals & Fuels	Books and Journals Private Ltd.,			
69.	Niraj Kumar, Dr **Biswajit Paul**, Dr. A Sinha	Compatibility of resin bolting vis-a-vis mass production technology in an Indian mechanized underground coal mine		2004	2004	Mining, Geological & Metallurgical Institute of India			

13 b) List of Best professional outputs/outcomes in last 10 years, relevant to present field of specialization.

PhD Guidance and Research in *Environmental Aspects of Mining (Mine Waters*)

Sl	Name of the Authors as appeared in the original manuscript	Title of the Paper	Vol.	Year of Publication	Name of the Journal	Name of publishers	Indexed in	Impact factor	Citation
1.	Arpan Sarkar, **Biswajit Paul**	The global menace of arsenic and its conventional remediation-A critical review	158	2016	Chemosphere	Elsevier	SCI **Q1**	8.1	548
2.	Arpan Sarkar, **Biswajit Paul**	Synthesis, Characterization of Iron-Doped TiO2(B) Nanoribbons for the Adsorption of As(III) from Drinking Water and Evaluating the Performance from the Perspective of Physical Chemistry	322, (114556)	2021	Journal of Molecular Liquids	Elsevier	SCI **Q1**	5.065	15
3.	Arpan Sarkar, **Biswajit Paul**	Analysis of the performance of zirconia-multiwalled carbon nanotube nanoheterostructures in adsorbing As(V) from potable water from the aspects of physical chemistry with an emphasis on adsorption site energy distribution and density functional theory calculations	*302 (110191)*	2020	Microporous and Mesoporous Materials	Science Direct	SCI **Q1**	4.551	16
4.	Arpan Sarkar, **Biswajit Paul**	Evaluation of the performance of zirconia-multiwalled carbon nanotube nanoheterostructures in adsorbing As(III) from potable water from the perspective of physical chemistry and chemical physics with a special emphasis on approximate site energy distribution	*242* (125234)	2020	Chemosphere	Elsevier	SCI **Q1**	8.1	15
5.	A Sarkar, **B Paul,** G.G Khan	Fabrication of One Dimensional MnO_2-TiO_2 Nano-heterostructures for Enhanced Hole Mediated Oxidation of As(III) in Potable Water	*11*	2018	Chemcatchem	Wiley	SCI **Q1**	4.674	10

Research in *Alternative Fuels*

6.	Ankur Nalgundwar, **Biswajit Paul,** Sunil Kumar Sharma	Comparison of performance and emissions characteristics of DI CI engine fueled with dual biodiesel blends of palm and jatropha	173	2016	Fuel	Elsevier	SCI **Q1**	6.7	208
7.	Chatterjee, R., Mukherjee, S.K., **Paul, B,** S Chattopadhyaya	Comparative spectroscopic analysis, performance and emissions evaluation of Madhuca longifolia and Jatropha curcas produced biodiesel. https://doi.org/10.1007/s11356-021-15081-0		2021	Environmental Science and Pollution Research.	Springer Nature	SCI, **Q2**	4.306	9

International Collaboration (Erasmus Mundus) Research Work with Student Exchange (*Properties of Coal and its Combustion Residues*): *Ref: Google Scholar* -9Xes_oAAAAJ

Sl	**Name of the Authors as appeared in the original manuscript**	**Title of the Paper**	**Vol.**	**Year of Publication**	**Name of the Journal**	**Name of publishers**	**Indexed in**	**Impact factor**	**Citation**
8.	Bruno Valentim, Neha Shreya, **Biswajit Paul,** Celeste Santos Gomes, Helena Sant'Ovaia, Alexandra Guedes, Joana Ribeiro, Deolinda Flores, Sílvia Pinho, Isabel Suárez-Ruiz, Colin R Ward	Characteristics of ferrospheres in fly ashes derived from Bokaro and Jharia (Jharkand, India) coals	153	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.6	31
9.	Bruno Valentim, Deolinda Flores, Alexandra Guedes, Renato Guimarães, Neha Shreya, **Biswajit Paul**, Colin R Ward	Notes on the occurrence of phosphate mineral relics and spheres (phosphospheres) in coal and biomass fly ash	154	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.6	20

10.	Neha Shreya, Bruno Valentim, **Biswajit Paul,** Alexandra Guedes, Sílvia Pinho, Joana Ribeiro, Colin R Ward, Deolinda Flores	Multi-technique study of fly ash from the Bokaro and Jharia coalfields (Jharkhand state, India): a contribution to its use as a geoliner	152	2015	International Journal of Coal Geology	Elsevier	SCI Q1	5.6	14
11.	Colin R. Ward Bruno Valentim, Deolinda Flores, Alexandra Guedes, Neha Shreya, **Biswajit Paul**	Vermicular kaolinite relics in fly ash derived from Bokaro and Jharia coals (Jharkhand, India)	162	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.6	9
12.	Bruno Valentim, Deolinda Flores, Alexandra Guedes, Neha Shreya, **Biswajit Paul,** Colin R Ward	Notes on the occurrence of char plerospheres in fly ashes derived from Bokaro and Jharia coals (Jharkhand, India) and the influence of the combustion conditions on their genesis	158	2016	International Journal of Coal Geology	Elsevier	SCI **Q1**	5.6	4

14(c) Highlights of Contributions to the area of specialization.

At Tata Steel (Industry) (1994-2001) as Mining Engineer (Position-Manager-Mining)

1. In charge of Environment,/Coal Production in one of the deepest and arduous underground mining condition of Jamadoba, Digwadih and 6&7 Pits Colliery- Increased productivity of Coal Mining, Safety implementation by Risk Assessment along with DGMS and Australian Experts.. As a Managerial Role supervising and working together with 15 Officers, 50 Supervisor and 1200 Co-Workers.
2. **Proposed Reclamation of Mining Degraded Land at Jamadoba** led to Development of Sir Dorabjee Park in which Tata Steel sponsored 1.5 Crore in 1997. The reclaimed site later was inaugurated by Sri Ratan Tata, Chairman Tata Sons.
3. Improvement of Pumping network of the underground mines led to **saving of electricity**, prevented leakage of water which resulted in huge cost and energy saving.
4. Shaft Sinking of Digwadih Colliery (384m) for access to new 11 seam for increasing life of mine and extract the deep seated Mineral/Coal reserve, **for conservation of minerals**.
5. Improvement in Sand Stowing rate by improvement in mixing ratio, **to prevent land subsidence.**
6. Utilization **of unused slag of steel plant for stowing** in underground mines (Waste management).

At CSIR-CIMFR (2001- 2005) (Intellectual Property Management and Technology Transfer)

1. Improved Patent Filing-from almost nil to 24 patents a year); Motivated many Senior and Junior Scientists to innovate and file patents.
2. Filed 12 own patents (8 Granted) remaining still in process, **in the area of environment, disaster management and safety**.
3. Technology Transfer of Patents and Know-how with four organizations, Drafted and prepared the MOUs.
4. Conducted two Seminar and Symposia, Conference as Co-Convener.
5. Conducted several Technology Promotion Events in 19th World Mining Congress, 1-5th Nov 2003, New Delhi; Trade Fair, 2004 at Pragati Maidan.
6. Prepared the first draft of Jharkhand Sustainable Mineral Policy in 2005 and submitted to the New Jharkhand Government for its implementation and notification for further brain storming session.

At IIT(ISM) Dhanbad (Teaching and Research)

1. Joined IIT(ISM) Dhanbad in the year 2005 in Centre of Mining Environment and prepared the Syllabus for B.Tech (Environmental Engineering) for the First Time in India through IIT-JEE.
2. Taught subjects like i.) **Environmental Aspects of Mining, Metallurgical and Thermal Power Plants,** ii) **Environmental Geotechnology**, iii) **Environmental Audit**, iv) **Environmental Impact Assessment,** v) **Occupational Health, Safety and Risk Assessment**, etc for Environmental Engineering Students.
3. Taught Subjects like **Environmental Aspects of Beneficiation Plants** for Fuel and Mineral Engineering Students.
4. Taught subject like **Environmental Aspects of Mining** for Mining Engineering and Geology Departments of IIT(ISM) Dhanbad.
5. Completed 4 R&D Projects and Ongoing DST Projects.
6. Completed 46 different type Industrial Consultancy Projects as Principal Investigator/ Consultant and many other as key member.
7. Conducted 09 Executive Development Programmes for National and International Participants.

8. Prepared a Drone with AI for greening undulating terrain in the mining dumps.
9. Expert member of National Green Tribunal in Mining related issues. (2019-till date)
10. Drafted Climate Change Policy of Bihar, 2015.
11. Drafted the Document on "Thematic clusters of the Eighteenth Session of the Commission on Sustainable Development (CSD 18), (Mining Sector), 3–14 May, 2010 MOEF.
12. Participated in the suggestion committee on "Sustainable Mineral Development and MMDR Bill 2011" meeting held at ISID, New Delhi on 24 August 2012.
13. Visiting Professor, University of Sheffield, UK; University of York, UK; NIT, Durgapur; ICED-CAG, Jaipur.
14. Warden of the then Largest 800 Boys Hostel 2006-2012 at ISM Dhanbad.
15. Committee Member in '**Just Transition in Coal Sector' of Niti Ayog,** 2021-22.
16. Chairman, Senate Undergraduate Programme, IIT(ISM) Dhanbad.
17. Ex-Officio Member Board of Examination, as Chairman SUGC, IIT(ISM), Dhanbad.
18. Acting as Head of the Department 2011-2020.
19. Treasurer of IIT(ISM) Alumni Association 2006-2014.
20. Vice-President IIT(ISM) Alumni Association 2021-till date.
21. Nominated as **Director,** Tamil Nadu Minerals Ltd (TAMIN) : **DIN No. 10541935** (in the Board of Directors, **nominated by Govt of Tamil Nadu**), http://www.tamingranites.com/
22. Convener "Urban Waters Forum" 4th Annual Meet 5-7th Feb 2025.

Country Visited

1.USA : Pennsylvania State University, PA, USA; Widener University, Philadelphia, PA, USA; California State University, Los angeles; USA

2. UK : Imperial College London; Sheffield University, Sheffield, Birmingham; University of York; University of Edinburgh; Scotland, UK.

3. Australia : The University of Queensland, Brisbane, The University of Western Sydney; The University of Wollongong, NSW; The University of New South Wales, Sydney
The Australian National University, Canberra, The Monash University, Melbourne; CSIRO, Clayton Campus, Melbourne, Curtin University, Perth, The Perth Mint; Alcoa Myara Bauxite Mines, Western Australia.
4. University of Tokyo, Japan
5. National University of Singapore
6. Asian Institute of Technology, Thailand

15. List of R&D Projects

S.No	Project Title	Amt in Lakhs	Role (PI/ CO-PI)	No of Co-PIs	Funding Agency	Duration	Status
1	Arid Region Reclamation Technology with respect to Lignite Mining Areas in Kutch, Gujarat **No. DST(SEED) (270)/2020-2021/755/ESE**	**122.44**	PI	1	Dept. of Science and Technology. New Delhi	3 Years (Proposed; Approved in Feb 2022; Sanctioned on 31st Dec 2020)	Ongoing till Dec 2024
2	Reassessment Study for Management Plan for	**10.92**	PI	1	Ministry of Environmen	1 Year	Approved

	Sustainable Mining (MPSM) in Saranda and Chaibasa Forest Division in West Singhbhum District of Jharkhand **MOEFCC :letter No : Letter No 11-65/2014/FC(Pt).26.10.2020**				t Forest and Climate Change (MOEFCC)		MOEF.Letter No 11-65/2014/FC (Pt). **26.10.2020**
3	Scientific Study into various aspects regarding dumping of fly ash in the external and internal dumps of Dipka Coal Mine expansion project. **No. SECL/2018-2019/592/ESE**	28.91	PI	0	South Eastern Coalfields Limited	2 Years	Completed
4	Scientific Study on Impact of Ironore Mining in Hydrological Behavior of Aquifers in Bonai and Koira Sector of Sundargarh District of Odisha **No. Rungta(1)/18-19/629/ESE**	11.80	PI	0	Rungta & Sons	2 Years	Completed
5	Environmental Carrying Capacity for Bagjata and Bhandhuhurang Mines of UCIL, BRNS Project (2007)	55.00	Co-PI	4	BRNS	2 Years	Completed

16. List of Industrial Consultancy Projects:(Title, Sanctioning authority, Duration, Amount, Status, Role (PI/Co-PI)):-

Sl No	Title	Sanctioning Authority	Duration	Value (Lakhs)	Status	Role
1	Environmental Audit of Compliance to Environmental Clearance Conditions granted by MOEFCC for the Sandur Manganese and Ironore Ltd, Sandur, Karnataka, CONS/7372/C	Sandur Manganese and Ironore Ltd	1 Year	8.24	Ongoing	PI
2	Scientific Mining Plan for a Drainage Diversion and Design in Kasta East Coal Mine Block, West Bengal, as per MOEFCC Terms of Reference for Environmental Clearance CONS/7348/C	Jitusol Developers Private Ltd	1Year	31.68	Ongoing	PI
3	Scientific study on the assessment of impact of Mine Blasting Operations on Environmental Pollution and important structures of Chittorgarh Fort for suggesting suitable remedial measures by	Birla Corporation Ltd	8 Months	206.50	Ongoing	PI

Sl No	Title	Sanctioning Authority	Duration	Value (Lakhs)	Status	Role
	IIT (ISM), Dhanbad, CONS/7161/2023-24					
4	Preparation of Reclamation, Eco-restoration and Conservation Plan of Pakri Barwadih North-West Coal Mining Project, NTPC Hazaribagh; CONS/7111/2023-24	NTPC	1 year	29.50	Ongoing	PI
5	Preparation of Carbon Sequestration Programme for High Carbon Ferro Chrome Plant of Indian Metals and Ferro Alloy Ltd; CONS/7121/2023-24	IMFA	6 Months	5.90	Ongoing	PI
6	Assessment of an Electronic Control System for enhancing crop yield and resource Efficiency; CONS/7143/2023-24	Agri Super	6 Months	0.59	Ongoing	PI
7	Scientific Slope Stability Study of Filled Ash in Mines Void of Bharatpur South (OCP), Mahanadi Coalfields Ltd, Talcher for NALCO Ltd; CONS/7220/2023-24	NALCO	6 Months	14.92	Ongoing	PI
8	Conducting a Comprehensive Scientific Study of Slope Stability of Working 04 Nos of Pits & 05 Nos of Dumps of F, G, D and Panposh Quarry Areas of Bolani Ore Mines, SAIL-RSP and Accordingly Suggest the Method of Working, Ultimate Pit Slope, Dump Slope and Monitoring of Slope Stability in Tune with the said Study; CONS/7161/2023-24	SAIL	1 Year	37.76	Ongoing	Co-PI
9	Source Apportionment Study of Polluting Units lying in the Buffer Zone of Tasra Coking Coal Washery Plant of Steel Authority of India Limited, with respect to Ecosystem Services and Biodiversity of the area. CONS/7258/2023-24	SAIL/KTMPL	6 Months	50.15	Ongoing	PI
10	Assessment of Progressive Mine Closure for Coal Mines of Eastern Coalfields Limited; CONS/7151/2023-24	Eastern Coalfields Ltd	1 Year	375.83	Ongoing	PI
11	Scientific Mining Closure Plan and Audit of Parsa-East Kanta Basan Coal Mine block of Rajasthan Rajya Vidyut Utpadan Nigam Limited (Adani Enterprises Ltd)	Adani Enterprises Ltd	1 Year	7.25	Ongoing	PI

Sl No	Title	Sanctioning Authority	Duration	Value (Lakhs)	Status	Role
12	Scientific Mining Plan for a Drainage Diversion and Design in Kasta East Coal Mine Block, West Bengal, as per MOEFCC Terms of Reference for Environmental Clearance (JDPL).	Reshmi Metallicks (JDPL)	1 Year	31.68	Ongoing	PI
13	Cumulative Impact Assessment Study, Carrying Capacity Study and Ecosystem Services Study as per condition of Terms of References (ToR) of Expansion of Nigahi Opencast Coal Mining Project from 21 Mtpa to 25 Mtpa with increase in leasehold area from 3018.40 Ha to 3582.723 Ha; CONS/6096/2021-22	Northern Coalfields Ltd	2 Years	130.00	Completed	Co-PI
14	Preparation of Yearly Mine Closure Activity Plan of 5 Mines of GMDC Cons/3867/2018-19	Gujarat Mineral Development Corporation Ltd	2 years	31.62	Completed	PI
15	Development of framework for Environmental monitoring (AAQM), implementation and control in line with CPCB Guidelines for Iron ore Mines in Goa CONS/3652/17-18	Fomento Resources. Vedanta, Sesa Goa	2 Years	29.50	Completed	PI
16	Social Impact Study of Sudamdih, Bhojudih & Patherdih Washery of BCCL, CONS/3378/2016-17	Coal India Ltd	2 Years	27.14	Completed	PI
17	Study on the impact of traffic density on ecology and human community Cons/3544/2017-18	Rungta & Sons Ltd	1 year	5.75	Completed	PI
18	Storm water management Plan for Sanindpur Iron and Bauxite Mine Cons/3536/17-18	Rungta & Sons Ltd	1 year	5.75	Completed	PI
19	Assessment, Certification and Preparation of Yearly Mine Closure Activity of 5 Mines of GMDC Cons/3484/2016-17	Gujarat Mineral Development Corporation Ltd	2 years	31.62	Completed	PI
20	Training Program on "Environmental Aspects of Mining" 5-7 Sept 2015, IIIF Kolkata Cons/2955/2015-16	Coal India Ltd	1 year	4.05	Completed	PI
21	Training Program on "Mining & Environment"-II 16-23rd Jan 2017 Cons/3427/16-17	Adani Enterprises Ltd	1 year	6.44	Completed	PI
22	Training Program on "Mining & Environment" 1-8th Aug 2016 Cons/3286/16-17	Coal India Ltd	1 year	22.54	Completed	PI

Sl No	Title	Sanctioning Authority	Duration	Value (Lakhs)	Status	Role
23	Assessment of Mine Closure, Talabira-I, Cons/2888/2015-16	Hindalco Industries Limited.	1 year	6.72	Completed	PI
24	Study on suitability and feasibility of mixing of flyash in the over burden of Kusmunda opencast mines of SECL with regard to stability of dumps and effect on the ground water and other safety, environmental aspects. Cons/3038/2015-16	South Eastern Coalfields Ltd	2 years	22.472	Completed	PI
25	Comparative Study Between Underground and Opencast Mining in Parsa Coal Block, Chattisgarh, Cons/2492/2013-14	Chattisgarh State Power Corp Ltd & Adani Ent Ltd	2 years	13.77	Completed	PI
26	Risk Assessment of Coal Washery, S&T Mining Co. Cons/2392/2013-14	(S&T Mining) Co. Sail & Tata-JV	2 Years	8.99	Completed	PI
27	'Environmental Impact Assessment of Mining Projects' for Officials of Ministry of Mines, Govt of Afghanistan Cons/2742/2014-15	Govt of Afghanistan	1 year	43.31	Completed	PI
28	Study to assess the extent of Illegal Mining in BCCL, CCL and ECL Subsidiaries of Coal India Ltd. Cons/2116/2012-13	Coal India Ltd	5 years	29.78	On going	PI
29	Investigation of Geotechnical Parameters of Steel Slag for Utilization in Underground Coal Mine Stowing, Tata Steel Ltd Cons/2529/2014-15	Tata Steel Ltd	2 years	2.13	Completed	PI
30	Sustainable Mine Planning for Ironore Mining in Mehalahalli, Chitradurga. Cons/1711/2011-12	Vedanta	2 years	22.06	Completed	PI
31	Environmental Study of DVC Bermo Mines Cons/3315/16-17	Damodar Valley Corporation	1 Year	1.48	Completed	PI
32	Environmental Study of DVC Bermo Mines Cons/2910/15-16	Damodar Valley Corporation	1 Year	1.48	Completed	PI
33	Environmental Study of DVC Bermo Mines Cons/2778/14-15	Damodar Valley Corporation	1 Year	1.48	Completed	PI
34	Environmental Study of DVC Bermo Mines Cons/2315/13-14	Damodar Valley Corporation	1 Year	1.48	Completed	PI
35	Environmental Study of DVC Bermo Mines Cons/1955/12-13	Damodar Valley Corporation	1 Year	1.3	Completed	PI

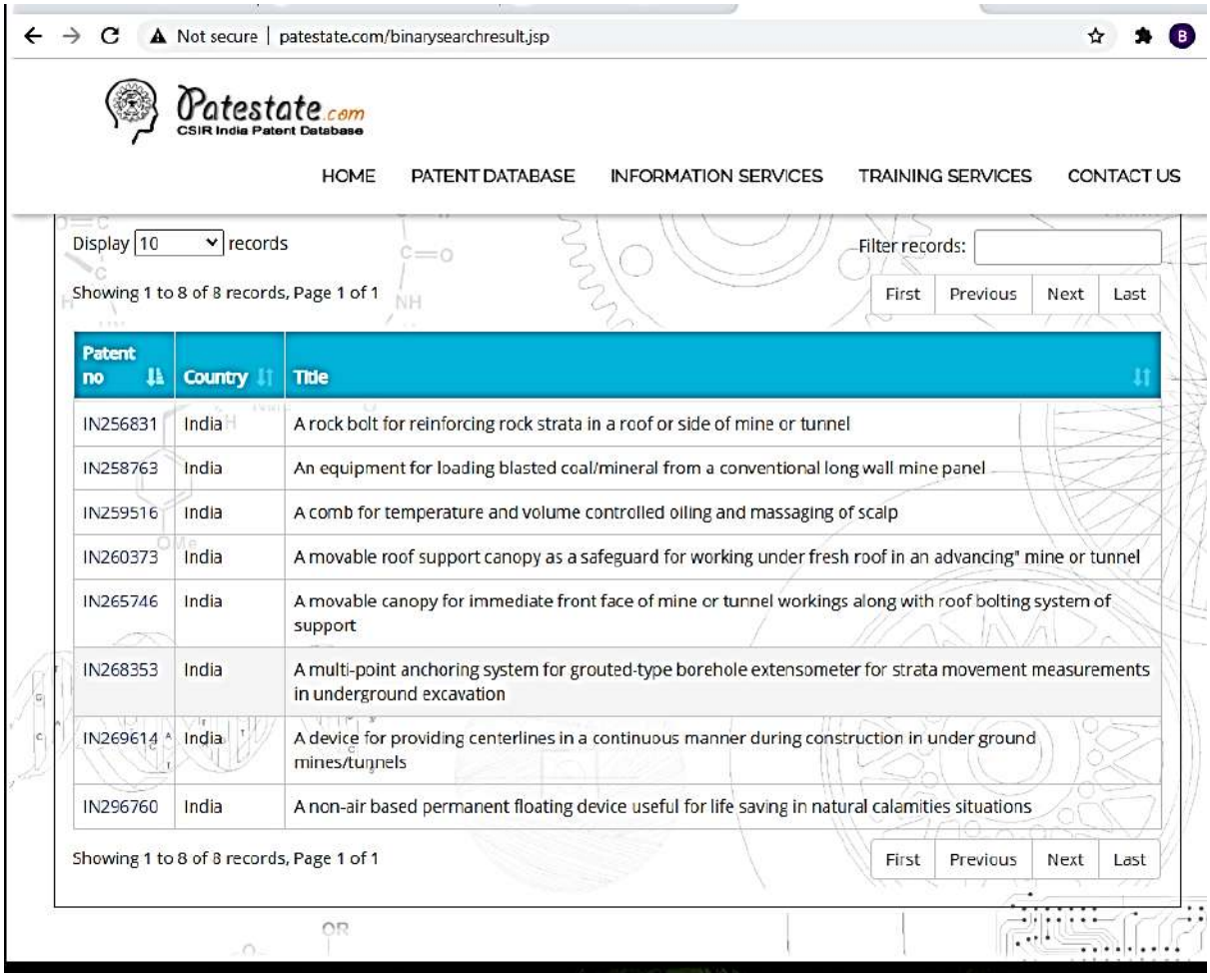
Sl No	Title	Sanctioning Authority	Duration	Value (Lakhs)	Status	Role
36	EIA/EMP of Tata Steel Sand Leases (Dungri-Petiya). Cons/1816/2012-13	Tata Steel Ltd	4 years		Ongoing	PI
37	EIA/EMP of Tata Steel Sand Leases (Tetangabad). Cons/1816/2012-13	Tata Steel Ltd	4 years		Ongoing	PI
38	EIA/EMP of Tata Steel Sand Leases (Bhatua Ranipokhar).	Tata Steel Ltd	4 years		Ongoing	PI
39	EIA/EMP of Tata Steel Sand Leases (Kunji) Cons/2212/13-14	Tata Steel Ltd	4 years	8.31	Ongoing	PI
40	EIA/EMP of Tata Steel Sand Leases (Premsinghdih) Cons/2213/2013-14	Tata Steel Ltd	4 years	7.58	Ongoing	PI
41	EIA/EMP of Tata Steel Sand Leases (Dungri-Bhowrah) Cons/2211/2013-14	Tata Steel Ltd	4 years	8.31	Ongoing	PI
42	EIA/EMP of Tata Steel Sand Leases (Mohulbani-Gorkhuti) Cons/2210/13-14	Tata Steel Ltd	4 years	8.31	Ongoing	PI
43	Pre-Feasibility Report of Kenduadih Colliery, BCCL CONS/1462/2011-12	Bharat Coking Coal Ltd/Dalmia Cement	1 year	1	Completed	PI
44	Mining Plan of Rock material at Little Andaman Island, CONS/0799/09-10	Ministry of Shipping	2 Year	5	Completed	PI
45	EIA/EMP of seven mining leases of Tata Steel for Environmental Clearance from Ministry of Environment & Forest CONS/568/08-09	Tata Steel Ltd	4 Years	22.5	Completed	PI
46	Mine Plan of Tasra OCP of SAIL-ISP for approval from Ministry of Coal CONS/0339/2007	Steel Authority of India Ltd	2 years	3	Completed	PI
47	Mine Plan of Trans-Damodar Coal Block CONS/415/2007	West Bengal Mineral Dev. Corp	2 years	0.5	Completed	PI

17. List of Executive Development Programme (EDP)/Outreach Programme/ Courses:

Sl.	Title	Value (in Lakhs)	Date of Course	Role (PI/Co-PI)
1	Urban Waters Forums 4th Annual Meet, ORAC-0148	10.00	5-7 Feb 2026, IIT(ISM) Dhanbad	PI
2	Mining and Environmental Aspects of the Industry	10.00	05 days, (21-25 Oct 2019); at IIT(ISM) Dhanbad	PI
3	Training Programme on "Mine Ecology & Environment	1.20	7-8 May 2018; MTI, SAIL, Ranchi	Co-PI
4	Off-Campus course on Mine Ecology & Environment	1.20	11-13, Dec., 2017; MTI, SAIL, Ranchi	Co-PI
5	Occupational Health, Safety and Environment	4.00	03 days 17-19 May, 2017; at IIIF Kolkata	Co-PI

Sl.	Title	Value (in Lakhs)	Date of Course	Role (PI/Co-PI)
6	Mining and Environment for Non-Mining Executives	6.44	16-23 January 2017, at EDC, IIT(ISM), Dhanbad	PI
7	Mining and Environment for Non-Mining Executives	17.00	1-8 August 2016, at EDC, IIT(ISM), Dhanbad	PI
8	Occupational Health, Safety and Environment	4.04	Jan 7-9, 2016, IIIF Kolkata	Co-PI
9	Environmental Aspects of Mining	4.05	2-5 Sept 2015, IIIF Kolkata	PI
10	Environmental Impact Assessment of Mining Projects' for Officials of Ministry of Mines, Govt of Afghanistan	43.31	Nov 29-Dec 15, 2014, at ISM Dhanbad	PI

18. List of Patents in CSIR Website



In Brief: -

Prof. Biswajit Paul is a professor at the Indian Institute of Technology (ISM) Dhanbad, in the Department of Environmental Science and Engineering. His expertise lies in Environmental Engineering, specifically in areas like Mine Environment, Land Reclamation, Fly-Ash Utilization, Mine Fill, Mine Closure, and Environmental Geotechnology, Environmental issues of Critical minerals.

With over 86 publications to his name, including journal articles, conference proceedings, and reviews, Prof. Paul has made significant contributions to his field. He has also guided several doctoral theses and has been involved in various research projects.

Prof. Paul's professional experience spans over two decades, with stints at Tata Steel and the Central Institute of Mining and Fuel Research. He has received several awards and honors, including the Duo India Fellowship for the United Kingdom and the Patent Award for filing 12 CSIR patents.

In addition to his academic and research pursuits, Prof. Paul is also a member of various professional bodies, including the Institution of Engineers (India) and the Mining, Geological & Metallurgical Institute of India.
Prof Paul is widely travelled person. He has visited several universities in USA, UK, Australia, Japan, Singapore and Thailand.

I hereby declare that all the information mentioned above is true to the best of my knowledge.

Signature of the Applicant

Date : 08.02.2025
Place : IIT(ISM) Dhanbad