## DEPARTMENT OF ENVIRONMENTAL SCIENCES, SAMBALPUR UNIVERSITY

# **Progression Profile**

Future: 1. Establishment of EIA Wing. 2.MoUs and Exchange Programme with Premium institutes 3. Introduction of 5 year Integrated Course

2022: Revision of all the Courses 40% Introduction of NEP into the Curricula

2018: Revision of all the Courses 22%

2007: M.Tech. in Environmental Science and Engineering (2year), Semester System

2005: Shift to New Building

**1991:** M.Sc. in Environmental Sciences (2year, Semester System with EES) and Ph.D.

1989: Started with M.Phil. In Environmental Sciences (1year)

### Ahievements during 2017-2023

### **Awards Received**

#### Faculty Members

Prof. S. K.Sahu	Certificate of Felicitation (towards Academic Wisdom, Commendable Research and Outstanding Contribution in the field of Environmental Science)	Chhattisgarh Council of Science and Technology, Chhatish Garh
Prof. S.K Pattanayak	Recognised as International Distinguished Scientist in Geochemistry and received Research Leadership Award of the Year 2020 (26.01.2020)	By International Journal for Research Under Literal Accession at Grandeur Hall, Tamil Nadu.

Dr. M.R. Mahananda	Bharat Ratna Mother Teresa Gold Medal Award for	Global research, New Delhi
	Outstanding Individual Achievement in Education By	
	Global Research 2023	

#### Students

Ms. Puja Maharaja	National Finalist at National	On Paryavaran	Ministry of Parliamentary
	Environment Youth parliament-	Chetna-	Affairs, Government of India,
	2022	Environment	New Delhi
		Sustainability	
		Environment Youth parliament-2022	

## Projects

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
Funded by Vizag General Cargo Berth Limited of Vedanta Visalkhapatnam	Prof. S.K. Sahu Prof.S.P.Mishra & Prof N.Behera	RS.6.29 Lakhs	January2016 to April 2017	Assessment of Biodiversity and Preparation of Biodiversity Management Plan for Vizag General Cargo Berth Pvt. Ltd.
University Grant Commission, East Regional Office, Kolkata	Dr. I. Baitharu	Rs. 2.5 Lakh	01/08/2016 to 01-08-2018	Effect of chronic exposure to pesticide vapors on neurobehavioral alteration like mood state, anxiety and depression in mammalian system
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakh		"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"

MCL, Jagruti Vihar	Prof. S. K.Sahu Dr.S.K.Pattanayak & Dr.M.R.Mahananada Prof. S. K.Sahu	Rs.2.20 lakh	25-10-2017- 29.01.2018 11.07.2018-	App Coal Jal Baseline Studies on
MCL, Jagruti Vihar	Dr.S.K.Pattanayak & Dr.M.R.Mahananada	KS.1.99 lakii	24.08.2018	Undertaking Afforestation Projects on Government land through CSR Funding of MCL
University Grant Commission, East Regional Office, Kolkata	Dr. I. Baitharu	Rs. 2.5 Lakh	01/08/2016 to 01-08-2018	Effect of chronic exposure to pesticide vapors on neurobehavioral alteration like mood state, anxiety and depression in mammalian system
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakh		"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
MCL, Jagruti Vihar	Prof.S.K.Sahu, Dr.S.K.Pattanayak and Dr.M.R. Mahananda	Rs.2.2 lakh		"App Coal Jal"
CSR funding of MCL	Prof.S.K.Sahu, Dr. S.K Pattanayak & Mr. A.K.Bhadra			Baseline studies on undertaking affforestation projects on Government land
Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakhs	2 Years	"Evaluation of HPA axis functioning, stress resilience and

				neurobehavioral alterations among farmers
				of Western Odisha
				following chronic
				occupational exposure to
				pesticide vapors"
OSHEC, DHE, Govt.	Dr. I. Baitharu	4.72 lakhs	2 Years	Identification of source of
Of Odisha				contaminants in water,
				flow pathway through
				food chain and
				determination of its
				impact on public health in
				and around downstream
				of Hirakud reservoir,
				Sambalpur, Odisha
Bhushan Power	Prof. S. K. Sahu,	Rs. 21.05	06 Months	Studies on Solid Waste
and Steel Limited,	Dr.S.K.Pattanayak,	lakhs		Disposal Site of BPSL at
Sambalpur	Dr. M.R.Mahananda			Derba, with possible
	& Dr. I. Baitharu			Stabilisation
	Dr. I. Baitharu	Rs. 4.7 Crore	05 years	DBT-BUILDER Programme
DBT, New Delhi				in collaboration with
				Department of
				Biotechnology and School of lie Sciences
MCL, Jagruti Vihar,	Prof.S.K.Pattanayak	Rs.12.5	06 Months	Social Impact Assessment
Burla	and Dr.	Lakha	00 101011113	Study fro Basundhara
Duna	M.R.Mahananda	Lakita		(West) Extension Opencast
				Project, Mahalaxmi Area,
				MCL, Jagruti Vihar
CMPDI, Ranchi	Prof. S. K. Sahu,	Rs.4.16	06 Months	Baseline Study of Flora and
	Dr.S.K.Pattanayak ,	Lakhs		Fauna in Connection to
	Dr. Anjan Kumar	24.1.10		Chhendipada Mine for
	Prusty			RAMSAR feasibility Study,
				CMPDI, Ranchi

### Extension of Infrastructure during 2017-2023

Construction of Seminar Hall, Two new Laboratories, Two new Teaching Halls

Research

### Total numbers of Papers published during 2017-2022

Faculty	Designation	Teaching / Research (years)	Papers Total (2017-22)	Specializati on / Area of Research	Ph.D. Awarded (Total)	M.Phil./ M-Tech awarde d (Total)
Dr. S.K. Sahu	University Chair Professor (S&T)	33	22	Pollution Ecology, Environmental Biology	6	11 M.Phil+30M. tech
Dr. S.K. Pattanayak	Professor	22 (=8yr Research+14 years teaching)	6	Environmental Geology, Geochemistry, Remote Sensing GIS, Pollution Studies, EIA and EM	2	14 M.Phil+20M. Tech
Dr. M.R. Mahananda	Associate Prof.	18	16	Occupational Health and Environmental Toxicology	1 (Ph.D.) + 1 (D.Sc)	08 M.Phil+16M. Tech
Dr. I. Baitharu	Asst Prof-St-II	7	12	Environmental Toxicology, water pollution and community health	-	09 M.Phil+7M.Te ch

### Total numbers of Students received Jobs during 2017-2022:

100 in Private, Public Sectors and Government Sectors and Schools

### **Total Nos of NET Gate Qualified**



Thesis Dissertations Completed and Awarded
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Theses/Dissertation	Number
M.Phil Theses	44
M.Tech Dissertations	73
Ph.D. Theses	9
D.Sc. Theses	1
Ph.D. Theses (Continuing)	21

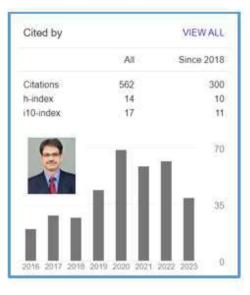
## Enrolled in Ph.D. with Fellowships

Year of nrolment	Number of Research fellow		Type of the fellowship		Qualifying exam if any (NET, GATE, etc.)	Туре	Numbers
						RGNF	3
2022	3	5 yrs	NFST, NFOBC,	UGC, GOO	2	NFST	1
	5	- 112	OURIP	000, 000	2	MANF	1
2021	4	5 yrs	RGNF,NFST,	UGC, GOO	6	OURIP	2
		- 1	OURIP	-		DST(Inspire)	1
2020	5	5 yrs	RGNF, NFST MANF	UGC	6	NFOBC	1
2019	6	5 yrs	RGNF, NFST, MANF	UGC	8		
2018	6	5 yrs	DST(Inspire), RGNF	DST,UGC	6		
2017	5	5 <u>yrs</u>	DST(Inspire)	DST	3		

### Citation, H-index, I-10 index

_	Google Scholer
_	Google Scholar

https://scholar.google.co.in/citations?user=wRyBnqQAAAAJ&hl=en



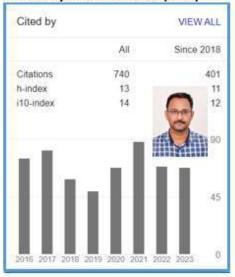
Prof. (Dr.) Sanjaya Kumar Pattanayak Head of the Department



Dr. Malaya Ranjan Mahananda Associate Professor



#### Prof. (Dr.) Sanjat Kumar Sahu University Chair Professor (S &T)



Dr. Ishwar Baitharu Assistant Professor- Stage-II



## University

Sambalpur

P. G. DEPARTMENT OF ENVIRONMENTAL SCIENCES (Autonomous) JYOTI VIHAR -768019 ORISSA, INDIA

From Dr.S.K.Pattanayakl, Ph.D. Asso.Professor & Head Tel, 9439809787 (m)

Email: <u>skp.envsu@gmail.com</u>

No. /ENS

Dated.22.03.2018

To,

The Chairman P.G.Council Sambalpur University Jyoti Vihar, Burla

Ref- Your Letter No.1139/PGCO, Dated-16-03-2018

Sub- Achievement/recognition during the academic session 2016-17

Dear Sir,

With reference to your Letter on the subject cited above, I am sending herewith a report on the achievement / recognition of the P.G. Department of Environmental Sciences during the academic session 2016-17.

Yours faithfully

Head of the Department

Dated.20.03.2018

Memo No. /ENS

Copy to:- The Deputy Director, E-Governance , Sambalpur University

Head of the Department



University

#### P. G. DEPARTMENT OF ENVIRONMENTAL SCIENCES (AUTONOMOUS) (DST-FIST SPONSORED DEPARTMENT) JYOTI VIHAR –768019 ORISSA, INDIA

#### P. G. DEPARTMENT OF ENVIRONMENTAL SCIENCES (AUTONOMOUS) SAMBALPUR UNIVERSITY, JYOTI VIHAR –768019, SAMBALPUR, ODISHA, INDIA

#### ACHIEVEMENT/RECOGNITION DURING THE ACADEMIC SESSION 2016-17

#### A. Projects Undertaken/Received

Sambalpur

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
Funded by Vizag General Cargo Berth Limited of Vedanta Visalkhapatnam	Prof. S.K. Sahu Prof.S.P.Mishra &Prof N.Behera	RS.6.29 Lakhs	January2016 to April 2017	Assessment of Biodiversity and Preparation of Biodiversity Management Plan for Vizag General Cargo Berth Pvt. Ltd.
University Grant Commission, East Regional Office, Kolkata	Dr. I. Baitharu	Rs. 2.5 Lacs	01/08/2016 to 01-08-2018	Effect of chronic exposure to pesticide vapors on neurobehavioral alteration like mood state, anxiety and depression in mammalian system
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakh		"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
MCL, Jagruti Vihar	Prof.S.K.Sahu, Dr.S.K.Pattanayak and Dr.M.R. Mahananda	Rs.2.2 lakh		"App Coal Jal"

### B. <u>Research Publication</u>

Sl. No.	Name of Author(s)	Title of Paper	Name of Journal	No./Vo./Year/ Page	ISSN No.
1	Sahu, C., Basti, S. and Sahu, S. K.	Carbon dioxide evolution and enzymatic activities of soil under different land use practices located near Bhawanipatna town in Odisha, India	Fresenius Environmental Bulletin (Parlar Scientific Publ., Germany	2016 :25(12)5432 - 5439.	ISSN:1018-4619
2	Dange, A., Wayde, J., Arun K., Shinde H., Balkrishna S. B., Khan J.A., Sapkal D. K. and Sahu S. K.	Biochemical and molecular characterization of grape rhizospheric microorganisms in Vani and Nandur Naka regions of Maharashtra, India.	Journal of Chemical and Pharmaceutical Research	8(3):794-799	ISSN: 0975-7384
3	Sahu, C., Basti, S., Pradhan, R.P. and Sahu, S. K.	Physicochemical properties of soil under different land use practices located near Bhawanipatna town in Odisha, India	International Journal of Environmental Sciences	6(6): 941-953	ISSN: 0976-4402
4	Mishra, S.R., Pradhan, R.P., Prusty, A.K. and Sahu, S.K.	Meteorology drives ambient air quality in a valley: a case study of Sukinda chromite mine, one among the ten most polluted areas in the world.	Environmental Monitoring and Assessment (Springer)	188,402:1-17	DOI 10.007/s10661-016- 5393-1
5	Bhadra, A.K. and Pattanayak S.K.	Dominance is more justified than abundance to calculate importance Value index(IVI) of plant species	Asian Journal of Science and Technology,	2016 Accepted v.08, no. 02, pp. 4304-4326	ISSN:2320-4257
6	Bhadra, A.K. and Pattanayak S.K.	Abundance or Dominance: Which is more justified to calculate importance value index (IVI) of plant species	Asian Journal of Science and Technology,	2016 v.07, no. 09, pp. 3577-3601	ISSN:0976-3376
7	Abanikanta Bhadra, sanjaya Kumar Pattanayak, Nabin Kumar Dhal	Mid-domain effect: A hypothesis testing in the Gandhamardan natural forest of Bargarh and Balangir districts, Odisha, India	Biolife,	2016 v. 4(2): pp.308-326	ISSN:0976-3376
8	Mamata Chhuria, Bidut Prava Mohanty & M.R.Mahananda	Cholrpyrifos- Cypermethrin inducted biochemicals alternations in Fejervarya limnocharis (G):A case study of Dekulba Village of Bargarh District, Odisha, India.	International Journal of Innovative and Applied Research.	2016 4(8): 9-18.	2348-0319.(IF: 0.739)
9	Sujata Sahu & Malaya Ranjan Mahananda	Sewage Water Characteristics of Burla town & its impact on the Power	International Journal of Science & Engineering	2016 2(12): 28-36	2454-2016

		Channel			
10	Prabhati Seth & Malaya Ranjan Mahananda	Impact of pesticides on Farmer's health of Western Odisha	International Journal of Environmental & Agricalture Research.	2016 2(12): 101-107	2454-1850 (SPRAC:1.238)
11	Iswar Baitharu, Deep Satya Narayan, Govindasamy Ilavazhagan	Hypobaric hypoxia- induced neurodegeneration and memory impairment is glucocorticoid receptor dependent	Bioscientifica	2016 44: 6-8	
12	Saroj Kumar Das, Iswar Baitharu, Kalpana Barhwal, Sunil Kumar Hota, Shashi Bala Singh	Early mood behavioral changes following exposure to monotonous environment during isolation stress is associated with altered hippocampal synaptic plasticity in male rats.	Neuroscience letters Scopus Indexed	2016 612: 231-237 Elsevier, Germany	ISSN: 0304-3940 Impact Factor: 2.18 (Thompson Reuter)
13	SN Deep, I Baitharu, A Sharma, AKS Gurjar, D Prasad, SB Singh	Neuroprotective role of L-NG- nitroarginine methyl ester (L- NAME) against chronic hypobaric hypoxia with crowding stress (CHC) induced depression like behaviour	Plos One Scopus Indexed	2016 11 (4) E0153371 PloS Publication, USA	ISSN: 1932-6203 Impact Factor: 2.806 (Thompson Reuter)
14	Iswar Baitharu, Satya Narayan Deep, Govindasamy Ilavazhagan	Neuroprotective effects of Sea buckthorn leaf extract against hypobaric hypoxia and post hypoxic reoxygenation induced hippocampal damage in rats.	International Journal of Phytomedicine Scopus Indexed <u>United States</u>	2016 8(1): 47-57	ISSN: 0975-0185

## C. Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department :

Name of the Seminar/Conference/etc	Period	Sponsering Agency
Environment, Forest Diisaster Management	November 2016	Refresher Course under the HRDC Sambalpur University; Course Coordinator Prof. S.K. Sahu
"Solid and Hazardous Waste Management"	23 <sup>rd</sup> March 2017	UGC unassigned Grant of the University.
"Intellectual Property Right"	23 <sup>rd</sup> March 2017	Department of Science and Technology , Govt. of Odisha.

## D . Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the	Name of the Teachers	Period and Place
Seminar/Conference/etc	Participated	
National Seminar on "Solid	Prof. S.K. Sahu	Acharya Nagarjun University,
Waste Management" DST &	As Resource Person	Vijayawada
MHRD, New Delhi		16&17 <sup>th</sup> September 2016
Seminar on "Solid Waste	Prof. S.K. Sahu	28 <sup>th</sup> October 2016
Management & Anti cancer	As invited speaker	Jawaharlal College,
Drugs" UGC,		Patnagarh, Bolangir
New Delhi		41.
National Seminar on	Prof. S.K. Sahu	8 & 9 <sup>th</sup> November 2016
"Biodiversity and its	As invited speaker	Dept of Botany
Conservation" UGC,		OPS Mohavidyalaya
New Delhi		Dhenkanal
National Conference on	Prof. S.K. Sahu	24-26 <sup>th</sup> December 2016
"Bioprspecting in Life	As resource person	School of Life Sciences
Science research For Human		Jyoti Vihar
Welfare" UGC, New Delhi		
(Uniassigned Grant)		
Research for Development"	Dr. I. Baitharu	30-05-2016 to 19-06-2016
UGC-Human Resource		Sambalpur University
organised by Development		
Centre (HRDC) and Regional		
Centre for Capacity Building		
(RCCB) Sambalpur		
University		
National Symposium on "	Dr. I. Baitharu	OUAT, Bhubaneswar.
Forestry and Agriculture for	Presented Paper	
Sustainable Future" entitled		
"Reversible inhibition of		
Glucocorticoid Receptor in		
Hippocampus ameliorates		
hypobaric hypoxia induced		
memory dysfunctions in rat		
Bioleaching of phosphorous	Dr. R.Panda	Deptt of Environmental
from rock phosphate by soil	Presented Paper	Science Bharathiar University
microorganisms in 2 <sup>nd</sup>		Coimbatore, Tamilnadu 7-9
International Coference on		March 2016
Environment and Ecology		aoth a sol a
National Symposium on	Dr. R.Panda	20 <sup>th</sup> March 2016 at
Operations and Supply Chain	Presented Paper	Department of Business
Management		Administration, Sambalpur
		University

#### E. Books/ Monograph written by teachers:

Sl. No	Name	Title of Book	Publication Name
1	Sanjat Kumar Sahu	Frontiers in Life Sciences ISBN: 978-93-85777-65- 3	EXCEL INDIA PUBLISHERS NEW DELHI

F. Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

Sl.	Name	Title of Book	Title of Book and	Publisher's Name and
No.		Chapter	ISBN No.	Place of Publication
1	Iswar Baitharu	Altered Glucocorticoid Signaling Causes Hippocampal Neurodegeneration and Memory Dysfunction in Hypoxia	Frontiers in Life Sciences ISBN: 978-93- 85777-65-3	EXCEL INDIA PUBLISHERS NEW DELHI

**G.** Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available: Some of the papers cited above are also available online

#### H. Faculty Visited other Institution for higher training: NIL

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Name	Programme	Host Institute
Dr. I. Baitharu	Workshop on Simulation	Supercomputing Facility and
	modelling, high performance	Bioinformatics, Indian
	supercomputing, Protein	Institute of Technology,
	modelling and drug design	New Delhi

## I. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

The Department carried out research work in collaboration with the School of Life Sciences, Sambalpur University. A research project has also been submitted to DST in collaboration with the P.G. Department of Earth Sciences.

#### J. Students Achievements:

#### a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF
Ajit Patra	Qualified for UGC-NET (Assistant Professor) Exam. held in June 2015
Rudra Pratap Pradhan	Qualified for UGC-NET (JRF & Assistant Professor) Exam. held in
	July, 2016
Manas Barik	Qualified for UGC-NET (Assistant Professor) Exam. held in July, 2016
Chandini Pradhan	Qualified for UGC-NET (Assistant Professor) Exam. Held in Dec-2016
Subhashree	Qualified for UGC-NET (Assistant Professor) Exam. Held in
Subhdarshini Mishra	November 2017

## b) Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

Name of the Student	Activities	<b>Prize/Certificate received</b>
Ms. Rinki Meher	State Level Rangoli	2 <sup>nd</sup> Prize
	Competition held during	
	Sept. 2106	
Ms. Prabhati Seth	State Level Rangoli	10 <sup>th</sup> position
	Competition held during	
	Sept. 2106	

#### c) <u>Student Placement</u>

- 1. Rudra Pratap Pradhan of the Department joined as Executive Officer in Environmental Menagement in Central Government PSU in the Month of March, 2017.
- 2. Alok Meher of the Department joined as Scientist in Central Pollution Control Board, New Delhi In the month of November, 2017.
- 3. Prabhati Seth & Gajendra Pal Singh Mathur of the Department selected for the post of Forest Ranger by the OPSC, Odisha during the period under report.
- 4. Sambit Behera of the Department joined as Manager (Environment) in the Paradip Port Trust in the month of September 2017.
- 5. Ms. Sujata Sahu of the Department joined as Executive Trainee Environment in OPGC, Banharpali in the month of March 2017.
- 6. Ajit Kumar Patra selected as Manager (Environment) in Shyam Metallic's Limited, Sambalpur.
- Ms. Pipasa Acharya joined as Development Officer in SADAR, FMU, under SBP Forest Division in OFSDP-II Managaed by Gramya Vikas Sanghathan, Nabarangpur on Dated-15-12-2017.

#### ANNUAL REPORT FOR THE YEAR- 2017 (From 1<sup>st</sup> January, 2017 to 31<sup>st</sup> December, 2017) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, Jyoti Vihar, Burla, Sambalpur, Odisha-768019
- **b) E-Mail Id:** headenvsc@suniv.in

#### 2. Year of Establishment: 1989

- a) Management : Government
  - (Government/aided/private applicable to college only)
- **b) Whether autonomy granted:** Yes
- c) Whether 12B/2f (UGC) accorded: Yes

#### 3. Name of the Head of the University P.G. Department/Principal (with qualification): Dr. S.K. Pattanayak, Ph.D.

- a) Phone No. 9439809787
- **b) Email:**headenvsc@suniv.in
- c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength of teaching:			
	Designation	Sanction	Actual strength	Vacant
	Professor:	1	1	Nil
	Associate Professor	1	1	Nil
	Asst. Prof/Lecturer:	2	2	Nil
	Contractual/Management	2 (Syndicate	2	Nil
	Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	Nil
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	04	Nil
Any other Staff	01 (VC (approv	ed) 01	Nil
(Class-IV staff cum Gard	lener		
from M.Tech Programm	e)		

#### 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years) M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

Class/Sanction	Actual Strength						
Strength	General		S.C.		S.T.		Strength
	Male	Female	Male	Female	Male	Female	
M.Sc. 1 <sup>st</sup> Sem							
2017-19 batch	09	07	00	02	00	05	23
12+11(SF)							
M.Sc. 3rd Sem							
2016-18 batch	02	08	01	02	00	03	16
08+08(SF)							
M.Phil							
2017batch	00	07	02	00	00	01	10
06+04(SF)							
M.Tech 1st Sem	10	02	00	01	01	00	14
2017-19 batch	10	02	00	01	01	00	14
M.Tech 3 <sup>rd</sup> Sem	12	03	01	00	00	00	16
2016-18 batch	12	05	01	00	00	00	10
Ph.D.2017	01	00	00	00	00	00	01

#### 6. Enrollment of Students (Classwise):

#### 7. Total Number of students appeared and passed (Class wise):

Name of the Exam.	Nos. of enrollment	Nos. appeared	Nos. passed	Percentage of pass
M.Sc. Ist Sem,2017 (2017-19)	23	23	23	100%
M.Sc. II nd Sem.2017 (2016-18)	16	16	16	100%
M.Sc. IIIrd Sem.2017 (2016-18)	16	16	16	100%
M.Phil Ist Smester (2017)	10	10	10	100%
M.Phil IInd Smester (2017)	10	10	10	100%
M.Tech Ist Sem. 2017 (2017-19)	14	12	10	100%
M.Tech IIndSem, 2017(2016-18)	16	16	16	100%
M.Tech. IIIrd Sem. 2017(2016-18)	16	16	16	100%

#### 8. Number of working days in the last academic year: 271

#### 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

#### **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

Name of the Awardee	Course	Name of the Guide	University where Awarded
PRAJNA PARAMITA	M.Phil	Prof.S.K. Sahu	Sambalpur
PUROHIT			University
PIPASA ACHARYA	M.Phil	Prof.S.K. Sahu	Sambalpur
			University
SANJEEV KUMAR BHOI	M.Phil	Prof.S.K. Sahu	Sambalpur
			University
CHUDAMANI BAG	M.Phil	Dr. S.K. Pattanayak	Sambalpur
			University
SARJANA PATNAIK	M.Phil	Dr. S.K. Pattanayak	Sambalpur
			University
PRIYADARSINI PADHI	M.Phil	Dr. S.K. Pattanayak	Sambalpur
			University
SUJATA SAHU	M.Phil	Dr.M.R.Mahananda	Sambalpur
			University
SUNELIRANI MISHRA	M.Phil	Dr.M.R.Mahananda	Sambalpur
			University
MANJIL SANGEETA	M.Phil	Dr.I Baitharu	Sambalpur
DUNGDUNG			University
SUBHASHREE	M.Phil	Dr.I Baitharu	Sambalpur
SUBHADARSINI			University
MISHRA			
PRASHANTA KUMAR	Ph.D.	Prof.S.K. Sahu	Sambalpur
NATH			University

b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

#### c) Research Publications:

Sl.	Name of	Title of Paper	Name of	No./Vo./Year/	ISSN No.
No.	Author(s)		Journal	Page	
01	A.Rani, Prabhati Seth & Malaya Ranjan	Sngle Dose two compartment kinetics of lead in duttaphrynus	International Journal of Environmenta 1 Sciences	2017	
02	Mahananda Sabita Shroff, Jayanta Kumar Sahu & Iswar Baitharu	melanostictus. Molecular, Neuronal, and Behavioral Mechanism of Communication Among Insect Species: A Review	Trends in Insect Molecular Biology and Biotechnolog y, Springer International	2017	

- d) Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available: Some of the papers cited above are also available online
- e) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

f) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

Sl.	Name	Title of Book	Title of Book and	Publisher's Name and
No.		Chapter	ISBN No.	Place of Publication
1				

#### 11.a) Research Project/Programme Undertaken:

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
Funded by Vizag General Cargo Berth Limited of Vedanta Visalkhapatnam	Prof. S.K. Sahu Prof.S.P.Mishra & Prof N.Behera	RS.6.29 Lakhs	January2016 to April 2017	Assessment of Biodiversity and Preparation of Biodiversity Management Plan for Vizag General Cargo Berth Pvt. Ltd.
University Grant Commission, East Regional Office, Kolkata	Dr. I. Baitharu	Rs. 2.5 Lakh	01/08/2016 to 01-08-2018	Effect of chronic exposure to pesticide vapors on neurobehavioral alteration like mood state, anxiety and depression in mammalian system
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakh		"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
MCL, Jagruti Vihar	Prof.S.K.Sahu, Dr.S.K.Pattanayak and Dr.M.R. Mahananda	Rs.2.2 lakh		"App Coal Jal"

#### b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

Sl. No.	Name	Guide	Funding Agency
1	Chandam Sahu	Dr.S.K.Sahu	INSPIRE, DST NEW DELHI
2	Karuna Ekka	Dr.S.K.Pattanayak	RGNF UGC, New Delhi
3	Prabhati Seth	Dr. M.R. Mahananda	RGNF UGC, New Delhi
4	Mamata Chhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi

### 12.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the Seminar/Conference/etc	Period	Sponsering Agency
"Solid and Hazardous Waste Management"	23 <sup>rd</sup> March 2017	UGC unassigned Grant of the University.
"Intellectual Property Right"	23 <sup>rd</sup> March 2017	Department of Science and Technology , Govt. of Odisha.

## b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Sympo sium/Workshops/Refresher	Name of the Teachers Participated	Period and Place
etc Waste Disposal and Management" organized by National Green Tribunal	Prof. S.K. Sahu As Resource Person	Guwahati from 9-10 <sup>th</sup> September 2017
National Seminar on Green India	Dr.M.R.Mahananda	Vikash New Gen Park, Sason, SBP on 24 April,2017
National Seminar on Global Warming and Climate Change	Dr.M.R.Mahananda	Boudh Panchayat Degree College, Boudh on 18-11- 2017
Resource Person Talk on Science Day	Dr.M.R.Mahananda	Pragati Degree College, Bhawanipatna, Kalahandi March, 2017
"Use of Informatics in Environmental sciences research, pollution modelling, drug design and high performance computation" organised by Supercomputing facility, IIT, New Delhi	Dr. I. Baitharu	IIT, New Delhi from 26.06.2017 to 06.07.2017

International Conference on "Translational Neurosciences and its Applications in Protection of Mental Health" and XXXV Annual Meet of Indian Academy of Neurosciences	Dr. I. Baitharu	Department of Zoology, Ravenshaw University, Cuttack, Odisha on 29 <sup>th</sup> – 31 <sup>st</sup> October, 2017
National Symposium on " Challenges in Clinical Neurosciences: From Bench to Bedside"	Dr. I. Baitharu	Department of Physiology, All India Institute of Medical Sciences, Bhubaneswar, Odisha on 1 <sup>st</sup> November 2017
UGC Sponsored 34 <sup>th</sup> Orientation Programme	Dr. I. Baitharu	UGC-HRDC Sambalpur University on 8 <sup>th</sup> Nov. 2017 to 5 <sup>th</sup> Dec. 2017
Workshop on Genomics, Proteomics, Drug Design, Pollution modeling and High performance computing	Dr. I. Baitharu	Supercomputing Facility, Indian Institute of Technology, New Delhi on 26 <sup>th</sup> June to 6 <sup>th</sup> July, 2017
Workshop on "The Time for Science Communication"	Dr. I. Baitharu	Ravenshaw University, Cuttack, Odisha on 27th October 2017
Workshop "A Non- invasive Therapeutic Strategy for Neurological disorders"	Dr. I. Baitharu	Ravenshaw University, Cuttack, Odisha on 28th October 2017

### **13.** Faculty Visited other Institution for higher training:

Name	Programme	Host Institute
Prof. S. K. Sahu	on the eve of World	Invited as the Chief
	Environment Day celebrated	Speaker of the Coservator
	on 5 <sup>th</sup> June 2017.	of Forest, Sambalpur and
		Odisha Sanskrutik Samaj,
		Sambalpur
Prof. S. K. Sahu	In the Memory Death	Invited by Saurindri
	Anniversary of Social	Nayak Memorial Trust to
	Activist and Former MLA	deliver a talk on "Effect of
	Suarindri Nayak 27 <sup>th</sup> July	fly ash discharged from
	2017	Industries on the
		Environment"
Prof. S. K. Sahu	48 <sup>th</sup> Foundation Day of the	Invited as the Chief Guest
	college held on 3 <sup>rd</sup>	by the Bhima Bhoi
	September 2017.	College, Rairakhol
Prof. S. K. Sahu	4 <sup>th</sup> Inter-college Workshop-	Invited to deliver a
	cum- Science Exhibition	keynote address

	held at Netaji Subash	
	5	
	Chandra Bose college on	
	17 <sup>th</sup> October 2017.	
Prof. S. K. Sahu	20 <sup>th</sup> Regional Conference of	Invited to deliver a talk on
	Odisha Chemical society	Biofertiliser for
	held at Bhawanipatna on	Sustainable Agriculture
	28 <sup>th</sup> & 29 <sup>th</sup> October 2017.	C .
Prof. S. K. Sahu	National Seminar on	Invited as the resource
	"Global Warming and	person
	Climate Change" organized	
	by Boudh Panchayat college	
	on 18 <sup>th</sup> November 2017.	
Prof. S. K. Sahu	National Pollution	Invited as the Chief
	Prevention Day held on 2 <sup>nd</sup>	Speaker by the State
	December 2017.	Pollution Control Board,
		Regional office, Rourkela
Prof. S. K. Sahu	Induction Training	Delivered a talk on Solid
	Programme for lecturers	Waste Management
	held at Behrempur	through Vermicomposting
	University on 17 <sup>th</sup> January	
	2017.	

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

#### **15.** Distinguished visitors in the year (Maximum ten):

The following eminent fellows taught the students as UGC visiting fellows

- 1. Prof. N. Behera, Retd Prof. of Life Sciences, Scool of Life Sciences, S.U.
- 2. Prof. B. Behera, Retd Prof. of Department of Chemistry, S.U.,

#### 16. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the honour/award

#### **17.** Academic achievement of the Institution:

a) DAS/DRS/ COSSIST/Extension work etc.: NIL

- b) MOU with other Institution: NIL
- c) Centres/Courses running by other Organizations (like IGNOU etc.): 2 COURSES

P.G. Diploma in Environment Education and Management and PG. Diploma in Industrial Safety and Health runing under the aegies of DDCE, Sambalpur University

d) Publication if any by the Institution: NIL

(Books/Monograph/Magazine)

**18. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:** A Seminar Hall, One Class Room and One Laboratory Constructed during 2017-2018

#### **19.** Hostel (for colleges only): Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			

#### 20. Students Achievements:

#### a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF
AJIT PATRA	Qualified for UGC-NET (JRF & Assistant Professor) Exam. held in
	November 2017
CHANDINI	Qualified for UGC-NET (Assistant Professor) Exam. Held in
PRADHAN	November 2017
SUBHASHREE	Qualified for UGC-NET (Assistant Professor) Exam. Held in
SUBHDARSHINI	November 2017.
MISHRA	

## b)Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

Name of the Student	Activities	<b>Prize/Certificate received</b>
MS. ANINDITA MANTRY	STATE LEVEL POEM	3 <sup>RD</sup> PRIZE
	COMPETITION IN THE	
	OCCASION OF VAGINI	
	NIBEDITA 'S BIRTH	
	ANNIVERSARY.	
MS MEDHA MISHRA	ESSAY COMPETITION	3 <sup>RD</sup> PRIZE
	ORGANIZED BY SUIIT	
	(SAMBALPUR	
	UNIVERSITY).	
MR. DHARMENDRA	7 BEST DEBATE	
SHARMA AND MS.	COMPETITORS	
BASUNDHARA RAKSHIT	ORGANIZED BY MCL	
JOINTLY	DURING VIGILANCE	
	AWARENESS WEEK 2017	
MR. RAHUL KUMAR	QUIZ COMPETITION	2 <sup>ND</sup> PRIZE
AGARWAL	ORGANIZED BY	
	STUDENT UNION OF	
	SAMBALPUR	

#### c) Distinction achieved by students in sports/Games (University/State/National level) Only

The students of the Department took part in the Quiz competition held at Statistics Seminar Hall and Science Exhibition held at the Department of Earth Sciences.

#### d) Participation in NSS/NCC/SCOUT etc. NIL

#### d) List of distinguished alumni of the College/Department (Maximum 10)

Sl. No.	Name	Designation	Institute
1.	Ashis Mohapatra	Scientist	Environment and Toxicology, Institute, Canada
2.	Prof.P.C. Mishra	Expert member, NGT, Kolkata, India	NGT, Kolkata, India
3.	Dr. Debashis Raha	Environment Engineer	Wallonggong Division, Sydney, Australia
4.	Dr. Ranjita Panda	Regional Director	Research Wing, IGNOU, New Delhi
4.	Dr. P.K. Behera	Scientist E	CPCB, New Delhi
5.	Dr. Sharada Srinivas Pati	Environmental Scientist	SPCB, Bhubaneswar
6.	Gagan Pattanaik	Environmental Manager	Leighton Group, LEED, AP
7.	Jitendra Kumar Sahu	Environmental Manager	OMC, Orissa
8.	Ashish Kumar Das	Environment Officer	NHPC, New Delhi
9.	Dr. Anjan Kumar Prustv	Senior Scientist and UNESCO Member	GUIDE Gujarat
10.	Susmita Ekka	Scientist	RPCB, Kolcatta

#### f) Student Placement

- 1. RUDRA PRATAP PRADHAN OF THE DEPARTMENT JOINED AS EXECUTIVE OFFICER IN ENVIRONMENTAL MENAGEMENT IN CENTRAL GOVERNMENT PSU IN THE MONTH OF MARCH, 2017.
- 2. ALOK MEHER OF THE DEPARTMENT JOINED AS SCIENTIST IN CENTRAL POLLUTION CONTROL BOARD, NEW DELHI IN THE MONTH OF NOVEMBER, 2017.

- 3. PRABHATI SETH & GAJENDRA PAL SINGH MATHUR OF THE DEPARTMENT SELECTED FOR THE POST OF FOREST RANGER BY THE OPSC, ODISHA DURING THE PERIOD UNDER REPORT.
- 4. SAMBIT BEHERA OF THE DEPARTMENT JOINED AS MANAGER (ENVIRONMENT) IN THE PARADIP PORT TRUST IN THE MONTH OF SEPTEMBER 2017.
- 5. MS. SUJATA SAHU OF THE DEPARTMENT JOINED AS EXECUTIVE TRAINEE ENVIRONMENT IN OPGC, BANHARPALI IN THE MONTH OF MARCH 2017.
- 6. AJIT KUMAR PATRA SELECTED AS MANAGER (ENVIRONMENT) IN SHYAM METALLIC'S LIMITED, SAMBALPUR.
- 7. MS. PIPASA ACHARYA JOINED AS DEVELOPMENT OFFICER IN SADAR, FMU,UNDER SBP FOREST DIVISION IN OFSDP-II MANAGAED BY GRAMYA VIKAS SANGHATHAN, NABARANGPUR ON DATED-15-12-2017.
- 8. MS. ANCY SWAIN JOINED ADITYA BIRLA OF KOLKATA .
- 9. MS. NAYANI PRADHAN JOINED AS A CONTRACTUAL LECTURER IN HIRAKUD COLLEGE.
- 10. MS PRIYANKA PRIYADARSHINI ALSO JOINED AS A CONTRACTUAL LECTURER IN SUNDARGARH COLLEGE.
- 21. Other Important matters, if any. NIL

Signature of the Head/ Principal with Official Seal

#### ANNUAL REPORT FOR THE YEAR- 2018 (From 1<sup>st</sup> January, 2018 to 31<sup>st</sup> December, 2018) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, Jyoti Vihar, Burla, Sambalpur, Odisha-768019
- b) E-Mail Id: headenvsc@suniv.in

#### 2. Year of Establishment: 1989

- a) Management : Government
  - (Government/aided/private applicable to college only)
- **b) Whether autonomy granted:** Yes
- c) Whether 12B/2f (UGC) accorded: Yes

#### 3. Name of the Head of the University P.G. Department/Principal (with qualification): Dr. S.K. Pattanayak, Ph.D.

**a) Phone No.** 9439809787

**b**) **Email:**headenvsc@suniv.in

c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength of teaching:			
	Designation	Sanction	Actual strength	Vacant
	Professor:	1	1	Nil
	Associate Professor	1	1	Nil
	Asst. Prof/Lecturer:	2	2	Nil
	Contractual/Management	2 (Syndicate	2	Nil
	Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction A	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	01
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	02	02
Any other Staff	01 (VC (approve	ed) 01	Nil
(Class-IV staff cum Gar	dener		
from M.Tech Program	ne)		

#### 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years) M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

Class/Sanction	Actual St	rength					Total
Strength	G	eneral	S	.C.	S	Т.	Strength
	Male	Female	Male	Female	Male	Female	
M.Sc. 1 <sup>st</sup> Sem							
2018-20 batch	08	07	01	02	01	04	23
12+12(SF)							
M.Sc. 3rd Sem							
2017-19 batch	09	07	00	02	00	05	23
12+11(SF)							
M.Phil							
2018batch	00	07	02	00	00	01	10
06+02(SF)							
M.Tech 1st Sem	12	02	01	03	00	00	18
2018-20 batch	12	02	01	03	00	00	10
M.Tech 3rd Sem	10	02	00	01	01	00	14
2017-19 batch	10	02	00	01	01	00	14
Ph.D.2018	02	01	00	00	00	00	03

#### 6. Enrollment of Students (Classwise):

#### 7. Total Number of students appeared and passed (Class wise):

Total Number of students appeared and passed (Class wise).						
Name of the Exam.	Nos. of	Nos.	Nos. passed	Percentage		
	enrollment	appeared		of pass		
M.Sc. Ist Sem,2018(2018-20)	23	23	Result is yet to be	published		
M.Sc. II nd Sem.2018 (2017-19)	23	23	23	100%		
M.Sc. IIIrd Sem.2018 (2017-19)	23	23	23	100%		
M.Phil Ist Smester (2018)	08	08	08	100%		
M.Phil IInd Smester (2018)	08	08	Result is yet to be published			
M.Tech Ist Sem. 2018(2018-20)	18	18	Result is yet to be published			
M.Tech IIndSem, 2018(2017-19)	12	12	10	100%		
M.Tech. IIIrd Sem. 2018(2017-19)	12	12	Result is yet to be published			

#### 8. Number of working days in the last academic year: 271

#### 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

#### **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

Name of the Awardee	Cuorse	Name of the Guide	University where Awarded
AJIT KUMAR PATRA	M.Phil.	Dr. S.K. Pattanayak	Sambalpur University
ASHISH KUMAR SAHU	M.Phil.	Dr. I.Baitharu	Sambalpur University
AYUSMAN MOHANTY	M.Phil.	Prof.S.K. Sahu	Sambalpur University
BANITA CHOUDHURY	M.Phil.	Dr. S.K. Pattanayak	Sambalpur University
BHAGYASHREE NAYAK	M.Phil.	Dr.M.R.Mahananda	Sambalpur University
NAYANI PRADHAN	M.Phil.	Prof.S.K. Sahu	Sambalpur University
ROJI LUHA	M.Phil.	Dr. I.Baitharu	Sambalpur University
TULSI BHOI	M.Phil.	Dr.M.R.Mahananda	Sambalpur University
CHANDAN SAHU	Ph.D.	Prof.S.K. Sahu	Sambalpur University

b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

#### c) Research Publications:

Sl.	Name of Author(s)	Title of Paper	Name of	No./Vo./	ISSN No.
No.			Journal	Year/Page	
	Mahesh, M.,	Zeolite Farming: A	International	2018	
	Thomas J., Arun K.,	sustainable	Journal of	<b>7</b> (5):	
	Bhople, B.S.,	Agricultural	Current	2912-2924.	
	Saresh, N.V., Vaid,	Prospective	Microbiology		
	S. K. and Sahu, S.K.		and Applied		
			Sciences,		
	Panda, S., Mishra,	In vitro	The Nucleus	2018	
	S.K. Naik, A. Sahu,	propagation of	(Springer),	61(2):	
	S.K. and	Cajanus cajan X C.		83 - 93.	
	Panigrahi, J.	cajanifolius hybrid			
		and its			
		characterization			
		using cyto-			
		morphological and			
		SSR markers.			
	Sahu, C., Singh, A.	Green Audit- A	Jr. of Industrial	2018	
	K., Basti,	Holistic Approach	Pollution	34(2):	
	S.,Mohanty, A.,	for Sustainable	Control,	2115-2124.	
	Acharya, P.,Nayak,	Development.			
	H.N. and <b>Sahu, S.</b>				
	К.				
		Characterisation			
	Dr. Kalpataru Rout,	and Reuse Avenues	International	Volume 3,	ISSN No:-2456
	Biswajita Mohanty,			Issue 1,	-2165

Dr. S. K. Pattanayak Pattanayak, Sanjaya Kumar & Bhadra, A.K.	of Blast Furnace Sludge (Solid Metallurgical Waste) and Recycling of Sludge Pond Effluents Geobotanical Study on Gandhamardan Hill Range, Odisha, India: Elevation Versus Plant	Journal of Innovative Science and Research Technology Journal of Economic & Taxonomic Botany	January – 2018 Vol.42 No.1- 4 March- December	0250-9768
Sujata, Sahu <b>Mahananda, M. R.</b> and Ekka Susmita	Species Perespetive Coal Dust Induced Morphological and Biochemical Alterations of Pigeon Pea ( <i>Cajanus cajan</i> ( <i>L</i> ) <i>millsp</i> ) in IB Valley Area	Indian Journal of Agricultural Biochemistry	2018 2018 Volume : 31, Issue : 1 PP.89-91.	
Panda, SS, <b>Mahananda, M.R</b> . and Chhuria M	Impact of industrialization on surface water in and around Neelachal Ispat Nigam Limited (NINL), Kalinga Nagar, Jajpur District Odisha	Pollution Research	2018 37(4): 1024-1030	
SN Sahu, A Tiwari, JK Sahu, SN Naik, <b>I</b> <b>Baitharu,</b> E Kariali	Moisture sorption isotherms and thermodynamic properties of sorbed water of chironji ( <i>Buchanania</i> <i>lanzan</i> Spreng.) kernels at different storage conditions	Journal of Food Measurement and Characterizatio n	2018:12 (4), 2626- 2635	
Syed Nikhat Ahmed <sup>a</sup> , Subhashree Subhadarsini Mishra <sup>a</sup> , Jayanta Kumar Sahu <sup>b</sup> , Sabita Shroff <sup>c</sup> , Prajna Paramita Naik <sup>d</sup> , Sanjat Kumar Sahu <sup>a</sup> , <b>Iswar Baitharu<sup>a</sup></b>	Application of nanomaterials in environmental pollution abatement and its impact on ecological sustainability: recent status and future perspective	Development of biotechnology in life sciences	Cambridge Scholars Publishing 2018	
Namita Bhoi and	Current perspective of	Development of	Cambridge Scholars	

Iswar Baitharu*	biofunctionalized nanomaterials in biology and medicine	biotechnology in life sciences	Publishing 2018
<sup>a</sup> Subhashree Subhadarsini Mishra, <sup>c</sup> Sabita Sheoff, <sup>a</sup> Jayanta Kumar Sahu, <sup>d</sup> Prajna Parimita Naik, <b><sup>a</sup>Iswar Baitharu</b>	Insect Pheromones and its applications in management of pest population	Natural materials and products from insects: Chemistry and applications	Springer Nature 2018

d) Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available: Some of the papers cited above are also available online

#### e) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

f) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

Sl.	Name	Title of Book	Title of Book and	Publisher's Name and
No.		Chapter	ISBN No.	Place of Publication
1				

#### 11.a) Research Project/Programme Undertaken:

Funding Agency	Name of the Project	Amount of	Duration	Title of the Project
	Director	Grant		
		Received		
MCL, Jagruti Vihar	Prof. S. K.Sahu	Rs.2.20 lakh	25-10-2017-	App Coal Jal
	Dr.S.K.Pattanayak		29.01.2018	
	&			
	Dr.M.R.Mahanan			
	ada			
MCL, Jagruti Vihar	Prof. S. K.Sahu	Rs.1.99 lakh	11.07.2018-	Baseline Studies
	Dr.S.K.Pattanayak		24.08.2018	on Undertaking
	&			Afforestation
	Dr.M.R.Mahanan			Projects on
	ada			Government land
				through CSR
				Funding of MCL
University Grant	Dr. I. Baitharu	Rs. 2.5 Lakh	01/08/2016	Effect of chronic
Commission, East			to	exposure to

Regional Office,			01-08-2018	pesticide vapors
Kolkata				on
				neurobehavioral
				alteration like
				mood state,
				anxiety and
				depression in
				mammalian
				system
University Grant	Dr. I. Baitharu	Rs.10.00		"Evaluation of
Commission		lakh		HPA axis
(UGC), New Delhi				functioning,
( ),				stress resilience
				and
				neurobehavioral
				alterations
				among farmers
				of Western
				Odisha following
				chronic
				occupational
				exposure to
				pesticide vapors"
MCL, Jagruti Vihar	Prof.S.K.Sahu,	Rs.2.2 lakh		"App Coal Jal"
	Dr.S.K.Pattanayak			
	and			
	Dr.M.R.			
	Mahananda			
CSR funding of	Prof.S.K.Sahu,			Baseline studies
MCL	Dr. S.K			on undertaking
	Pattanayak & Mr.			affforestation
	A.K.Bhadra			projects on
				Government land

#### b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

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1

Sl. No.	Name	Guide	Funding Agency
1	Karuna Ekka	Dr.S.K.Pattanayak	RGNF UGC, New Delhi
2	Mamata Chhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi

#### 2.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the	Period	Sponsering Agency
Seminar/Conference/etc		
A one day National	23 <sup>rd</sup> March 2018.	in collaboration with
Seminar on		Nrusnigha Guru Smruti
"Industrialization in		Samiti, Sambalpur
Western Odisha : Its		
impact on Environment		
and Society"		

b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Sympo sium/Workshops/Refresher Course etc	Name of the Teachers Participated	Period and Place	
Workshop on "solid Waste Management under	Prof. S. K.Sahu	25 <sup>th</sup> January 2018 N.A.C. , Kuchinda	
Swachha Bharat MIssion 7 <sup>th</sup> VBD Workshop on "Serve to Live"	Prof.S.K.Sahu	28 <sup>th</sup> & 29 <sup>th</sup> April 2018 MCL, Jagruti Vihar	
National Seminar on "Climate Change and Future of Animals"	Prof.S.K.Sahu	22 <sup>nd</sup> &23 <sup>rd</sup> December 2018 P.N.( Auto)College Khurda	
National seminar on " Living World: A Knowledge Encyclopaedia for Science Through Ages"	Prof. S. K.Sahu	27 <sup>th</sup> & 28 <sup>th</sup> December 2018 Govt.(Auto.) College, Rourkela	
7 <sup>th</sup> VBD workshop on "Serve to Live"	Prof. S. K. Sahu	Tyaga, Burla on 28 <sup>th</sup> & 29 <sup>th</sup> April 2018	
Quantification of Environmental Impact of coal mining in Samleswari Opencast mine of IB Valley Coalfields of Odisha, India Using Life Cycle Assessment (LCA) Model. In: Proceedings of 2 <sup>nd</sup> National Conference on Current Practices Mining and Allied Industries	Debendra Kumar Khanda and M.R.Mahananda.	organzed by Department of Mining Engineering Government College of Engineering, Keonjhar. Date- 6-7 October 2018	
20 <sup>th</sup> Odisha Bigyan 'O' Paribesh Congress :- Characterization of Fly Ash, Problems and its Possible Management Aspects.	Mamata Chhuria and Malaya Ranjan Mahananda. In Proceedings of	Organized by Orissa Environmental Society, Bhubaneswar. 17-18 Nov.2018	
Assessment of Environmental impacts of coal mining in Lakhanpur Open cast Project of Ib Valley coalfield, Odisha using Life cycle Assessment (LCA) model	D. Khanda and M.R. Mahananda. at	International conference on opencast mining Technology & Sustainability ICOMS 18 during 14 <sup>th</sup> – 15 <sup>th</sup> December 2018.	

International Conference on Emerging Research in Biosciences (ICERB-2018) Bioremediation, Impact analysis and fluoride contamination	Dr. Iswar Baitharu	Organized by Department of Zoology, GuruGhsidas Central University, Bilaspur,C.G. on Oct. 28-30, 2018
Mr. Abanikanta Bhadra	presented a talk as resource person in the state level Kalinga Herbal Fair	Boudh, Odisha

### **13.** Faculty Visited other Institution for higher training:

Name	Programme	Host Institute
Prof. S. K.Sahu	Invited as Resource Person	17 <sup>th</sup> January 2018 at
	for Induction Training	Barhampur University,
	Programme for Lecturers,	Ganjam
Prof.S.K.Sahu	Invited as a member of Jury	27 &28 <sup>th</sup> February 2018 at
	in the 16 <sup>th</sup> Chhattisgarh	Durg Viswavidyalaya,
	Young Scientist Congress	Durg, CG
	2018	_
Prof.S.K.Sahu	Invited as Speaker on the	22 <sup>nd</sup> May 2018 at Tata
	occasion of International	Steel Ltd., Joda , Keonjhar
	Biodiversity Day	
Prof. S. K.Sahu	Invited as Chief Speaker on	5 <sup>th</sup> June 2018 at Civic
	the occasion of World	Centre, Rourkela
	Environmental Day	
Prof.S.K.Sahu	Invited as Keynote Speaker	25 <sup>th</sup> August 2018 at
	on the occasion of Seminar	Neelamadhab
	on Global warming	Mahavidyalaya, Kantilo,
		Nayagarh
Dr. Malaya Ranjan	invited as resource person to	organized by Pratik Sahu
Mahananda	deliver a talk on "Disaster	Degree College, Laida,
	Management"	Sambalpur
Dr. Iswar Baitharu	Invited as resource person to	Organised by Department
	deliver a talk on Stress	of Zoology, Vikram Dev
	Hormone and its impact on	College, Jeypore
	brain functioning	
Dr. Iswar Baitharu	Invited as resource person to	Organised by Department
	deliver a talk on Impact of	of Zoology,\Govt. Auto
	occupational exposure on	College, Bhawanipatna,
	stress resilience, HPA axis	Odisha
	functioning and neuro-	
	behavioral alteration among	
	farmers of western Odisha	

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

#### **15.** Distinguished visitors in the year (Maximum ten):

The following eminent fellows taught the students as UGC visiting fellows

#### 16. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the
		honour/award
Prof. S. K.Sahu	Certificate of Felicitation	Chhattisgarh Council
	(towards Academic Wisdom,	of Science and
	Commendable Research and	Technology, CG
	Outstanding Contribution in	
	the field of Environmental	
	Science)	

#### 17. Academic achievement of the Institution:

- a) DAS/DRS/ COSSIST/Extension work etc.: NIL
- b) MOU with other Institution: NIL
- c) Centres/Courses running by other Organizations (like IGNOU etc.): 2 COURSES P.G. Diploma in Environment Education and Management and PG. Diploma in

Industrial Safety and Health runing under the aegies of DDCE, Sambalpur University d) Publication if any by the Institution: NIL

(Books/Monograph/Magazine)

**18. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:** A Seminar Hall, One Class Room and One Laboratory Constructed during2017-2018

#### 19. Hostel (for colleges only):Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			
_			

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Name of the Student	Appoiuntment/NET/GATE/JRF
SUBHASHREE	Qualified CBSENET, June-2018 eligibility for Assistant
SUBHADARSINI	Professor.
MISHRA	
SYED NIKHAT	Qualified CBSENET, June-2018 eligibility for Assistant
AHMED	Professor.
PAPU KUMAR NAIK	Qualified CBSENET, June-2018 eligibility for Assistant
	Professor.
MANAS BARIK	Qualified CBSENET, June-2018 eligibility for Assistant
	Professor.
S S KALIKINKAR	Qualified NTNET, December-2018 eligibility for Assistant
MAHANTA	Professor.
RAHUL KUMAR	Qualified NTNET, December-2018 eligibility for Assistant
AGRAWAL	Professor.

#### a) Qualified in NET/GATE/JRF Examination

## b)Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

- 1. Ms. Anindita Mantry got awarded 3<sup>rd</sup> prize in state level poem competition in the occasion of Vagini Nibedita 's birth anniversary.
- 2. Ms Medha Mishra secured 3<sup>rd</sup> prize in essay competition organized by SUIIT (Sambalpur University).
- 3. She also delivered a seminar talk on "Voluntary blood donation" in 7<sup>th</sup> national conference of voluntary blood donors organization, organized by Tyaga family.

#### c) Distinction achieved by students in sports/Games (University/State/National level) Only

- 1 Our department's cricket team was runners up in Annual Inter-Departmental Cricket Tournament held on 4th February 2018.
- 2 MR. ABHISHEK PANDA REPRESENTED SAMBALPUR UNIVERSITY IN THE EAST ZONE INTER UNIVERSITY CRICKET TOURNAMENT 2018 HELD AT KIIT UNIVERSITY, BHUBANESWAR. HE WAS ALSO VICE CAPTAIN OF THE TEAM. AND THE TEAM QUALIFIED ZONE SEMIFINALS.
- 3 Aditya Kumar Singh received for the best Scientific Poster Presentation award at NISER, Bhubaneswar on 14-11-2018.

4 On 28<sup>th</sup> February 2018, Science Exhibition was organized by Science Society of Sambalpur Uiversity on the occasion of Science day in which our students had participated and got third prize.

#### d) Participation in NSS/NCC/SCOUT etc. NIL

#### Sl. No. Name Designation Institute 1. ASHISMOHAPATRA SCIENTIST ENVIRONMENTANDTOXIC OLOGY. INSTITUTE, CANADA 2. PROF.P.C.MISHRA EXPERTMEMBER, NGT,KOLKATA,INDIA NGT,KOLKATA, WALLONGGONGDIVISION,S 3. DR.DEBASHISRAHA ENVIRONMENT YDNEY, AUSTRALIA ENGINEER 4. DR.RANJITAPANDA REGIONALDIRECTOR RESEARCHWING, IGNOU, NEW DELHI DR.P.K.BEHERA SCIENTISTE CPCB,NEWDELHI 4. DR. SHARADA SRINIVAS ENVIRONMENTAL SPCB, BHUBANESWAR 5. PATI SCIENTIST GAGANPATTANAIK LEIGHTONGROUP,LEED,AP 6. ENVIRONMENTAL MANAGER 7. JITENDRAKUMARSAHU ENVIRONMENTAL OMC, ORISSA MANAGER 8. ASHISHKUMARDAS ENVIRONMENT NHPC,NEWDELHI OFFICER 9. DR. ANJAN KUMAR KHALIKOTE UNIVERSITY ASSOCIATE PRUSTY PROFESSOR 10. SUSMITAEKKA SCIENTIST RPCB, KOLKATTA 11. DR.KHAGESWR PRADHAN **ENVIRONMENTAL** NTPC. KANIHA MANAGER 12. ARABINDA BEHERA ENVIRONMENTAL OMC, ORISSA MANAGER 13. KUMARMANI MEHER ENVIRONMENTAL OMC,ORISSA MANAGER 14. SAMBIT BEHERA ASST. PARADIP PORT ENVIRONMENTAL MANAGER 15 DR. CHANDAN SAHU RESEARCH G.M.UNIVERSITY ASSOCIATE

#### e) List of distinguished alumni of the College/Department (Maximum 10)

#### f) Student Placement

#### 21. Other Important matters, if any. NIL

Signature of the Head/ Principal with Official Seal

#### ANNUAL REPORT FOR THE YEAR- 2019 (From 1<sup>st</sup> January, 2018 to 31<sup>st</sup> December, 2019) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, JyotiVihar, Burla, Sambalpur, Odisha-768019
- **b) E-Mail Id:** headenvsc@suniv.in

#### 2. Year of Establishment: 1989

- a) Management : Government
  - (Government/aided/private applicable to college only)
- **b) Whether autonomy granted:** Yes
- c) Whether 12B/2f (UGC) accorded: Yes

#### 3. Name of the Head of the University P.G. Department/Principal (with qualification): Dr. S.K. Pattanayak, Ph.D.

a) Phone No. 9439809787

**b**) **Email:**headenvsc@suniv.in

c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength of teaching:			
	Designation	Sanction	Actual strength	Vacant
	Professor:	1	1	Nil
	Associate Professor	1	1	Nil
	Asst. Prof/Lecturer:	2	2	Nil
	Contractual/Management	2 (Syndicate	2	02
	Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction A	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	01
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	02	02
Any other Staff	01 (VC (approve	ed) 01	Nil
(Class-IV staff cum Ga	rdener		
from M.Tech Program	me)		

## 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years)

> M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

#### 6. a. Enrolment of Students ( Class wise): For University Departments and Colleges

Class/Sanction Strength			S.T.		n(s) with ability	Minority Community		Total Strength					
-	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
M.Sc. 1 <sup>st</sup> Sem 2019-21 batch 12+12(SF)	03	04	04	05	02	03	00	03					24
M.Sc. 3 <sup>rd</sup> Sem 2018-20 batch 12+12(SF)	04	05	04	02	01	02	01	04					23
M.Phil 2018- 2019batch	01	02	00	01	00	01	00	01					06
M.Phil 2019- 2020batch	02	02	00	00	00	01	00	02					07
M.Tech 1 <sup>st</sup> Sem 2019-21 batch	12	04	01	00	01	00	00	00					18
M.Tech 3 <sup>rd</sup> Sem 2018-20 batch	07	02	05	00	01	03	00	00					18
Ph.D.2019	07	10	01	00	03	01	00	03					25

**b.** Of the total strength of students no-of students admitted from a University outside the State:

**b.** Of the total strength of students no-of students admitted from a University outside the State:

c. What special infrastructure has been created for Physically challenged persons:

## 7. Total Number of students appeared and passed (Class wise):

Name of the exam.	Numbers of students admitted		Numbers of students appeared			Numbers of students passed			ents	Percentag e of pass			
	Gen	OBC	SC	ST	Gen	OBC	SC	ST	Gen	OBC	SC	ST	
M.SC. IIND SEM, MAY 2018 (2017-19)	08	08	02	05	07	08	02	05	07	08	02	05	95.65
M.SC. IIIRD SEM. DEC. 2018 (2017-19)	08	08	02	05	08	08	02	02	08	08	02	05	100
M.SC. IVTH SEM.MAY, 2019(2017-19)	08	08	02	05	08	08	02	02	08	08	02	05	100
M. PHIL IST SEM. JUNE, 2018 (2018)	04	02	01	01	04	02	01	01	04	02	01	01	100
M. PHIL IIND SEM. DEC.2018 (2018)	04	02	01	01	04	02	01	01	04	02	01	01	100
M. PHIL IST SEM.DEC. 2018 (2018-19)	03	01	01	01	03	01	01	01	03	01	01	01	100

#### 8. Number of working days in the last academic year: 271

#### 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

#### **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

#### b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

Name of the Awardee	Cuorse	Name of the Guide	University where
			Awarded
ADITYA KUMAR	M.Phil.	Prof.S.K. Sahu	Sambalpur
SINGH			University
RITU MEHER	M.Phil.	Prof.S.K. Sahu	Sambalpur
			University
BUDDHADEV BAGH	M.Phil.	Dr. S.K. Pattanayak	Sambalpur
			University
SNEHALATA PANDA	M.Phil.	Dr. S.K. Pattanayak	Sambalpur
			University
ROSISMITA BHOI	M.Phil.	Dr.M.R.Mahananda	Sambalpur
			University
SYED NIKHAT AHMED	M.Phil.	Dr. I. Baitharu	Sambalpur
			University
BANANI DAS	Ph.D.	Prof.S.K. Sahu	Sambalpur
			University
HADIBANDHU	Ph.D.	Dr.M.R.Mahananda	Sambalpur
PANIGRAHI			University
SUBHRANSHU PANDA	Ph.D.	Dr. I. Baitharu	Sambalpur
			University

## c) Research Publications:

Sl. No.	Name of Author(s)	Title of Paper	Name of Journal	No./Vo./ Year/Page	ISSN No.
	Chandan Sahu, <b>S.K.</b> <b>Sahu</b>	Ambient air quality and air pollution index of sambalpur: A Major town in Eastern India	International Journal of Environmenta I Science and Technology (Springer)	16 (12): 8217-8228	ISSN: 1735- 1472
	Rabindra Barik and <b>Sanjaya Kumar</b> <b>Pattanayak</b>	Assessment of groundwater quality for irrigation of green spaces in theRourkela city of Odisha, India	Groundwater for Sustainable Development, Elsevier	v.8, pp.428- 438. 2352- 801X/ © 2019 Elsevier B.V.	
	A.K. Bhadra & Sanjaya Kumar Pattanayak	Tree Species Population Dynamics in the Tropical Dry Deciduous Forest of Gandhamardan Hills, Eastern Ghats, Weastern Odisha	Indian Forester	Vol-145(2): PP.101-113 ISSN no- 0019-4816	
	Dr.M.R.Mahanda	Death Field: Cancer stalks Odisha's agriculture- intensive Bargarh District raising questions over its link with pesticide overuse	Down to Earth	1-15	October, 2019
	S N Sahu, A Tiwari, J K Sahu, S N Naik, <b>I Baitharu,</b> E Kariali	Moisture sorption isotherms and thermodynamic properties of sorbed water of chironji ( <i>Buchanania</i> <i>lanzan</i> Spreng.) kernels at different storage conditions	Journal of Food Measurement and Characterizati on	2018:12 (4), 2626-2635	

d) **Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available:** Some of the papers cited above are also available online

## e) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

f) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

<b>Sl.</b> <b>No.</b>	Name	Title of Book Chapter	Title of Book and ISBN No.	Publisher's Name and Place of Publication
1	Syed Nikhat Ahmed, Subhashree Subhadarsini Mishra, Jayanta Kumar Sahu, Sabita Shroff, Prajna Paramita Naik, Sanjat Kumar Sahu, <b>Iswar</b> <b>Baitharu</b>	Application of nanomaterials in environmental pollution abatement and its impact on ecological sustainability: recent status and future perspective	Development of biotechnology in life sciences	Cambridge Scholars Publishing
	Namita Bhoi and Iswar Baitharu	Current perspective of biofunctionalized nanomaterials in biology and medicine	Development of biotechnology in life sciences	Cambridge Scholars Publishing
	Subhashree Subhadarsini Mishra, Sabita Shroff, Jayanta Kumar Sahu, Prajna Parimita Naik, <b>Iswar</b> <b>Baitharu</b>	Insect Pheromones and its applications in management of pest population	Natural materials and products from insects: Chemistry and applications	Springer Nature
	Iswar Baitharu, Sabita Shroff, Prajna Parimita Naik, Jayanta Kumar Sahu	Environmental management and sustainable control of mosquito vector: challenges and opportunities	Molecular Identification of mosquito species of public health importance and their management	Springer Nature

- (g) Patent field , if any(h) Non-Academic Publications, if any :

11.a) Research Project/Programme	Undertaken:
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Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakhs	2 Years	"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
OSHEC, DHE, Govt. Of Odisha	Dr. I. Baitharu	4.72 lakhs	2 Years	Identification of source of contaminants in water, flow pathway through food chain and determination of its impact on public health in and around downstream of Hirakud reservoir, Sambalpur, Odisha

## b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

Sl. No.	Name	Guide	Funding Agency
1	KarunaEkka	Dr.S.K.Pattanayak	RGNF UGC, New Delhi
2	MamataChhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi

## 12.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the Seminar/Conference/etc	Period	Sponsering Agency
A one day National Seminar on "Global Warming and Climate Change "	26, August, 2019	in collaboration with Nrusnigha Guru SmrutiSamiti, Sambalpur

b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Symposium/Work shops/Refresher Courseetc	Name of the Teachers Participated	Period and Place
Invited to participate in National Seminar on Indusrialization in Western Odisha : Its impact on Environment and Society	Prof. S.K.Sahu	on 24 <sup>th</sup> March 2019 at Sheela Tower, Sambalpur.
Invited to participate in National Seminar on Recent Advances in Biological Life Sciences	Prof. S.K.Sahu	on 3 <sup>rd</sup> & 4 <sup>th</sup> April 2019 organized by School of Life Sciences, Sambalpur University, Odisha
Invited as Resources Person for 38 <sup>th</sup> Orientation Programme	Prof. S.K.Sahu	on 17 <sup>th</sup> March 2019 at HRDC, Samblpur University.
Invited as Resources Person for World Bank Funded OHEPPE Principals Meet Programme	Prof. S.K.Sahu	on 26 <sup>th</sup> & 27 <sup>th</sup> March 2019 at HRDC, Samblpur University.
Invited as Resources Person for 40 <sup>th</sup> Orientation Programme	Prof. S.K.Sahu	on 8 <sup>th</sup> November 2019 at HRDC, Samblpur University.
Invited to participate in National Conference on Green Technology for clean Environment GTCE-2019	Dr. M.R.Mahananda	2019 on 20 <sup>th</sup> May 2019 organized by Biofuels and Bioprocessing Research Centre, ITER, SOA University, Bhubaneswar
invited to deliver a oral talk in International/ National Conference on Crossroads of Biological Science and its applications	Dr.I.Baitharu	Department of Zoology, Berhampur University World Bank under OHEPEE
invited for participate in the national conference on ANDHARI	Dr.I.Baitharu	School of Life Sciences, Sambalpur University, Odisha
invited for participate in the national conference on Recent Advances in Biological Life Sciences	Dr.I.Baitharu	on 3 <sup>rd</sup> & 4 <sup>th</sup> April 2019 organized by School of Life Sciences, Sambalpur University, Odisha

## (c) Seminar/Conference/Symposium/Workshop/Refresher Courses where teachers acted as Resource Persons/Chair Person of a Session/Key Note Speaker/Invited Speaker.

**13.** (a) Faculty Visited other Institution for higher training:

Name	Programme	Host Institute	National/international

#### (b) Faculty/Student visited from other institutions to Department/College/Schools

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

- **15. Distinguished visitors in the year (Maximum ten):** The following eminent fellows taught the students as UGC visiting fellows
- 16. Faculty visiting/interacting with any academic/Social/Cultural Institutions for consultancy and conducting training

### 17. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the honour/award

#### 18. Academic achievement of the Institution:

- a) DAS/DRS/ COSSIST/Extension work etc.: NIL
- b) MOU with other Institution: NIL
- c) Centres/Courses running by other Organizations (like IGNOU etc.): 2 COURSES
  P.G. Diploma in Environment Education and Management and PG. Diploma in
  Industrial Safety and Health runing under the aegies of DDCE, Sambalpur University
- d) Publication if any by the Institution: NIL
  - (Books/Monograph/Magazine)

# **19. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:** A Seminar Hall, One Class Room and One Laboratory Constructed during 2017-2018

#### 20. Hostel (for colleges only):Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			

## 21. Students Achievements:

#### a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF	
S S KALIKINKAR	Qualified NTANET/J.R.F. June , 2019 eligibility for Assistant	

MAHANTA	Professor.
KUSULINDI BISWAS	Qualified NTANET/J.R.F. June , 2019 eligibility for Assistant
	Professor.
ROSISMITA BHOI	Qualified NTANET June, 2019 eligibility for Assistant
	Professor.
NAYANI PRADHAN	Qualified NTANET June, 2019 eligibility for Assistant
	Professor.
ROJALIN SAHU	Qualified NTANET June, 2019 eligibility for Assistant
	Professor.
BHAGIRATHI	Qualified NTANET June, 2019 eligibility for Assistant
MAHANTA	Professor.
NAMITA PRADHAN	Qualified NTANET June, 2019 eligibility for Assistant
	Professor.
SYED NIKHAT	Qualified NTANET June, 2019 eligibility for Assistant
AHMED	Professor.

b) Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

Name of the student	Activities	Prize/Certificate received

- c) Distinction achieved by students in Sports/Games(University/State/National level) only:
- d) Participation in NSS/NCC/SCOUT /Swach Bharat Abhiyan etc. NIL

e)	List of distinguished	Alumni of the	<b>College/Department</b>	(maximum 10)
ν,	List of aistingaistica	Thummer of the	conceso Department	(maximum 10)

Sl.No.	Name	Designation	Institute
1.	AshisMohapatra	Scientist	EnvironmentandToxicology, Institute,Canada
2.	Prof.P.C.Mishra	Expertmember, NGT,Kolkata, India	NGT,Kolkata,India
3.	Dr.DebashisRaha	Environment Engineer	WallonggongDivision,Sydney, Australia

4.	Dr.RanjitaPanda	RegionalDirector	ResearchWing,IGNOU,New
			Delhi
4.	Dr.P.K.Behera	ScientistE	CPCB,NewDelhi
5.	Dr. SharadaSrinivasPati	Environmental	SPCB,Bhubaneswar
		Scientist	
6.	GaganPattanaik	Environmental	LeightonGroup,LEED,AP
		Manager	
7.	JitendraKumarSahu	Environmental	OMC,Orissa
		Manager	
8.	AshishKumarDas	Environment	NHPC,NewDelhi
		Officer	
9.	Dr. AnjanKumar	Associate	Khalikote University
	Prusty	Professor	
10.	SusmitaEkka	Scientist	RPCB,Kolkatta
11.	Dr.Khageswr Pradhan	Environmental Manager	NTPC. Kaniha
12.	ArabindaBehera	Environmental Manager	OMC,Orissa
		C	
13.	KumarmaniMeher	Environmental Manager	OMC,Orissa
15.			0110,011354
14.	SambitBehera	Asst. Environmental	Paradip Port
14.	SamonBenera	Manager	ratadip rott
		wianagei	
15	Dr. Chandansahu	Research Associate	G.M.University

## f) Student Placement

## 22. Other Important matters, if any:

Signature of the Head/ Principal with Official Seal

#### ANNUAL REPORT FOR THE YEAR- 2020 (From 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2020) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, JyotiVihar, Burla, Sambalpur, Odisha-768019
- b) E-Mail Id: headenvsc@suniv.in

#### 2. Year of Establishment: 1989

a) Management : Government

(Government/aided/private applicable to college only)

- **b) Whether autonomy granted:** Yes
- c) Whether 12B/2f (UGC) accorded: Yes

## 3. Name of the Head of the University P.G. Department/Principal (with qualification):

- 1. Dr. S.K. Pattanayak, Ph.D. (01-01-2020 TO 31-05-2020)
- a) Phone No. 9439809787
- 2. Prof.S.K.Sahu (01-06-2020-31-12-2020)
- **b. Phone No.** 9668220609
- **b) Email:**headenvsc@suniv.in

c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength	of	teac	hing:
<i>u</i> )	Ducigui	UI.	uau	uunge

Designation	Sanction	Actual strength	Vacant
Professor:	1	1	Nil
Associate Professor	1	1	Nil
Asst. Prof/Lecturer:	2	2	Nil
Contractual/Management	2 (Syndicate	2	Nil
Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction A	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	01
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	02	02
Any other Staff	01 (VC (approve	ed) 01	Nil
(Class-IV staff cum Ga	rdener		
from M.Tech Program	me)		

#### 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years)

M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

#### 6. Enrollment of Students (Class wise):

Class/Sanction Strength	Ge	neral	C	BC	S	5.C.	S	S.T.		n(s) with ability		nority munity	Total Strength
_	Male	Female	Male	Female	_								
M.Sc. 1 <sup>st</sup> Sem 2020-22 batch	04	07	03	03	00	04	00	03					24
M.Sc. 3 <sup>rd</sup> Sem 2019-21 batch 12+12(SF)	03	04	04	05	02	03	00	03					24
M.Phil 2019- 2020batch	02	02	00	00	00	01	00	02					07
M.Phil 2020-2022 batch	02	02	00	00	00	01	00	01					06
M.Tech 1 <sup>st</sup> Sem 2020-22 batch	12	02	00	00	02	00	02	01					19
M.Tech 3 <sup>rd</sup> Sem 2019-21 batch	12	04	01	00	01	00	00	00					18
Ph.D.2020	08	11	02	01	03	01	00	03					29

## 7. Total Number of students appeared and passed (Class wise):

Name of the exam.	Numbers of students admitted			Numbers of students appeared			Numbers of students passed			lents	Percen tage of		
	GEN	OBC	SC	ST	Gen	OBC	SC	ST	Gen	OBC	SC	ST	pass
M.SC. IST SEM, DEC. 2018 (2018-20)	09	06	03	05	09	06	03	05	09	06	03	05	100
M.SC. IIND SEM. MAY, 2019 (2018-20)	09	06	03	05	09	06	03	05	09	06	03	05	100
M.SC. IIIRD SEM.DEC, 2019 (2018-20)	09	06	03	05	09	06	03	05	09	06	03	05	100
M.SC. IVTH SEM.MAY, 2019 (2018-20)	09	06	03	05	09	06	03	05	09	06	03	05	100
M.SC. IST SEM, DEC. 2019 (2019-21)	07	09	05	03	08	10	05	06	08	09	05	05	93.10
M. PHIL IIND SEM.JUNE,2019 (2018-19)	03	01	01	01	03	01	01	01	03	01	01	01	100
M.TECH IINDSEM, MAY, 2018 (2017-19)	07	05	01	01	06	05	01	01	06	05	01	01	100
M.TECH IIIRDSEM, DEC, 2018 (2017-19)	07	05	01	01	06	05	01	01	06	05	01	01	100
M.TECH. IVTH SEM. MAY, 2019 (2017-19)	07	05	01	01	06	05	01	01	06	05	01	01	100
M.TECH. IST.SEM, DEC, 2018 (2018-20)	10	04	04	00	10	05	04	00	09	05	03	00	89.47
M.TECH IINDSEM, MAY, 2019 (2018-20)	10	04	04	00	09	03	04	00	09	03	04	00	100
M.TECH IIIRDSEM, DEC, 2018 (2018-20)	10	03	04	00	10	03	04	00	10	03	04	00	100
M.TECH. IVTH SEM. MAY, 2019 (2018-20)	10	03	04	00	11	03	04	00	11	03	04	00	100

## 8. Number of working days in the last academic year: 271

## 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

## **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

#### b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

Name of the Awardee	Cuorse	Name of the Guide	University where
			Awarded
JYOSNA ORAM	M.Phil.	Prof.S.K. Sahu	Sambalpur
			University
MRINALI SENAPATI	M.Phil.	Prof.S.K. Sahu	Sambalpur
			University
NARAD RAJESH	M.Phil.	Dr. S.K. Pattanayak	Sambalpur
			University
RAHUL KUMAR	M.Phil.	Dr. S.K. Pattanayak	Sambalpur
AGRAWAL			University
ROJALIN SAHU	M.Phil.	Dr. S.K. Pattanayak	Sambalpur
			University
SAKUNTALA HANSDA	M.Phil.	Dr. I. Baitharu	Sambalpur
			University
SAMIKSHYA MISHRA	M.Phil.	Dr.M.R.Mahananda	Sambalpur
			University
HEMENDRA NATH	Course Work	Prof.S.K. Sahu	Sambalpur
NAYAK			University
SYEELVA PANDA	Ph.D.	Prof.S.K. Sahu	Sambalpur
			University
BEENA KUMARI	Ph.D.	Prof.P.C.Mishra	Sambalpur
THAKKAR			University

## c) Research Publications:

Sl. No	Name of Author(s)	Title of Paper	Name of Journal	No./Vo./ Year/Page	ISSN No.
1	Dharmendra Patri, Diparani Samal, Chandan Sahu and <b>Sanjat Kumar Sahu</b> (2020)	Soil quality of different rice-based cropping systems in a drought affected block of Odisha,	India. Eco.Env. & Cons.( EM International, India),	26 S:159 – 165.	
2	A.K. Singh, C. Sahu and <b>S.K.</b> Sahu (2020)	Carbon sequestration potential of a teak plantation forest in the Eastern Ghats of India.	Journal of Environmental Biology (Triveni Enterprises, India),	41:770 – 775.	
3	Chandan Sahu, Hemendra Nath Nayak, <b>Sanjat Kumar Sahu</b> (2020)	Carbon Sequestration Potential of Trees in an Urban Area: A Case Study of Sambalpur Town in Eastern India	. Fresenius Environmental Bulletin (Parlar Scientific Publication, Germany),	20(10):8757 – 8766.	
4	Chandan Sahu, Sradhanjali Basti and <b>Sanjat Kumar Sahu</b> ( 2020)	Air pollution tolerance index (APTI) and expected performance index (EPI) of trees in sambalpur town of India.	SN Applied Sciences (Springer Nature, Switzerland),	on line 03 July 2020, 2:1327   https://doi.o rg/10.1007/ s42452- 020-3120-6	
5	A.K. Bhadra, S.K. Pattanayak and N.K. Dhal (2020	Plant Taxonomic Diversity: An Assessment on Gandhamardan hill range of Western Odisha, India	Indian Forester	146 (2) : 148-158.	
6	Binaya Kumar Pattnaik, Sanjaya Kumar Pattanayakand Chandan Sahu (2020)	Studyof Drainage Morphometry of Hatti River Valley in Mahanadi Basin	Odishausing Geographical Information System. Poll Research	38, S100- 107	
7	M.R.Mahananda	Quantification of Environmental Impacts of coal mining in Samaleswari open cast(surface) mine of	Internaational Research Journal of Engineering & Technology (IRJET)	Vol 7 (1). January 2020	

		IB Valley coal field			
		of Odisha, India			
		using Life Cycle			
		assessment (LCA)			
		models.			
8	M.R.Mahananda	Quantification of	Internaational	Vol 5 (10).	
		Environmental	Journal for	January	
		Impacts of coal	Research in	2020.	
		mining in Lajkura	Engineering		
		open cast(surface)	Application &		
		mine of IB Valley	Management		
		coal field of Odisha,			
		India using Life			
		Cycle assessment			
		(LCA) models			
9	M.R.Mahananda	Spatial Distribution	Pollution	39 (3) 2020	
		of Heavy metals in	Research		
		Waters of the			
		Mahanadi Estuary,			
		Paradeep, Odisha.			
10	Abhisek Mishra, Sujit Kumar	Food security and	Journal of	2020,9,141-	IOSSN:
	Mishra,	nutritional status	Reviews on	148	1929-
	IswarBaitharu, TusharKanta	among rural poor:	Global		7092/20
	Mishra	Evaluating the	Economics		
		impact of rural	Leononics		
		livelihood mission in			
		Odisha, India			

a) Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available: Some of the papers cited above are also available online

## b) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

c) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

SI. No.	Name	Title of Book Chapter	Title of Book and ISBN No.	Publisher's Name and Place of Publication
1				Tublication
	Syed Nikhat Ahmed, Subhashree Subhadarsini Mishra, Jayanta Kumar Sahu, Sabita Shroff, Prajna Paramita Naik, Sanjat Kumar Sahu, <b>Iswar Baitharu</b>	Application of nanomaterials in environmental pollution abatement and its impact on ecological sustainability: recent status and future perspective	Development of biotechnology in life sciences	Cambridge Scholars Publishing
	Namita Bhoi and <b>Iswar</b> <b>Baitharu</b>	Current perspective of biofunctionalized nanomaterials in biology and medicine	Development of biotechnology in life sciences	Cambridge Scholars Publishing
	Subhashree Subhadarsini Mishra, Sabita Shroff, Jayanta Kumar Sahu, Prajna Parimita Naik, <b>Iswar Baitharu</b>	Insect Pheromones and its applications in management of pest population	Natural materials and products from insects: Chemistry and applications	Springer Nature
	<b>Iswar Baitharu</b> , Sabita Shroff, Prajna Parimita Naik, Jayanta Kumar Sahu	Environmental management and sustainable control of mosquito vector: challenges and opportunities	Molecular Identification of mosquito species of public health importance and their management	Springer Nature
	SabitaShroff, Showkat Mir, BinataNayak, <b>IswarBaitharu,</b> Ajay Kumar Behera*	Chemical control of mosquito vector		Springer Nature
	Jayanta Kumar Sahu, Rajendra Kumar Behera, <b>IswarBaitharu</b> , PrajnaParamitaNaik	Biology of Earthworm in a world of nanomaterials : New room, Challanges and Future Perspectives		Springer Nature

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakhs	2 Years	"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
OSHEC, DHE, Govt. Of Odisha	Dr. I. Baitharu	4.72 lakhs	2 Years	Identification of source of contaminants in water, flow pathway through food chain and determination of its impact on public health in and around downstream of Hirakud reservoir, Sambalpur, Odisha

## **11.a) Research Project/Programme Undertaken:**

## b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

Sl. No.	Name	Guide	Funding Agency
1	KarunaEkka	Dr.S.K.Pattanayak	RGNF UGC, New Delhi
2	MamataChhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi
3	Manjil Sangeeta Dungdung	Dr.I.Baitharu	RGNF UGC, New Delhi

## 12.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the Seminar/Conference/etc	Period	Sponsering Agency

## b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Symposium/Work shops/Refresher Courseetc	Name of the Teachers Participated	Period and Place
Delivered a Talk on "Verms and Vermitechnology" as Resource person in National seminar on "Current Research Trends in Biotechnology, Bioinformatics Intellectual Property Management (CRTBBI-2020)"	Prof. S.K.Sahu	held on 3-4 March 2020 inP.G.DepartmentofBiotechnologyandBioinformatics,SambalpurUniversity, Jyoti Vihar.
Delivered a invited Talk on "Institutional Waste Management with Special Reference to Biodegradable Waste" in the One day Workshop on "Institutional Waste Management"	Prof. S.K.Sahu	organized by OUAT, Bhubaneswar on 13.03.2020 under Institutional Developmental Plan of World Bank sponsored National Agricultural Higher Education Project (NAHEP).
Delivered a talk on "Covid-19 and Environmental Challenges in Education Sector" in the Online Webinar on " Covid Challenges in Environment Management of Industrial and Urban Areas"	Prof. S.K.Sahu	organized by Andhra University, Visakhapatnam on 27 <sup>th</sup> and 28 <sup>th</sup> August 2020.
Delivered two lectures on "Air, Water and Soil Pollution" and "Forest and Ecosystem Conservation"	Prof. S.K.Sahu	on 12 <sup>th</sup> and 13 <sup>th</sup> October 2020 as Resource Person in the Refresher Course on "Environmental Studies" organized by Pt. Ravi Shankar Shukla University, Raipur, Chattisgarh
Attained Webinar on Environmental Around us	Dr. M.R.Mahananda	Organized by Dept. Of Zoology & Biotechnology, P.G.College Ujjain.July 20 <sup>th</sup>
National Webinar on Vaccines for COVID-19 Ahead	Dr. M.R.Mahananda	Organized by Utkal University 27 <sup>th</sup> August,2020
The epidemiology of pesticide exposure and cancer: A case study in Bargarh District. In : National Seminars on Advances and Challenges in Biological Sciences (ACBS-2020)	Dr. M.R.Mahananda	12-13 Feb 2020 sponsored by World Bank under OHEPEE organized by Dept, of Zoology, Berhampur University.( <b>Invited</b>

		talk)
Quantification of Environmental	Dr. M.R.Mahananda	Organized by Central Institute of
Impacts of coal Mining in Lajkura		Mining and Fuel Research and
Opencast (surface) mine of IB Valley		the institution of Engineers
coalfields of Odisha, India using Life		(India) Dhanbad. Dt.14-15 Feb
Cycle Assessment (LCA) model. In:		2020.(Full Paper)
Proceeding of National Seminar		
Conferences on Advances in Mining		
(AIM-2020).	D ID 11	0. 51. 15.16.0000
invited to deliver a oral talk in	Dr.I.Baitharu	On Feb. 15-16, 2020 organized
International/ National Conference on		by Department of Zoology,
Crossroads of Biological Science and		Berhampur University
its applications		World Bank under OHEPEE
Successfully completed 4 week	Dr.I.Baitharu	organized by Centre for Science
ofOnlinetraining on "City wide		and Environment, New Delhi
sanitation planning"		from 7th – Oct 5th, 2020.
TEQIP-III sponsored one week online	Dr.I.Baitharu	organized by Department of
Faculty Development Programme on "		Civil Engineering, Veer
Recent Development in Environmental		SurendraSai University of
Engineering"		Technology, Burla during 15th –
		19th September, 2020.

## **13.** Faculty Visited other Institution for higher training:

Name	Programme	Host Institute

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

## **15.** Distinguished visitors in the year (Maximum ten):

The following eminent fellows taught the students as UGC visiting fellows

## 16. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the honour/award			
Dr. S.K Pattanayak	Recognised as International Distinguished Scientist in Geochemistry and received Research Leadership Award of the Year 2020	by International Journal for Research Under Literal Accesson 26 January 2020 At Grandeur Hall, Tamil Nadu.			

#### **17. Academic achievement of the Institution:**

- a) DAS/DRS/ COSSIST/Extension work etc.: NIL
- b) MOU with other Institution: NIL
- c) Centres/Courses running by other Organizations (like IGNOU etc.): 2 COURSES
  P.G. Diploma in Environment Education and Management and PG. Diploma in
  Industrial Safety and Health runing under the aegies of DDCE, Sambalpur University
- d) Publication if any by the Institution: NIL

(Books/Monograph/Magazine)

**18. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:** A Seminar Hall, One Class Room and One Laboratory Constructed during2017-2018

#### **19.** Hostel (for colleges only):Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			

#### **20. Students Achievements:**

## a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF
RAHUL KUMAR	Qualified NTANET/J.R.F. June , 2020 eligibility for Assistant
AGRAWAL	Professor.
DHARMENDRA	Qualified NTANET June, 2020 eligibility for Assistant
SHARMA,	Professor.
S S KALIKINKAR	Qualified NTANET June, 2020 eligibility for Assistant
MAHANTA	Professor.
SAWAN KUMAR	Qualified NTANET June, 2020 eligibility for Assistant
SAHOO	Professor.
KARUNA EKKA	Qualified NTANET June, 2020 eligibility for Assistant
	Professor.
ABHISHEK PATEL	Qualified NTANET June, 2020 eligibility for Assistant
	Professor.

## b)Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

#### d) Participation in NSS/NCC/SCOUT etc. NIL

Sl.No.	Name	Designation	Institute			
1.	Ashis Mohapatra	Scientist	EnvironmentandToxicology, Institute,Canada			
2.	Prof.P.C.Mishra	Expertmember, NGT,Kolkata, India	NGT,Kolkata,India			
3.	Dr.DebashisRaha	Environment Engineer	WallonggongDivision,Sydney, Australia			
4.	Dr.RanjitaPanda	RegionalDirector	ResearchWing,IGNOU,New Delhi			
4.	Dr.P.K.Behera	ScientistE	CPCB,NewDelhi			
5.	Dr. SharadaSrinivasPati	Environmental Scientist	SPCB,Bhubaneswar			
6.	GaganPattanaik	Environmental Manager	LeightonGroup,LEED,AP			
7.	JitendraKumarSahu	Environmental Manager	OMC,Orissa			
8.	AshishKumarDas	Environment Officer	NHPC,NewDelhi			
9.	Dr. AnjanKumar Prusty	Associate Professor	Khalikote University			
10.	SusmitaEkka	Scientist	RPCB,Kolkatta			
11.	Dr.Khageswr Pradhan	Environmental Manager	NTPC. Kaniha			
12.	ArabindaBehera	Environmental Manager	OMC,Orissa			
13.	KumarmaniMeher	Environmental Manager	OMC,Orissa			
14.	SambitBehera	Asst. Environmental Manager	Paradip Port			
15	Dr. Chandansahu	Research Associate	G.M.University			

## e) List of distinguished alumni of the College/Department (Maximum 10)

## f) Student Placement

#### 21. Other Important matters, if any. NIL

#### ANNUAL REPORT FOR THE YEAR- 2021 (From 1<sup>st</sup> January, 2021 to 31<sup>st</sup> December, 2021) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, JyotiVihar, Burla, Sambalpur, Odisha-768019
- **b) E-Mail Id:** headenvsc@suniv.in

#### 2. Year of Establishment: 1989

a) Management : Government

(Government/aided/private applicable to college only)

- b) Whether autonomy granted: Yes
- c) Whether 12B/2f (UGC) accorded: Yes

#### 3. Name of the Head of the University P.G. Department/Principal (with qualification): 1. Prof.S.K.Sahu (01-06-2020-31-12-2020)

1. Proi.5.K.Sanu (01-00-2020-51-12-

**b. Phone No.** 9668220609

**b**) **Email:**headenvsc@suniv.in

c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength of teaching:
	0 0

Designation	Sanction	Actual strength	Vacant
Professor:	1	1	Nil
Associate Professor	1	1	Nil
Asst. Prof/Lecturer:	2	2	Nil
Contractual/Management	2 (Syndicate	2	02
Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction A	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	02
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	02	02
Any other Staff	01 (VC (approve	ed) 01	Nil
(Class-IV staff cum Ga	rdener		
from M Tooh Program	ma)		

from M.TechProgramme)

### 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years) M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

#### 6. Enrollment of Students (Classwise):

Class/Sanction Strength	Ge	neral	C	BC	S	S.C.	S	S.T.		n(s) with ability		nority munity	Total Strength
-	Male	Female	Male	Female									
M.Sc. 1 <sup>st</sup> Sem 2021-2022 2021-23 batch	2	6	1	5	1	3	4	1					23
M.Sc. 3 <sup>rd</sup> Sem 2021-2022 2020-22 batch	4	7	3	3	0	4	0	3					24
M.Phil 2019- 2020batch	02	02	00	00	00	01	00	02					07
M.Phil 2020-2021 batch	2	2	0	0	0	1	0	1					06
M.Phil 2021-2022 batch													
M.Tech. 1 <sup>st</sup> Sem 2021-2022 2021-23 batch	12	7	0	0	0	0	0	0					19
M.Tech. 3 <sup>rd</sup> Sem 2021-2022 2020-22 batch	12	2	0	0	2	0	2	1					19
Ph.D.2020	6	9	2	0	0	2	1	3					23

## 7. Total Number of students appeared and passed (Class wise):

Name of the exam.		Numb dents a			Num	bers of appea		lents	Nui	nbers pas	of stud ssed	lents	Percen tage of
	GEN	OBC	SC	ST	Gen	OBC	SC	ST	Gen	OBC	SC	ST	pass
M.SC. IIND SEM.MAY, 2020 (BATCH 2019-2021)	07	09	05	03	07	09	05	03	07	09	05	03	100
M.SC. IIIRD SEM.DEC, 2020 (BATCH 2019-2021)	07	09	05	03	07	09	05	03	07	09	05	03	100
M.SC. IVTH SEM, SEPT.2021 (BATCH 2019-2021)	07	09	05	03	07	09	05	03	07	09	05	03	100
M. PHIL IIND SEM.DECEMBER, 2020 (2019-2020)	04	00	01	02	04	00	01	02	04	00	01	02	100
M.TECH IINDSEM, MAY, 2020 (BATCH 2019-2021)	16	01	01	00	16	01	01	00	16	01	01	00	100
M.TECH IIIRDSEM, DEC, 2020 (BATCH 2019-2021)	16	01	01	00	16	01	01	00	16	01	01	00	100
M.TECH. IVTH SEM. MAY, 2021 (BATCH 2019-2021)	15	00	01	00	15	00	01	00	15	00	01	00	100

## 8. Number of working days in the last academic year: 271

#### 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

#### **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

Name of the Awardee	Cuorse	Name of the Guide	University where Awarded
SOUMYA SANKALPA PANDA	M.Phil.	Prof.S.K. Sahu	Sambalpur University
SUSMITA NAYAK	M.Phil.	Dr. S.K. Pattanayak	Sambalpur University
ROHAN RAO	M.Phil.	Dr. S.K. Pattanayak	Sambalpur University
MEENA BARIK	M.Phil.	Dr.M.R.Mahananda	Sambalpur University
KIRAN BALA PATRA	M.Phil.	Dr. I. Baitharu	Sambalpur University
KIRAN BALA PATRA	M.Phil.	Dr. I. Baitharu	Sambalpur University

b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

## c) Research Publications:

Sl. No	Name of Author(s)	Title of Paper	Name of Journal	No./Vo./ Year/Page	ISSN No.
	Sahu, R., <b>Sahu. S. K.</b> and Nishank, S. S.	de novo transcriptome profile of two earthworms <i>Lampitomauritii</i> and <i>Drawidacalebi</i> during regeneration	Biochemistry and Biophysics Reports (Elsevier, The Netherlands)	(https:// creativecom mons. org/ licences/ by-nc-nd/ 4.0/)27:101 092.	(ISSN: 2405-5808)
	Dwibedi, S.K., <b>Sahu, S. K.</b> and Pandey, V. C.	Seedling growth and physicochemical transformations of rice nursery soil under varying levels of coal fly ash and vermicompost amendment	Environmental Geochemistry & Health (Springer,The Netherlands)	(https://doi. org/10. 1007/s 10653-021- 01074-y)	(ISSN:0269 -4042)
	Sahu, C. ,Basti, S. and Sahu, S. K.	Particulate collection potential of trees as a means to improve the air quality in urban areas in India	Environmental Processes (Springer Nature, Switzerland)	(https://doi. org/10.1007 /s 40710- 021-00494- 3	(ISSN: 2198-7505; 2198-7491)
	Kumar, K. Arun, <b>Sahu, S. K.</b> and Jayanthi, J.	Developing nations soil microbial community shifts and diversity loss: leading towards major ecological threat	Environment ConservationJour nal	22(3):117- 121,2021(ht tps://doi.org /10.36953/E CJ.2021.22 314).	(PISSN:097 2-3099: EISSN: 2278-5124)
	Sambit Kumar Behera, BidutPravaMohanty, Samikshya Mishra and <b>M.R.Mahananda</b>	Adsorption Effiency of Albizialebeck (Indian Sris) as Bio- adsorbent for quantitative removal of lead metal ion from contaminated water.	Applied Ecology and Environmental Science.	9 (10): 856-864 (2021)	
	NiruPamaMohanty <b>and</b> <b>M.R.Mahananda</b>	The tal-Kholgarh Elephant Corridor in odisha, India.	Gajah	54: 37-39 (2021)	

- a) Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available: Some of the papers cited above are also available online
- b) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

c) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

Sl. No.	Name	Title of Book Chapter	Title of Book and ISBN No.	Publisher's Name and Place of Publication
1	Namita Bhoi and Iswar Baitharu	Current Prespective of Biofunctionalized Nanomaterials in Biology and Medicine in: Rout J.R. (eds)	Biotechnological Advances for Microbiology, Molecular Biology, and Nanotechnology,	CRC Press
	Syed Nikhat Ahmed, Subhashree Subhadarsini Mishra, Jayanta Kumar Sahu, Sabita Shroff, Prajna Paramita Naik, Iswar Baitharu, Sanjat Kumar Sahu	Application of Nanomaterials in Environmental Pollution Abatement and Their Impact on Ecological Sustainability: Recent Status and Future Perspective	Biotechnological Advances for Microbiology, Molecular Biology, and Nanotechnology	Apple Academic Press

## 11.a) Research Project/Programme Undertaken:

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakhs	2 Years	"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide vapors"
OSHEC, DHE, Govt. Of Odisha	Dr. I. Baitharu	4.72 lakhs	2 Years	Identification of source of contaminants in water, flow pathway through food chain and determination of its impact on public health in and around downstream of Hirakud reservoir, Sambalpur, Odisha

## b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

Sl. No.	Name	Guide	Funding Agency
1	KarunaEkka	Dr.S.K.Pattanayak	RGNF UGC, New Delhi
2	MamataChhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi
3	ManjilSangeetaDungdung	Dr.I.Baitharu	RGNF UGC, New Delhi
4.	Syed Nikhat Ahmed	Dr.I.Baitharu	MANF, UGC, New Delhi

## 12.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the	Period	Sponsering Agency
Seminar/Conference/etc		
WEBNIR ON COVID-19		SAMBALPUR UNIVERSITY
PANDEMIC &		
SUSTAINABLE		
DEVELOPMENT		

## b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Symposium/Work shops/Refresher Courseetc	Name of the Teachers Participated	Period and Place
International Webinar on Climate change impact on health in coastal area of bay of Bengal.	Dr.M.R.Mahananda as <b>Resource Person</b>	Organized by A Researcher based project at multipul institution from UK, Thailand, India & Bangladesh dated;-20 <sup>th</sup> July, 2021

#### **13.** Faculty Visited other Institution for higher training:

Name	Programme	Host Institute

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

**15. Distinguished visitors in the year (Maximum ten):** The following eminent fellows taught the students as UGC visiting fellows

#### 16. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the honour/award

#### 17. Academic achievement of the Institution:

- a) DAS/DRS/ COSSIST/Extension work etc.: NIL
- b) MOU with other Institution: NIL
- c) Centres/Courses running by other Organizations (like IGNOU etc.): 2 COURSES P.G. Diploma in Environment Education and Management and PG. Diploma in

Industrial Safety and Health runing under the aegies of DDCE, Sambalpur University d) Publication if any by the Institution: NIL

(Books/Monograph/Magazine)

**18. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:** A Seminar Hall, One Class Room and One Laboratory Constructed during2017-2018

#### **19.** Hostel (for colleges only):Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			

#### **20. Students Achievements:**

#### a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF
ASHUTOSH PATEL	QUALIFIED NTANET / JRF DECEMBER, 2021
	ELIGIBILITY FOR ASSISTANT PROFESSOR.
ANKITA PRAHARAJ	QUALIFIED NTANET / JRF DECEMBER, 2021
	ELIGIBILITY FOR ASSISTANT PROFESSOR.
ASHISH KUMAR	QUALIFIED NTANET. JUNE , 2021 ELIGIBILITY FOR
SAHU	ASSISTANT PROFESSOR.
ABHISHEK SAHU	QUALIFIED NTANET. DECEMBER , 2021 ELIGIBILITY
	FOR ASSISTANT PROFESSOR.
NARAD RAJESH	QUALIFIED NTANET/ NFOBC DECEMBER, 2021
	ELIGIBILITY FOR ASSISTANT PROFESSOR.
ROHAN RAO	QUALIFIED NTANET. DECEMBER, 2021 ELIGIBILITY
	FOR ASSISTANT PROFESSOR.

b)Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

1. Soham Pradhan got 1<sup>st</sup> Prize on Odia Debate Competition at Unversity level

2. Nilamadhabparida got 1<sup>st</sup> Prize on Just a minute Competition at Unversity level

d) Participation in NSS/NCC/SCOUT etc. NIL

Sl.No.	Name	Designation	Institute
1.	AshisMohapatra	Scientist	EnvironmentandToxicology, Institute,Canada
2.	Prof.P.C.Mishra	Expertmember, NGT,Kolkata, India	NGT,Kolkata,India
3.	Dr.DebashisRaha	Environment Engineer	WallonggongDivision,Sydney, Australia
4.	Dr.RanjitaPanda	RegionalDirector	ResearchWing,IGNOU,New Delhi
4.	Dr.P.K.Behera	ScientistE	CPCB,NewDelhi
5.	Dr. SharadaSrinivasPati	Environmental Scientist	SPCB,Bhubaneswar
6.	GaganPattanaik	Environmental Manager	LeightonGroup,LEED,AP
7.	JitendraKumarSahu	Environmental Manager	OMC,Orissa
8.	AshishKumarDas	Environment Officer	NHPC,NewDelhi
9.	Dr. AnjanKumar Prusty	Associate Professor	Khalikote University
10.	SusmitaEkka	Scientist	RPCB,Kolkatta
11.	Dr.Khageswr Pradhan	Environmental Manager	NTPC. Kaniha
12.	ArabindaBehera	Environmental Manager	OMC,Orissa
13.	KumarmaniMeher	Environmental Manager	OMC,Orissa
14.	SambitBehera	Asst. Environmental Manager	Paradip Port
15	Dr. Chandansahu	Research Associate	G.M.University

## e) List of distinguished alumni of the College/Department (Maximum 10)

## f) Student Placement

## 21. Other Important matters, if any. NIL

Signature of the Head/ Principal with Official Seal

#### ANNUAL REPORT FOR THE YEAR- 20222 (From 1<sup>st</sup> January, 2022 to 31<sup>st</sup> December, 2022) (FOR UNIVERSITY P.G. DEPARTMENTS AND COLLEGES ONLY) SAMBALPUR UNIVERSITY

#### 1. Name of the University P.G. Department/College:

P.G. Department of Environmental Sciences

- a) Address: Sambalpur University, JyotiVihar, Burla, Sambalpur, Odisha-768019
- **b) E-Mail Id:** headenvsc@suniv.in

#### 2. Year of Establishment: 1989

a) Management : Government

(Government/aided/private applicable to college only)

- b) Whether autonomy granted: Yes
- c) Whether 12B/2f (UGC) accorded: Yes

#### 3. Name of the Head of the University P.G. Department/Principal (with qualification):

- 1. Prof.S.K.Sahu (01-01-20202-31-05-2022)
- 2. Prof.S.K.Pattanayak (01-06-20202-31-01-2022)

**b**) **Email:**headenvsc@suniv.in

c) Whether Autonomous: Yes

#### 4. Total staff strength: Teaching 06 (4 Regular+2 Contractual); Non-Teaching 08

a)	Strength of teaching:			
	Designation	Sanction	Actual strength	Vacant
	Professor:	1	-	1
	Associate Professor	1	1	Nil
	Asst. Prof/Lecturer:	2	2	Nil
	Contractual/Management	2 (Syndicate	2	02
	Teachers	Approved)		

#### b) Strength of non-teaching staff:

Designation	Sanction A	Actual strength	Vacant
Librarian	Nil	Nil	Nil
Assistant Librarian	Nil	Nil	Nil
Demonstrator	Nil	Nil	Nil
Technical Assistant	02	02	02
Computer Assistant	Nil	Nil	Nil
Class-III Staff	01	01	Nil
Class-IV Staff	04	02	02
Any other Staff	01 (VC (approve	ed) 01	Nil
(Class-IV staff cum Gar	rdener		
from M.TechProgramm	ne)		

#### 5. Course Taught(such as +3 arts/ Science/Commerce/MA/M.Sc./MCom/MBA/Law/MCA/DCA/Engineering/Medical/Homeo pathic/Aurvedic/Diploma/MPhil/Ph.D. etc.)

M.Sc. in Environmental Science (4 semester 2 years) M.Phil in Environmental Science (2 semesters 1 year) Ph.D in Environmental Science (minimum 5 years) M.Tech. in Environmental Science and Engineering (Self financing 2 years 4 Semesters) PGDISH (running under the aegis of DDCE, S.U.):Diploma 1 year programme PGDEEM (running under the aegis of DDCE, S.U.):Diploma 1 year programme

Whether following Annual/Semester/choice based credit systems: Semester based credit system is being followed

#### 6. Enrollment of Students (Classwise):9\*

Class/Sanction Strength	Ge	neral	C	BC	S	S.C.	5	S.T.		n(s) with ability		nority munity	Total Strength
U U	Male	Female	Male	Female	U								
M.Sc. 1 <sup>st</sup> Sem 2022-2023 2022-24 batch	0	6	2	8	2	1	3	2					24
M.Sc. 3 <sup>rd</sup> Sem 2021-2022 2021-23 batch	2	6	1	5	1	3	4	1					23
M.Phil 2021-2022 batch	1	5	0	0	0	0	0	0					6
M.Tech. 1 <sup>st</sup> Sem 2022-2023 2022-24 batch	15	1	0	0	0	0	0	0					16
M.Tech. 3 <sup>rd</sup> Sem 2021-2022 2021-23 batch	12	7	0	0	0	0	0	0					19
Ph.D.2022	8	10	3	0	0	3	1	3					28

## 7. Total Number of students appeared and passed (Class wise):

Name of the exam.	Numbers of students admitted		Numbers of students appeared			Numbers of students passed				Percen tage of			
	GEN	OBC	SC	ST	Gen	OBC	SC	ST	Gen	OBC	SC	ST	pass
M.SC. I SEM.SEPTEMBER, 2021 (BATCH 2020-2022)	11	06	03	03	11	06	03	03	11	06	03	03	100
M.SC. II SEM.NOVEMBER, 2021 (BATCH 2020-2022)	11	06	03	03	11	06	03	03	11	06	03	03	100
M.SC. III SEM.MARCH, 2022 (BATCH 2020-2022)	11	06	03	03	11	06	03	03	11	06	03	03	100
M.SC. IV SEM.JULY, 2022 (BATCH 2020-2022)	11	06	03	03	11	06	03	03	11	06	03	03	100
M.TECH IINDSEM, MAY, 2021 (BATCH 2020-2022)	13	0	2	2	13	0	2	2	13	0	2	2	100
M.TECH IIIRDSEM, DEC, 2021 (BATCH 2020-2022)	13	0	2	2	13	0	2	2	13	0	2	2	100
M.TECH. IVTH SEM. MAY, 2022 (BATCH 2020-2022)	14	0	2	2	14	0	2	2	14	0	2	2	100

## 8. Number of working days in the last academic year: 271

## 9. Library:

- a) Total number of books: 1092
- b) Books added during the year under report: NIL
- c) No. of research journals subscribed: NIL

#### ?

### **10. Research activities**

a) No. of persons registered for Doctoral degree: All the faculty members and technical staffs have Ph.D. degree

Name of the teachers/Other staff	Name of the Guide	University where registered
NIL	NIL	NIL
NIL	NIL	NIL

## b) No. of persons awarded with M.Phil/Ph.D./D.Sc./D.Litt degree:

Name of the Awardee	Cuorse	Name of the Guide	University where Awarded
NIKITA SAHU	M.PHIL.	PROF.S.K. SAHU	
PRAGNYA PARAMITA	M.PHIL.	DR. S.K.	
THATY		PATTANAYAK	
SMRITI BARIK	M.PHIL.	DR. S.K.	
		PATTANAYAK	
RAKESH ROSHAN	M.PHIL.	DR.M.R.MAHANANDA	
SAHU			
SHEPHALI	M.PHIL.	DR. I. BAITHARU	
SUCHARITA			
PRADHAN			
ABANIKANTA	PH.D.	DR. S.K.	
BHADRA		PATTANAYAK	
RABINDRA BARIK		DR. S.K.	
		PATTANAYAK	
DR. PRASHANTI MISHR	D.SC.	PROF.S.K. SAHU	

## c) Research Publications:

Sl. No	Name of Author(s)	Title of Paper	Name of Journal	No./Vo./ Year/Page	ISSN No.
	Dwibedi, S. K. , <b>Sahu, S.K.,</b> Pandey, V. C. , Mahalik, J. K. and Behera, M.	Effect of fly ash and vermicompost amendment on rhizospheric earthworm and nematode count and change in soil carbon pool of rice nursery	Environmental Science and Pollution Research (Springer- Verlag, Germany)	2022	ISSN: 1614-7499
	Chanda, A., Jana A., Sit, G, Das, P., Mukherjee, M.M. and Sahu, S.K.	Are all indigenous freshwater ornamental fishes being petted in aquarium	Indian Hydrobiology	21 (1): 127- 134 2022	ISSN: 0971-6548
	Sit, G., Jana, A., Chanda, A. and <b>Sahu, S.K.</b>	Record of zipper loach <i>Paracanthocobitisbo</i> <i>tia</i> (Hamilton 1822), an ornamental fish from PaschimMedicipur, West Bengal, India	Journal of fisheries	2022	EISSN: 2311-3111
	Ahmed, S.N., Mishra, S.S., Sahu, J.K., Shroff, S., Naik, P.P., Baitharu, I and <b>Sahu,</b> <b>S.K.</b>	Application of Nanomaterials inEnvironmental Pollution Abatementand Their Impact on Sustainability: Recent Status and Future Perspective In: Biotechnological Advances for Microbiology, Molecular Biology, and Nanotechnology,	AppleAcademicPress(CRCPress)TaylorFranscisGroup	pp.629-654. 2022	eISBN: 9781000369 441
	Jana, A., Sit, G, Das P., Chanda, A., and <b>Sahu, S.K</b>	Seasonal length- Weight Relationship and condition factors of MystusTengara (Hamilton, 1822) in Two Habitats	Aquatic Sciences and Engineering (Istanbul University Press, Turkey)	2022	eISSN: 2602-473.X
	1	- no incituto	1	1	1

Sambit Kumar Behera, Samikshya Mishra and Bidut Prava Mohanty Rosismita Bhoi, Malaya Ranjan Mahananda & Abanti Pradhan	of chromium contaminated water by Indian siris Human health risk assessment of pesticides used for rice cultivation in an agricultural pocket	journal of Scientific Research in Biological Sciences Environmental Quality Management (Wiley Online Library)	2022	DOI:10.100 2/tqem.219 08 (IF.1.091)
Rashmita Behera, Bidut prava Mohanty, Malaya Ranjan Mahananda and Samikshya Mishra	of Eastern India Endocrine disruption and physiological alteration in fish exposed to hexavalent chromium	Ecology, Environment and Conservation	28(3): 1628-1635 2022	(IF.0.45) (DOI: http://doi.or g/10.53550/ EEC.2022.v 28103.073
Prajna Paramita Naik, Iswar Baitharu, and Sanjat Kumar Sahu	Application of Nanomaterials in Environmental Pollution Abatement and Its Impact on Ecological Sustainability: Recent Status and Future Perspective	Apple Academic publishers		
Syed Nikhat Ahmeda, Subhashree Subhadarsini Mishraa, Jayanta Kumar Sahub, Sabita Shroffc, Prajna Paramita Naikd, Sanjat Kumar Sahua, Iswar Baitharua	Application of nanomaterials in environmental pollution abatement and its impact on ecological sustainability: recent status and future perspective	Development of Biotechnology in Life sciences	2022	
Namita Bhoi and <b>Iswar</b> <b>Baitharu</b>	Current perspective of biofunctionalized nanomaterials in biology and medicine	Development of Biotechnology in Life sciences		

a) **Provide Particulars of Publication in online Journal/Journals if any with ISSN no. if available:** Some of the papers cited above are also available online

## b) Books/ Monograph written by teachers:

Sl. No.	Name	Title of Book	Publication Name
1			

c) Chapter/Chapters contributed by teachers to books. Details of the title of the book its Publisher, place of publication and ISBN no. are to be mentioned.

Sl. No.	Name	Title of Book Chapter	Title of Book and ISBN No.	Publisher's Name and Place of Publication
1	Namita Bhoi and Iswar Baitharu	Current Prespective of Biofunctionalized Nanomaterials in Biology and Medicine in: Rout J.R. (eds)	Biotechnological Advances for Microbiology, Molecular Biology, and Nanotechnology,	CRC Press
	Syed Nikhat Ahmed, Subhashree Subhadarsini Mishra, Jayanta Kumar Sahu, Sabita Shroff, Prajna Paramita Naik, Iswar Baitharu, Sanjat Kumar Sahu	Application of Nanomaterials in Environmental Pollution Abatement and Their Impact on Ecological Sustainability: Recent Status and Future Perspective	Biotechnological Advances for Microbiology, Molecular Biology, and Nanotechnology	Apple Academic Press

## 11.a) Research Project / Programme Undertaken:

Funding Agency	Name of the Project Director	Amount of Grant Received	Duration	Title of the Project
University Grant Commission (UGC), New Delhi	Dr. I. Baitharu	Rs.10.00 lakhs	2 Years	"Evaluation of HPA axis functioning, stress resilience and neurobehavioral alterations among farmers of Western Odisha following chronic occupational exposure to pesticide
OSHEC, DHE, Govt. Of Odisha	Dr. I. Baitharu	Rs.4.72 lakhs	2 Years	vapors" Identification of source of contaminants in water, flow pathway through food chain and determination of its impact on public health in and around downstream of Hirakud reservoir,
Bhushan Power and Steel Limited, Sambalpur	Prof. S. K. Sahu, Dr.S.K.Pattanayak, Dr. M.R.Mahananda & Dr. I. Baitharu	Rs. 21.05 lakhs	06 Months	Sambalpur, Odisha Studies on Solid Waste Disposal Site of BPSL at Derba, with possible Stabilisation

	Dr. I. Baitharu	Rs. 4.7 Crore	05 years	DBT-BUILDER
DBT, New Delhi				Programme in collaboration
				with Department of
				Biotechnology and School
				of lie Sciences

## b)Teacher Fellow/JRF/SRF/PDF/Visiting Scientist Working:

Sl. No.	Name	Guide	Funding Agency
1	MamataChhuria	Dr. M.R. Mahananda	RGNF UGC, New Delhi
2	ManjilSangeetaDungdung	Dr.I.Baitharu	RGNF UGC, New Delhi
3	Syed Nikhat Ahmed	Dr.I.Baitharu	MANF, UGC, New Delhi
4.	Narad Rajesh	Prof. S.K.pattanayak	NFOBC, UGC, New Delhi

## 12.a) Seminar/Conference/Symposium/Workshop/Refresher Course organized by the Department:

Name of the	Period	Sponsering Agency
Seminar/Conference/etc		
WEBNIR ON COVID-19		SAMBALPUR UNIVERSITY
PANDEMIC &		
SUSTAINABLE		
DEVELOPMENT		

## b) Seminar/Conference/Symposium/Workshops/Refresher Course Attended by the Teachers:

Name of the Seminar/Conference/Symposium/Work shops/Refresher Courseetc	Name of the Teachers Participated	Period and Place
International Webinar on Climate change impact on health in coastal area of bay of Bengal.	Dr.M.R.Mahananda as <b>Resource Person</b>	Organized by A Researcher based project at multipul institution from UK, Thailand, India & Bangladesh dated;-20 <sup>th</sup> July, 2021

#### **13.** Faculty Visited other Institution for higher training:

Name	Programme	Host Institute

## 14. Collaboration and Interaction with any other organization/faculty in a University in Teaching and Research:

#### **15.** Distinguished visitors in the year (Maximum ten):

The following eminent fellows taught the students as UGC visiting fellows

#### 16. Honours/Recognition/Award received by the teachers: NIL

Name of the teacher	Honours/award	Agency giving the honour/award

#### 17. Academic achievement of the Institution:

- a) DAS/DRS/ COSSIST/Extension work etc.: NIL
- b) MOU with other Institution: NIL
- c) Centres /Courses running by other Organizations (like IGNOU etc.): 2 COURSES
  P.G. Diploma in Environment Education and Management and PG. Diploma in
  Industrial Safety and Health running under the aegies of DDCE, Sambalpur University
- d) Publication if any by the Institution: NIL

(Books/Monograph/Magazine)

## 18. Infrastructural facilities available and added during the year under report regarding Building, Laboratory, Play Ground, Computer facilities, Hostel etc. to be specified:

#### 19. Hostel (for colleges only):Not Applicable

	Men	Women	Total
Number of Hostels			
Strength of Boarders			

#### **20. Students Achievements:**

#### a) Qualified in NET/GATE/JRF Examination

Name of the Student	Appoiuntment/NET/GATE/JRF
SUSMITA NAYAK	QUALIFIED NTANET JUNE , 2022 ELIGIBILITY FOR
	ASSISTANT PROFESSOR.
RITAMAYEE	QUALIFIED NTANET JUNE , 2022 ELIGIBILITY FOR
PRADHAN	ASSISTANT PROFESSOR.

b)Extra Curricular achievement (Literary/Music/Painting/Fine arts) by the students (University/State/national level) only: NIL

d) Participation in NSS/NCC/SCOUT etc. NIL

Sl.No.	Name	Designation	Institute
1.	AshisMohapatra	Scientist	EnvironmentandToxicology, Institute,Canada
2.	Prof.P.C.Mishra	Expertmember, NGT,Kolkata, India	NGT,Kolkata,India
3.	Dr.DebashisRaha	Environment Engineer	WallonggongDivision,Sydney, Australia
4.	Dr.RanjitaPanda	RegionalDirector	ResearchWing,IGNOU,New Delhi
4.	Dr.P.K.Behera	ScientistE	CPCB,NewDelhi
5.	Dr. SharadaSrinivasPati	Environmental Scientist	SPCB,Bhubaneswar
6.	GaganPattanaik	Environmental Manager	LeightonGroup,LEED,AP
7.	JitendraKumarSahu	Environmental Manager	OMC,Orissa
8.	AshishKumarDas	Environment Officer	NHPC,NewDelhi
9.	Dr. AnjanKumar Prusty	Associate Professor	Khalikote University
10.	SusmitaEkka	Scientist	RPCB,Kolkatta
11.	Dr.Khageswr Pradhan	Environmental Manager	NTPC. Kaniha
12.	ArabindaBehera	Environmental Manager	OMC,Orissa
13.	KumarmaniMeher	Environmental Manager	OMC,Orissa
14.	SambitBehera	Asst. Environmental Manager	Paradip Port
15	Dr. Chandansahu	Research Associate	G.M.University

## e) List of distinguished alumni of the College/Department (Maximum 10)

## f) Student Placement: 5nos.

## 21. Other Important matters, if any. NIL

## Signature of the Head/ Principal with Official Seal