ENVIRONMENTAL ASSESSMENT REPORT

SONAMUKHI COLLEGE

Sonamukhi, Bankura

ACADEMIC SESSION 2018-2019

Campus Area:

Sonamukhi College has 29056.42 sq.mts areas with green fields, gardens in front side and a medicinal plant garden in the central position. The campus is decorated with flowering plants and harbor many large trees. Moreover, the campus is green having perfect match with adjacent deep forests.

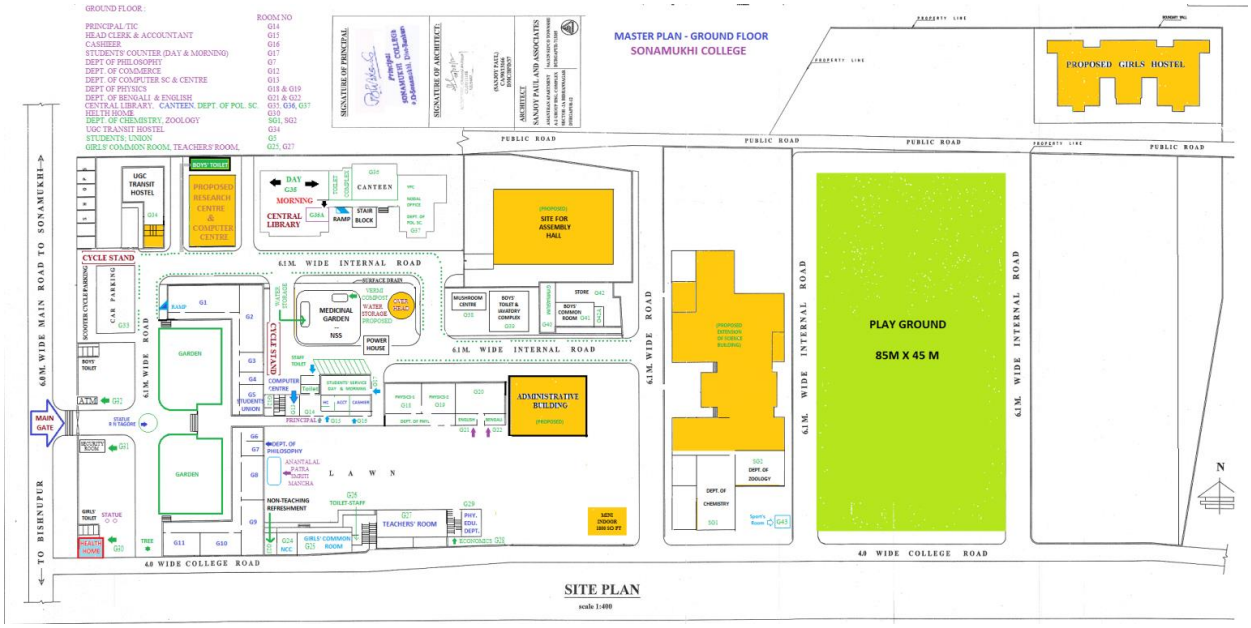
Vision:

In an eco-friendly geographical location & within a backward socio-economic rural base, the college started its journey on 17th August, 1966. The conceptualization to establish this college was to create a class of intellectuality, morally and spiritually sound and committed citizen, who will become a human resource of high caliber, to cater to the needs of the society and the country as a whole.

Mission:

The mission of the college encompasses the following ideals:

- To spread higher education among the first generation learners with particular emphasis on SC and SC students who form a large part of the Sonamukhi Block and broadly at Bankura district.
- To provide qualitative education mainly to the students coming from the poor, backward community of Sonamukhi.
- To motivate the students in academic events, cultural events and sports.
- To uplift ecological and environment awareness, to infix values like self-respect, social quality, secularism, brotherhood and national integration by organizing various activities in the college.
- To orient discipline among the students in terms of sincerity, regularity, punctuality, humanity and inspire them to develop socially responsible citizen of India.
- To drive the students as well as the teachers into innovative research by organizing Seminar lectures and workshops with the speeches of eminent persons of different fields.
- Moreover, to qualify the students to reach national and global standard.



Map of the Campus of Sonamukhi College

Google Map of the Campus of Sonamukhi College

List of Plants in College Campus:

BOTANICAL NAME	FAMILY
1. *Polyalthia longifolia*	Anonaceae
2. *Tectona grandis*	*Verbenaceae*
3. *Roystonia regia*	Arecaceae
4. *Mangifera indica*	Anacardiaceae
5. *Mussandus frondus*	Rubiaceae
6. *Acacia moliniformis*	Mimosaceae
7. *Croton bonplandianum*	Euphorbiaceae
8. *Cycas circinalis*	Cycadaceae
9. *Duranta pulmieri*	Verbenaceae
10. *Gardenia latifolia*	Rubiaceae
11. *Hibiscus rosa-sinensis*	Malvaceae
12. *Ixora parviflora*	Rubiaceae
13. *Thuja oxidentalis*	Cupressaceae
14. *Rosa indica*	Rosaceae
15. *Euphorbia hirta*	Euphorbiaceae
16. *Caesalpinia pulcherima*	Caesalpinaceae
17. *Canna indica*	Cannaceae
18. *Melia azadirachta*	Meliaceae
19. *Araucaria excelsa*	Araucariaceae
20. *Chrysanthemum sp.*	Asteraceae
21. *Switenia mehagini*	Meliaceae
22. *Sida cordifolia*	Malvaceae
23. *Madhuca indica*	Sapotaceae
24. *Borasus flabelifer*	Arecaceae
25. *Leucus aspera*	Lamiaceae
26. *Zymnema sylvestris*	Apocynaceae
27. *Datura metel*	Solanaceae
28. *Oldenlandia corymbosa*	Rubiaceae
29. *Adhatoda vasica*	Acanthaceae
30. *Bacopa moneri*	Scrophulariaceae
31. *Linderdia sp*	Scrophulariaceae
32. *Ficus religiosa*	Moraceae
33. *Peltoforum sp.*	Fabaeae
34. *Eupatorium sp.*	Asteraceae
35. *Michenia sp.*	Asteraceae
36. *Spermacoce hispida*	Rubiaceae
37. *Clerodendron sp.*	Acanthaceae
38. *Achyranthus aspera*	Amaranthaceae
39. *Spilanthus sp.*	Asteraceae
40. *Cassia sophera*	Caesalpiniaceae
41. *Cassia oxidentalis*	Caesalpiniaceae

42. *Cassia tora*	Caesalpiniaceae
43. *Vernonia sp*.	Asteraceae
44. *Blumia sp.*	Asteraceae
45. *Paperomia sp.*	Piperaceae
46. *Scoparia dulcis*	Scrophulariaceae
47. *Sida cordifolia*	Malvaceae
48. *Cyperus sp.*	Cyperaceae
49. *Cynodon sp*.	Cyperaceae
50. *Cephalandra indica*	Cucurbitaceae
51. *Tephrosia purpurea*	Fabaceae
52. *Crotalaria pallida*	Fabaceae
53. *Jatropha sp*.	Euphorbiaceae
54. *Calotropis procera*	Asclepiadaceae
55. *Eragrostis sp*.	Poaceae
56. *Vitex negundo*	Verbenaceae
57. *Ruellia prostrata*	Acanthaceae
58. *Eclipta alba*	Asteraceae
59. *Centella asiatica*	Apiaceae
60. *Aloe vera*	Asphodelaceae
61. *Rhoeo discolor*	Commelinaceae
62. *Curcuma longa*	Zingiberaceae
63. *Curcuma amada*	Zingiberaceae
64. *Mentha spicata*	Lamiaceae
65. *Dryospyros melanoxylon*	Ebenaceae
66. *Syzygium aromaticum*	Myrtaceae
67. *Gmelina arboria*	Verbenaceae

MEDICINAL PLANTS IN COLLEGE MEDICINAL GARDEN

BOTANICAL NAME	**FAMILY**
1.*Centella asiatica*	Apiaceae
2.*Elaeocarpus ganitrus*	Elaeocarpaceae
3.*Averrhoa carambola*	Oxalidaceae
4. *Calotropis gigantia*	Apocynaceae

5.*Terminallia chebula*	Combretaceae
6.*Impatiens psillacina*	Balsaminaceae
7.*Piper longum*	Piperaceae
8. *Syzygium aromaticum*	Myrtaceae
9.*Citrus maxima*	Rutaceae
10. *Citrus limon*	Rutaceae
11.*Citrus limonia*	Rutaceae
12. *Stevia rebandiana*	Asteraceae
13.*Ayapana triplinervis*	Asteraceae
14. *Mentha spicata*	Lamiaceae
15. *Elettaria cardamomum*	Zingiberaceae
16. *Zingiber officinalis*	Zingiberaceae
17. *Mimosa pudica*	Fabaceae
18. *Cinnamomum tamala*	Lauraceae
19. *Murraya koenjgii*	Rutaceae
20. *Citrus aurantifolia*	Rutaceae
21. *Aloe vera*	Asphodelaceae
22. *Ocimum basilicum*	Lamiaceae
23. *Ocimum sanctum*	Lamiaceae
24. *Datura metel*	Solanaceae
25. *Catharanthus roseus*	Apocynaceae
26. *Aegle marmelos*	Apocynaceae
27. *Adhatoda vasica*	Acanthaceae
28. *Centella asiatica*	Apiaceae

29. *Jatropha gossypifolia*	Euphorbiaceae
30. *Bacopa moneri*	Scrophulariaceae
31. *Emblica officinalis*	Euphorbiaceae

List of Animals in College Campus:

Parasitic Protozoa- *Gregarina sp.*

Phleobum sp.

Quadruspinospora sp.

Stylocephalus sp.

Nyctotherus sp.

Annelids- *Pheretima* sp.

Arthopods- Butterflies, several insects and Honey bees.

Birds-

1. Domestic pigeon	*Columba livia domestica*
2. Yellow-footed green pigeon	*Treron phoenicoptera*
3. Rufous Turtle Dove	*Streptopelia orientalis*
4. Parrot	*Psittacula euparia*
5.	
6. Koel	*Eudynamis scolopaceus*
7. woodpecker (Kathphorwa)	*Dendrocopus mahrattensis*
8. Common house sparrow	*Passer domesticus*
9. Common house crow	*Corvus splendens*

10. Green bee-eater	*Merops orientalis*
11. White-eared Bulbul	*Pycnonotus leucotis*
12. Red-vented Bulbul	*Pycnonotus cafer*
13. Indian Golden Oriole	*Oriolus kundoo*
14. Indian Scops- Owl	*Otus bakkamoena*

Garden of Sonamukhi College: structure and maintenance

The campus is made as green as possible by planting good number of trees and plants by students and the College gardeners. Tree plantations are organized regularly to create clean and green campus. The college has a well maintained beautiful garden with rich variety of plants. The garden extends from the front gate associated area and extends towards the science building. The frontal area of the canteen is a pleasure to watch due to the proper maintenance of the garden. The garden contains several flowering and non-flowering plants to create an attractive look to the campus. NSS volunteers also maintain the garden at regular intervals. The college uses its own manure generated from canteen waste to nurture the garden plants and sometimes necessary fertilizers are purchased to sustain the soil quality. Regular watering is done by assigned staffs of the college.

Energy Utilization in Campus:

1. Best practice of our college is use of **solar energy** to produce electricity. Actually solar energy system converts the sun's energy into another form of energy, like electricity. Although, we have installed fewer panels to reach a desired power target. This plan was to reduce the cost of electric bills. 4 years back, we have installed these solar panels and hope it will last for another 26 years. This energy source is now very essential for our college; as it is a renewable source of energy. Moreover, it is environment friendly.

2. Near about 10 years back we have planned for **rainwater harvesting**. On the rooftop of first floor, just above the top roof of our new room number 13, we have installed tools to redirect the rainwater to two reservoirs located at medicinal plant garden. We think it is a good way to conserve water in the drought area like Sonamukhi, Bankura. It helps us in

preserving water for future needs. One may say, it is an artificial method. But it helps us to irrigate the garden and green belts of the college campus. So we do not miss use even the rain water. We don't allow the rainwater to run off. It may be said that, this harvesting plan of our college is for sustainable water management. So, in summer we do not feel crisis of water. Though, this water is not of drinkable quality.

3. We have replaced with **LED bulbs** all the previously installed filament lights scattered around the college campus. As these bulbs use more than 75% less energy than the early installed bulbs. LED stands for light emitting diode. 95% of the energy in LEDs is converted into light and only 5% is wasted as heat. However, the inner workings of LED bulbs are quite a bit different from other standard bulbs of the market. It is now the most efficient lights on the market. Replacing the other standard bulbs like CFL in our college campus we found energy efficient light which has lessened our consumed electricity bills. Show the lesson we have learnt by using this LED bulbs that it produce bright light while using very little electricity consumption. Moreover, LED has thermal management capacity and has configuration to manage heats. LED bulb emits light in a specific direction. Actually, we found LED produce light up to 90% more efficiently than the earlier installed CFL bulbs.

Waste Management practices adopted by Sonamukhi College

There is a well-organized practice policy for waste management run in our college. The liquid wastes, solid wastes as well as e-wastes are managed in an eco-friendly way.

i) Liquid Waste management

Liquid waste from the points of generation like the canteen and toilet etc. is let out as effluent into a proper drainage facility and to avoid stagnation. Regular check-ups are made to ensure that the drainage systems are properly functioning. We are following Good Laboratory Practices to ensure the safety of the personnel. Laboratory liquid chemical waste are collected and safely disposed after proper neutralization. Microbiologically contaminated liquid wastes are expelled after proper decontamination process.

ii) Solid Waste Management

As part of the Green initiative, the college always tries to reduce the waste through reuse and recycling which ensures the cleanliness and eco-balance in the campus. The major solid waste materials generated in the college includes food waste, plastic and papers. The food and plastic wastes from the campus are collected by placing waste bins at various locations in the campus. Every day all the academic buildings and other surrounding area in the campus are cleaned by out concerned staffs and they separate out waste and dispose accordingly. Biodegradable solid wastes are dumped at specific area of the college where they are converted into manure. This manure is later on used for gardening purpose of the college.

iii) E-waste management

Electronic goods are used at its optimum level by proper up gradation and maintenance which is done by the suppliers themselves. Periodic checking ensures the proper disposal of non-working electronic items. All the miscellaneous e-waste such as CDs, batteries, fluorescent bulbs, PCBs and electronic items are collected from every department and office and delivered for safe disposal. Useful parts of electronic gadgets like resistors, capacitors, inductors, diodes, transistors, thermostats etc. are removed from the gadgets for reuse in practical/projects of relevant departments.

This Environmental Report of Sonamukhi College is checked by –

Sailen Madan.
08/03/2019

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