

Biodiversity Report For St. Xavier's College, Simdega, Jharkhand



Submitted To



St. Xavier's College, Simdega

Environmental Laboratories & Engineering Services Pvt. Ltd.



Plot No. – 30, Mansarovar Enclave, Tupudana, Hatia,
Ranchi – 834003 (Jharkhand)

ISO 9001:2015 Certified, OHSAS: 2007 Certified

[NABL Accredited, MoEF & CC (CPCB) & JSPCB Recognized Laboratory for Environmental
Pollution Monitoring & Analysis].

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ACKNOWLEDGEMENT

The task of performing a biodiversity audit of the campus has been given to Environmental Laboratories & Engineering Services Pvt. Ltd. (ELESPL), Ranchi by St. Xavier's College, Simdega as part of their green effort.

ELESPL hereby express sincere thanks to the following officials of St. Xavier's College, Simdega for their proactive support and courtesy extended to the energy audit team during field study.

Fr. (Rev.) Dr. Roshan Baa (Principal)

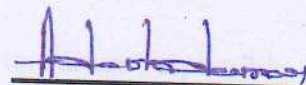
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Bio Diversity of St. Xavier Collage, Simdega, Jharkhand

A survey on biodiversity of St. Xavier College

1. Introduction

The Ranchi Jesuit Society (Jesuits) established "ST. XAVIER'S COLLEGE, SIMDEGA," a Catholic Minority Educational Institution of Higher Education. Its main goal is to give tribal students and the region's marginalized majority access to a Christian university education that fosters their intellectual, social, and spiritual development on all levels. It belongs to the "XAVIERS RANCHI" society, which is registered under the Society's Registration Act XXI of 1860 (No. 198/2005-2006 Jharkhand, No. 13/1958-59 Bihar). It is currently situated on the site of St. John Berchmans Apostolic School Samtoli. St. Francis Xavier, the college's patron saint and one of the original members of the Society of Jesus, is honored by the college's name. With 454 students enrolled in two undergraduate courses in arts and commerce, it began operations on August 1st, 2016. It is associated with Ranchi University in Ranchi, Jharkhand, and students who pass the university's exams will receive degrees from the institution.

St. Xavier's College, Simdega, is a premier institution of higher education in Jharkhand, dedicated to academic excellence and holistic development. Established with the vision of providing quality education to students in the region, the college is affiliated with Ranchi University and is managed by the Jesuit Society, known for its commitment to intellectual and moral growth.

With a strong emphasis on values-based education, St. Xavier's College, Simdega, offers undergraduate and postgraduate programme in arts and commerce, fostering an environment of learning and research. The institution is equipped with modern infrastructure, well-qualified faculty, and a vibrant campus life that promotes both academic and extracurricular excellence.

Rooted in the Jesuit tradition of education, the college strives to nurture responsible citizens who contribute meaningfully to society. Through its commitment to discipline, ethical values, and social service, St. Xavier's College continues to be a center of knowledge and leadership development in the region.

2. Biodiversity available in college Campus:

The college campus has different kinds of flora such as Tree, Shrubs & Herbs, Grasses, Medicinal Plant and climbers. The biodiversity survey of the college campus has been done in much different location. There are many valuable plants planted in the campus. Some large and old trees such as *Tectona grandis* (Sagwan), *Shorea robusta* (Sal, Sakhua), *Ficus religiosa* (Banyan Tree), etc. College campus have some fruiting plants such as *Mangifera indica* (Aam, Mango), *Punica granatum* (Anar, Pomegranate), *Psidium guajava* (Guava, Amrud), *Syzygium cumini* (Jamun), *Ziziphus mauritiana* (Ber) etc, also have some medicinal plant such *Tinospora cordifolia* (Giloy), *Ocimum tenuiflorum* (Holy Basil, Tulsi) etc. The garden area of college has different kinds flowering plants such as *Dahlia pinnata* (Dahlia), *Tagetes erecta* (Marigold), *Trachelospermum jasminoides* (Star jasmine), *Rosa chinensis* (Rose) etc.

College Campus have some common fauna such Birds, Snake, Lizard, Drangonfly, Butterfly, spider, Ants, Crickets & Grasshoppers etc. At the time of survey some fauna has been spotted like garden lizard, wall lizard, yellowish & Blackish butterfly, different types of spiders, Greenish dragonfly and some reddish brown ants, some local birds and some termites also spotted on trees etc, some seasonal and local species of snakes had been recorded on the basis of the verbal communication with gardener person of the college.

According to the biodiversity survey report all the species of flora fauna has listed below with their scientific name and their family name where they belong.

3. FLORA

3.1 Trees

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Tectona grandis</i>	Sagwan	Lamiaceae
2.	<i>Punica granatum</i>	Anar, Pomegranate	Lythraceae
3.	<i>Mangifera indica</i>	Aam, Mango	Anacardiaceae
4.	<i>Swietenia mahagoni</i>	Mahogany	Meliaceae
5.	<i>Shorea robusta</i>	Sal, Sakhua	Dipterocarpaceae
6.	<i>Psidium guajava</i>	Guava, Amrud	Myrtaceae
7.	<i>Gmelina arborea</i>	Gambhar	Lamiaceae
8.	<i>Artocarpus heterophyllus</i>	Kathal, Jackfruit	Moraceae
9.	<i>Dalbergia sissoo</i>	Shisham	Fabaceae
10.	<i>Pongamia pinnata</i>	Karanj	Fabaceae
11.	<i>Azadirachta indica</i>	Neem	Meliaceae
12.	<i>Adina cordifolia</i>	Karam	Rubiaceae
13.	<i>Anacardium occidentale</i>	Kaju, Cashew	Anacardiaceae
14.	<i>Saraca asoca</i>	Ashoka	Fabaceae
15.	<i>Bauhinia variegata</i>	Koinar	Fabaceae

SL . No	Scientific name	Indian Common Name	Family
16.	<i>Areca catechu</i>	Supadi	Areaceae
17.	<i>Syzygium cumini</i>	Jamun	Myrtaceae
18.	<i>Carica papaya</i>	Papaya	Caricaceae
19.	<i>Schleichera oleosa</i>	Kusum, Lac Tree	Sapindaceae
20.	<i>Citrus limon</i>	Lemon	Rutaceae
22.	<i>Tamarindus indica</i>	Imli	Fabaceae
23.	<i>Terminalia catappa</i>	Indian Almond	Combretaceae
24.	<i>Ziziphus mauritiana</i>	Ber	Rhamnaceae
25.	<i>Alstonia scholaris</i>	Blackboard tree	Apocynaceae
26.	<i>Quercus polymorpha</i>	Mexican white oak	Fagaceae
27.	<i>Albizia julibrissin</i>	Pink silk tree	Fabaceae
28.	<i>Ficus religiosa</i>	Banyan Tree	Moraceae
29.	<i>Ficus microcarpa</i>	Chinese Banyan	Moraceae
30.	<i>Pritchardia affinis</i>	Kona fan Palm	Areaceae

3.2 Herbs and Shrubs

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Erythrochiton brasiliensis</i>	Star of Brazil	Rutaceae
2.	<i>Ixora coccinea</i>	Jungle geranium	Rubiaceae
3.	<i>Dahlia pinnata</i>	Dahlia	Asteraceae
4.	<i>Tagetes erecta</i>	Marigold	Asteraceae
5.	<i>Trachelospermum jasminoides</i>	Star jasmine	Apocynaceae
6.	<i>Turnera diffusa</i>	Damiana	Passifloraceae
7.	<i>Euphorbia tithymaloides</i>	Rang chita	Euphorbiaceae
8.	<i>Euphorbia milli</i>	Crown of thorns	Euphorbiaceae
9.	<i>Aucuba japonica</i>	Japanese laurel	Garryaceae
10.	<i>Cordyline fruticosa</i>	Ti plant	Asparagaceae
11.	<i>Aloe barbadensis miller</i>	Aloe vera	Asphodelaceae
12.	<i>Prosopis juliflora</i>	Mesquite	Fabaceae
13.	<i>Plumeria rubra</i>	Frangipani	Apocynaceae
14.	<i>Chrysanthemum indicum</i>	Indian chrysanthemum	Asteraceae
15.	<i>Sonchus oleraceus</i>	Soft thistle	Asteraceae
16.	<i>Thuja compacta</i>	Thuja	Cupressaceae
17.	<i>Hibiscus rosa-sinensis</i>	China rose	Malvaceae
18.	<i>Dracaena reflexa</i>	Dracaena	Asparagaceae
19.	<i>Rosa chinensis</i>	Rose	Rosaceae
20.	<i>Canna indica</i>	Indian shot	Cannaceae
21.	<i>Codiaeum variegatum</i>	Garden croton	Euphorbiaceae
22.	<i>Abutilon wrightii</i>	Indian mallow	Malvaceae
23.	<i>Cymbidium aloifolium</i>	Aloe Leaf Cymbidium	Orchidaceae
24.	<i>Syngonium podophyllum</i>	Arrowhead plant	Araceae

SL . No	Scientific name	Indian Common Name	Family
25.	<i>Mecardonia procumbens</i>	Brahmi	Plantaginaceae
26.	<i>Madagascar periwinkle</i>	Bright eyes, sadabahar	Apocynaceae
27.	<i>Portulaca quadrifida</i>	Chicken weed	Portulacaceae
28.	<i>Euphorbia pulcherrima</i>	Poinsettias	Euphorbiaceae

3.3 Grasses

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Melinis repens</i>	Natal grass	Poaceae
2.	<i>Alternanthera sessilis</i>	Sessile joyweed	Amaranthaceae
3.	<i>Cynodon dactylon</i>	Indian doab	Poaceae
4.	<i>Acalypha rhomboidea</i>	Copper leaf	Euphorbiaceae
5.	<i>Oxalis corniculata</i>	Creeping woodsorrel	Oxalidaceae

3.4 Medicinal Plant

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Tinospora cordifolia</i>	Giloy	Menispermaceae
2.	<i>Ocimum tenuiflorum</i>	Holy Basil, Tulsi	Lamiaceae

3.5 Climbers

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Clitoria ternatea</i>	Aparajita	Fabaceae

4. FAUNA

4.1 Snakes

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Amphiesma stolatum</i>	Buff striped keelback	Amphiesma
2.	<i>Ptyas mucosa</i>	Oriental rat snake	Colubridae
3.	<i>Dendrelaphis punctulatus</i>	Green Tree Snake	Colubridae
4.	<i>Bungarus caeruleus</i>	Indian krait	Elapidae

4.2 Birds

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Milvus migrans</i>	Kite	Accipitridae
2.	<i>Columba livia</i>	Rock Pigeon	Columbidae
3.	<i>Corvus splendens</i>	House Crow	Corvidae
4.	<i>Acridotheres tristis</i>	Common Myna	Sturnidae
5.	<i>Passer domesticus</i>	House Sparrow	Passeridae

4.3 Lizards

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Calotes versicolor</i>	Oriental Garden Lizard	Agamidae
2.	<i>Podarcis muralis</i>	Common Wall Lizard	Lacertidae

4.4 Dragonflies

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Orthetrum sabina</i>	Green marsh hawk	Libellulidae
2.	<i>Caconeura ramburi</i>	Indian blue bombootail	Platycnemididae
3.	<i>Pseudagrion rubriceps</i>	Saffron-faced blue dart	Coenagrionidae
4.	<i>Geotrupes stercorarius</i>	Dor beetle	Geotrupidae

4.5 Butterflies

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Euploea core</i>	Common Crow Butterfly	Nymphalidae
2.	<i>Rapala varuna</i>	Indigo Flash	Lycaenidae
3.	<i>Eurema brigitta</i>	Small Grass Yellow Butterfly	Pieridae

4.6 Spider

SL . No	Scientific name	Indian Common Name	Family
1.	<i>Argiope aemula</i>	Oval St Andrew's cross spider	Araneidae
2.	<i>Argiope trifasciata</i>	Banded garden spider	Araneidae



ELES & St. Xavier's College Team for Green Audit



Cordyline fruticosa (Ti plant)



Trachelospermum jasminoides (Star jasmine)



Euphorbia pulcherrima (Poinsettias)



Cacomeura ramburi (Indian blue bop bootail)



Argiope aemula (Oval St. Andrew's cross spider)



Argiope trifasciata (Banda garden spider)



Saraca asoca (Ashoka)



Tectona grandis (Sagwan)



Mangifera indica (Mango)

5. Conclusion

The biodiversity survey of St. Xavier's College, Simdega, highlights the rich and diverse ecosystem within the campus. The presence of 30 species of trees, 28 types of shrubs and herbs, 5 species of garden grasses, and 2 valuable medicinal plants showcases the ecological significance of the area. Additionally, the survey recorded various fauna, including 4 species of snakes, 5 species of birds, 2 types of lizards, 4 species of dragonflies, 3 species of butterflies, and 2 species of spiders.


This study emphasizes the importance of conservation and sustainable management of the campus flora and fauna. The presence of native and medicinal plant species contributes to environmental balance, while the diversity of avian and insect species indicates a healthy ecosystem.

To maintain and further enhance biodiversity, the college should implement conservation strategies such as plantation drives, habitat protection, and awareness programs among students and staff. Future studies can expand on this work by monitoring seasonal variations in species and evaluating the impact of human activities on biodiversity.

Overall, the study serves as a baseline for future ecological assessments and highlights the role of educational institutions in preserving local biodiversity.

SERVICE INVOICE

(DUPLICATE FOR TRANSPORTER)

 <p>Environmental Lab. & Eng. Services Pvt. Ltd (from 1-Apr-24) Block -A, Flat No- I-109, Tapovan Residential Estat Hawai Nagar, Road No-2, Birsachowk Ranchi-834003 Office Add-Plot No-30, Mansarovar Enclave, Hatia, Tupudaha-Ranchi UDYAM : UDYAM-JH-20-0006735 (Micro/Services) GSTIN/UIN : 20AAECE9713D1Z4 State Name : Jharkhand, Code : 20 CIN: U74999JH2018PTC011125 E-Mail : etes.ranchi@gmail.com</p>	Invoice No. ELESPL/24-25/508	Dated 18-Mar-25
	Reference No. & Date.	Mode/Terms of Payment
Buyer (Bill to) M/S St. Xavier's College (Simdega) PO-Gotra, PS-Simdega Dist-Simdega, Jharkhand State Name : Jharkhand, Code : 20	Buyer's Order No.	Dated
Terms of Delivery		

SI No.	Description of Goods and Services	HSN/SAC	Quantity	Rate	per	Disc. %	Amount
1	Ambient Air Quality Monitoring	999490	3 Point	9,020.00	Point		27,060.00
2	NOISE MONITORING	999490	3 Point	1,540.00	Point		4,620.00
3	Driking Water Analysis	999490	1 nos	10,780.00	nos		10,780.00
4	Waste Water Analysis	999490	1 nos	9,020.00	nos		9,020.00
5	Light Intensity Measurement	999490	4 nos	1,320.00	nos		5,280.00
6	Bio-Diversity	999490	1 nos	15,400.00	nos		15,400.00
7	Energy Audit	999490	1 nos	15,400.00	nos		15,400.00
8	Waste Disposal and Waste Analysis	999490	1 nos	8,800.00	nos		8,800.00
							96,360.00
					9 %		8,672.40
					9 %		8,672.40
							0.20
Total							₹ 1,13,705.00

*verified
received
19/03/25
Principal
St. Xavier's College
Simdega*

Amount Chargeable (in words) **INR One Lakh Thirteen Thousand Seven Hundred Five Only** E. & O.E

HSN/SAC	Taxable Value	CGST		SGST/UTGST		Total Tax Amount
		Rate	Amount	Rate	Amount	
999490	96,360.00	9%	8,672.40	9%	8,672.40	17,344.80
Total	96,360.00		8,672.40		8,672.40	17,344.80

Tax Amount (in words) : **INR Seventeen Thousand Three Hundred Forty Four and Eighty paise Only**

Company's PAN : **AAECE9713D**

Declaration

- WE DECLARE THAT THIS INVOICE SHOWS THE ACTUAL PRICE OF THE SERVICE DESCRIBED AND THAT ALL PARTICULARS ARE TRUE AND CORRECT.
- ADVANCE PAYMENT 100% ALONG WITH WORK ORDER IS REQUIRED

Company's Bank Details

A/c Holder's Name : **ENVIRONMENTAL LAB And ENG SERVICES PVT LTD**
 Bank Name : **HDFC BANK**
 A/c No. : **50200032166360**
 Branch & IFS Code : **Singh More, Hatia, Ranchi & HDFC0005770**

for Environmental Lab. & Eng. Services Pvt. Ltd (from 1-Apr-24)

Niranjan Kumar
Singh

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 Date: 2025.03.18 15:53:45Z
Authorised Signatory