



GOVERNMENT BILASA GIRLS' P.G. COLLEGE BILASPUR (C.G.)

NAAC "B+"

Website-<http://bilasagirlscollege.ac.in> email-bilasagirlscollege_bilaspur@rediffmail.com Ph No./Fax-07752-224249

7.1.6 - Quality audits on environment and energy undertaken by the institution

College have implemented various initiatives to preserve and improve the environment and harness energy. Some of these initiatives include:

1. Recycling: HEI has established recycling contract with a vendor to reduce waste, conserve resources, and minimize the environmental impact of campus activities.



2. Energy Conservation Measures: Implemented energy-efficient practices, such as using LED lighting, and promoting energy-saving behaviors among students and staff.






Masanganj, Chhattisgarh, India
 Magarpara Road, behind TVS Showroom, Ambedkar Nagar,
 Masanganj, Chhattisgarh 495001, India
 Lat 22.079978°
 Long 82.14636°
 23/05/22 12:20 PM

Average use of energy by light

| S.n | Dept./room | No. of bulb | | No. of tubes | | Total bulb | | Total tube | | Average use of energy in kwh per year | Total | Normal | LED |
|-----|-------------------|-------------|-----|--------------|-----|------------|-----|------------|-----|---------------------------------------|--------|----------|-----|
| | | Normal | LED | Normal | LED | Normal | LED | Normal | LED | | | | |
| 1 | Physics | 0 | 0 | 26 | 3 | 0 | 0 | 26 | 3 | 2779.84 | 2657.2 | 122.64 | |
| 2 | Chemistry | 2 | 0 | 47 | 14 | 2 | 0 | 47 | 14 | 5886.72 | 5314.4 | 572.32 | |
| 3 | Comp. science | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 28 | 1144.64 | 0 | 1144.64 | |
| 4 | Mathematics | 0 | 0 | 6 | 2 | 0 | 0 | 6 | 2 | 694.96 | 613.2 | 81.76 | |
| 5 | Botany | 0 | 0 | 33 | 2 | 0 | 0 | 33 | 2 | 3454.36 | 3372.6 | 81.76 | |
| 6 | Zoology | 0 | 0 | 41 | 7 | 0 | 0 | 41 | 7 | 4476.36 | 4190.2 | 286.16 | |
| 7 | Home science | 0 | 0 | 17 | 8 | 0 | 0 | 17 | 8 | 2064.44 | 1737.4 | 327.04 | |
| 8 | Commerce | 0 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 605.535 | 306.6 | 298.935 | |
| 9 | Economics | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 408.8 | 408.8 | 0 | |
| 10 | Political science | 0 | 0 | 0 | 0 | 6 | 2 | 6 | 2 | 1650.53 | 1533 | 117.53 | |
| 11 | History | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 3 | 224.84 | 102.2 | 122.64 | |
| 12 | Geography | 2 | 0 | 8 | 7 | 2 | 0 | 8 | 7 | 1614.76 | 1328.6 | 286.16 | |
| 13 | Sociology | 0 | 0 | 6 | 1 | 0 | 0 | 6 | 1 | 654.08 | 613.2 | 40.88 | |
| 14 | Sociology add | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 122.64 | 0 | 112.64 | |
| 15 | Psychology | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 367.92 | 0 | 367.92 | |
| 16 | Hindi | 0 | 1 | 0 | 3 | 0 | 1 | 3 | 0 | 181.405 | 0 | 181.405 | |
| 17 | English | 0 | 0 | 5 | 7 | 0 | 0 | 5 | 7 | 797.16 | 511 | 286.16 | |
| 18 | Sanskrit | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 102.2 | 102.2 | 0 | |
| 19 | Urdu | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 122.64 | 0 | 122.64 | |
| 20 | Music | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 102.2 | 102.2 | 0 | |
| 21 | NCC | 0 | 0 | 3 | 2 | 0 | 0 | 3 | 2 | 388.36 | 306.6 | 81.76 | |
| 22 | Library | 0 | 1 | 6 | 28 | 0 | 1 | 6 | 28 | 18816.605 | 613.2 | 1203.405 | |


 Principal
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| | | | | | | | | | | | | |
|----|-------------------|---|----|----|----|---|----|----|----|-----------------|--------------|-----------------|
| 22 | Library | 0 | 1 | 6 | 28 | 0 | 1 | 6 | 28 | 18816.605 | 613.2 | 1203.405 |
| 23 | NSS | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 352.59 | 0 | 352.59 |
| 24 | Principal chamber | 0 | 1 | 4 | 11 | 0 | 1 | 4 | 11 | 917.245 | 408.8 | 508.445 |
| 25 | Verandah | 0 | 51 | 22 | 24 | 0 | 51 | 22 | 24 | 6226.535 | 2248.4 | 3978.135 |
| 26 | Rn 6 | 0 | 0 | 3 | 5 | 0 | 0 | 3 | 5 | 511 | 306.6 | 204.4 |
| 27 | Rn 7 | 0 | 0 | 3 | 5 | 0 | 0 | 3 | 5 | 511 | 306.6 | 204.4 |
| 28 | Rn 19 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 511 | 511 | 0 |
| 29 | Rn 20 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 613.2 | 613.2 | 0 |
| 30 | Rn 24 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 408.8 | 408.8 | 0 |
| 31 | Rn 25 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 408.8 | 408.8 | 0 |
| 32 | Rn 26 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 511 | 511 | 0 |
| 33 | Rn 34 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 613.2 | 613.2 | 0 |
| 34 | Rn 35 | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 715.4 | 715.4 | 0 |
| 35 | Rn 46 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 36 | Rn 47 | 0 | 0 | 5 | 6 | 0 | 0 | 5 | 6 | 756.28 | 511 | 245.28 |
| 37 | Rn 48 | 0 | 0 | 4 | 6 | 0 | 0 | 4 | 6 | 654.08 | 408.8 | 245.28 |
| 38 | Rn 49 | 0 | 0 | 4 | 6 | 0 | 0 | 4 | 6 | 654.08 | 408.8 | 245.28 |
| 39 | Rn 50 | 0 | 0 | 4 | 6 | 0 | 0 | 4 | 6 | 654.08 | 408.8 | 245.28 |
| 40 | Rn 51 | 0 | 0 | 4 | 6 | 0 | 0 | 4 | 6 | 654.08 | 408.8 | 245.28 |
| 41 | Rn 52 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 42 | Rn 53 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 43 | Rn 54 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 44 | Rn 55 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 45 | Rn 56 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 46 | Rn 57 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 245.28 | 0 | 245.28 |
| 47 | Rn 61 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 613.2 | 613.2 | 0 |
| 48 | Rn 62 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 0 | 613.2 | 613.2 | 0 |
| | TOTAL | | | | | | | | | 48276.73 | 34237 | 14039.73 |


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3. Green Building Practices: HEI has eco-friendly buildings with sustainable materials, energy-efficient designs, and green technologies to reduce energy consumption and promote environmental sustainability.
4. Tree Plantation and Afforestation: College engage in tree plantation drives and afforestation projects to enhance green cover, combat climate change, and create a healthier environment on campus.



5. **Water Conservation:** Implemented water-saving measures, such as rainwater harvesting, ground water recharge, and promoting water conservation practices among students and faculty.



6. **Waste Management Programs:** Established waste management systems and monitored that the waste materials to be collected timely by Bilaspur Municipal Corporation to reduce, reuse, and recycle waste. HEI also promotes composting, and minimizing landfill contributions.



Waste collection by Nagar Nigam Bilaspur

7. Renewable Energy Initiatives: Installed solar panels, and other renewable energy sources to generate clean energy on campus and reduce reliance on fossil fuels.



8. Environmental Education and Awareness: Prescribed courses on environmental issues, conduct workshops, seminars, and campaigns, and various other activities to educate students and staff about environmental issues, sustainability practices, and the importance of conservation.

These initiatives collectively contribute to creating a more sustainable and environmentally conscious campus environment, fostering a culture of environmental responsibility and energy efficiency among college communities.

Plant species present in the college campus were audited by the Department of Botany. The taxonomical identification includes the botanical name, common name and number of plants. The following table provides the details of the audited tree species in the campus.

List of Botanical Plants in the College Campus


Department of Botany
List of Plants in the college campus (2022-2023)

| Tree | | |
|--------------|--------------------|---------------------------------|
| S.No. | Common Name | Botanical Name |
| 1 | शीशम | <i>Dalbergia sissoo</i> |
| 2 | अमलतास | <i>Cassia fistula</i> |
| 3 | सागौन | <i>Tectona grandis</i> |
| 4 | आंवला | <i>Phyllanthus emblica</i> |
| 5 | नीम | <i>Azadirachta indica</i> |
| 6 | जंगलजलेबी | <i>Pithecellobium dulce</i> |
| 7 | कन्द | <i>Dioscorea bulbifera Linn</i> |
| 8 | कटहल | <i>Artocarpus heterophyllus</i> |
| 9 | बबूल | <i>Acacia nilotica</i> |
| 10 | बेल | <i>Aegel marmelos</i> |
| 11 | जामुन | <i>Syzygium cumini</i> |
| 12 | करंज | <i>Millettia pinnata</i> |
| 13 | बरगद | <i>Ficus benghalensis</i> |
| 14 | आम | <i>Mangifera indica</i> |

| | | |
|----|-------------|----------------------------|
| 15 | नीलगिरी | <i>Eucalyptus spp.</i> |
| 16 | पीपल | <i>Ficus religiosa</i> |
| 17 | क्रिसमसट्री | <i>Araucana columnaris</i> |
| 18 | अमरूद | <i>Psidium guajava</i> |
| 19 | कचनार | <i>Bauhinia variegata</i> |
| 20 | अशोक | <i>Saraca asoca</i> |
| 21 | नारियल | <i>Cocos nucifera</i> |
| 22 | बादाम | <i>Prunus amygdalus</i> |
| 23 | बेर | <i>Ziziphus mauritiana</i> |
| 24 | मुनगा | <i>Moringa oleifera</i> |
| 25 | सेमल | <i>Bombax ceiba</i> |
| 26 | महोगनी | <i>Swietenia mahagon</i> |
| 27 | विलायतीबबुल | <i>Vachella farnesiana</i> |
| 28 | सीताफल | <i>Annona squamosa</i> |
| 29 | सायकस | <i>Cycus spp.</i> |
| 30 | जुनिपेरस | <i>Juniperus</i> |
| 31 | विद्यापति | <i>Thuja</i> |
| 32 | अमलतास | <i>Cassia siamea</i> |

| 34 | तेजपत्ता | <i>Cinnamomum tamala</i> |
|--------------|-------------|------------------------------|
| 35 | बोहारभाजी | <i>Cordia dichotoma</i> |
| 36 | गंगाइमली | <i>Pithecellobium dulce</i> |
| HERBS | | |
| S.No. | Common Name | BotanicalName |
| 1 | लेमनग्रास | <i>Cymbopogon martinii</i> |
| 2 | केसरिया | <i>Barleria prionitis</i> |
| 3 | फर्न | <i>Adiantum capillus</i> |
| 4 | अश्वगंधा | <i>Withania somnifera</i> |
| 5 | अपराजिता | <i>Clitoria ternata</i> |
| 6 | मनीप्लांट | <i>Epipremnum aureum</i> |
| 7 | चिरैयाफूल | <i>Impatiens balsamina</i> |
| 8 | तुलसी | <i>Ocimum sanctum</i> |
| 9 | दौना | <i>Ocimum gratissimum</i> |
| 10 | छुईमुई | <i>Mimosa pudica</i> |
| 11 | मोंगरा | <i>Jasminum grandiflorum</i> |
| 12 | हेज | <i>Duranta erecta</i> |
| 13 | गुलदाउदी | <i>Chrysanthemum sps.</i> |
| 14 | सदासुहागन | <i>Catharanthus roseus</i> |

| | | |
|----|--------------------|--------------------------------|
| 6 | कपास | <i>Gossypium herbaceum</i> |
| 7 | टेकोमा | <i>Tecoma stans</i> |
| 8 | केला | <i>Musa paradisiaca</i> |
| 9 | फायर ब्रश पौधा | <i>Hemalia petens</i> |
| 10 | सतावर | <i>Asparagus racemosus</i> |
| 11 | मधुमालती | <i>Combretum indicum</i> |
| 12 | कुंदा | <i>Jasminum oleaceae</i> |
| 13 | भुआवला | <i>Phyllanthus emblica</i> |
| 14 | पीलीकनेर | <i>Thevetia nerifolia</i> |
| 15 | छीन | <i>Phoenix spp.</i> |
| 16 | क्रोटल | <i>Croton spp.</i> |
| 17 | मिर्चीमदार | <i>Malvaviscus arboreus</i> |
| 18 | अनार | <i>Punica granatum</i> |
| 19 | पत्थर घूर | <i>Coleus spp.</i> |
| 20 | पर्पल हार्ट प्लांट | <i>Tradescantia spp.</i> |
| 21 | आक | <i>Calotropis gigantea</i> |
| 22 | कनेर | <i>Nerium oleander</i> |
| 23 | मदार | <i>Hibiscus -rosa-sinensis</i> |
| 24 | जंगल फ्लेम | <i>Ixora spp</i> |


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