



V. M. Salgaocar Institute of International Hospitality Education Manora-Raia

Green Report - 2019



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FOREWORD

V. M. Salgaocar Institute of International Hospitality Education (VMSIHE) is an institution which is determined to follow the best practices in all possible areas. Right from the inception, plans were put in place to ensure that the green cover would be retained and the Institute would be surrounded by greenery like the rest of Raia. A visit to Manora Raia will give visitors a picturesque scene of coconut trees, paddy fields, fruit bearing trees and pastoral beauty.

Some of the practices like water harvesting sewage treatment were planned at the time of establishing the Institute as part of effective management practices. By the time the institute was effectively functional, many of the plans were in existence. All these measure have aided us in a large way to run an Institution following the Best Practices.

It was decided that a Green Report should be prepared listing the practices for maintaining eco-friendly measures in a more systematic, objective manner and also to explore the immense possibilities of environmental services that can be offered through and for stake holders. A committee was formed to ensure that strategies and operations were fulfilled and went beyond mere compliance.

It is with great pride that we state our Institution has been the recipient of the **Swachatam Mahavidyalaya Samman Award** for the cleanest college in Goa for 3 consecutive years **2016-17, 2017-18 and 2018-19.**

Prof. Irfan S. Mirza
Director / Principal

Executive Summary

The greening of the VMSIHE has been part of the strategic and operational planning by the management, right from its inception. It was decided that an effective Management practice would be to maintain “green reports” to provide direction to potentialities, improvements and other procedural practices. It would also ensure clarity and focus in institutional functioning towards quality enhancement. A healthy environment in the Campus was posited.

It was concluded at a meeting that an environmental audit was an absolute necessity because while it takes into account the environmental diversity, it also leads to a process of identification, quantification and analysis of this diversity.

A formation of a committee was envisaged to explore the immense possibilities of environment services that can be offered for stakeholders. The committee consists of the following members:

Prof. Irfan Mirza, Director/Principal	- Chairman
Dr. Marie Raj, Administrator	- Member
Ms. Sujatha Madhavan, Associate Professor	- Member
Ms. Nelissa Alcasoas, Asst. Professor	- Member
Mr. Savio D’Souza, Security Supervisor	- Member

The report was prepared to evaluate the present scenario of the campus with regard to the greening of the institute as well as an analysis of this report threw up a number of suggestions which could be implemented and followed in stages.

It was observed that while a number of healthy measures were taken by the institute, there was room for development which is conducive for changes, for better minimisation of waste planning, energy conservation and implementing sustainable development. The suggestions would mean:

- More efficient use of energy
- Maintaining and supplementing the existing diversity
- Planting trees and ornamental flowering plants
- Increased student activities

Dr. Marie Raj
Administrator

Introduction to VMSIHE

V. M. Salgaocar Group of Companies was established in Goa in 1952 under the visionary leadership of founder chairman, the late Mr. Vassudev M. Salgaocar. Drawing from the rich experience of an illustrious past, the company has a clear vision for the future. This vision is backed by an enlightened leadership under the chairmanship of Mr. Dattaraj V. Salgaocar, owner of VMSC, assisted by a talented team of executives and committed work force, enhanced with modern technology and business dynamics. V. M. Salgaocar Corporation Pvt. Ltd. (VMSC) owns hotels and hospitality assets. It is in process of expanding its educational presence. In the HE realm, the group has a law college and the recently established the V. M. Salgaocar Institute of International Hospitality Education (VMSIHE).

Profile of VMSIHE

Set up to high international standards, VMSIHE is a leading hospitality institute in Goa that offers the finest hospitality education with world class infrastructure. Affiliated to the Goa University, backed with strong international exchange program, internships and placements in starred hotels, VMSIHE uses a perfect combination of academic learning, practical sessions and professional internship to give students a strong foundation and an internationally acclaimed hospitality degree for a global career.

Location of VMSIHE

VMSIHE is situated in the rural area of Manora-Raia in Salcete Taluka, South Goa.

Geographical Map of VMSIHE



Flora and Fauna in the campus

The VMSIHE campus, spread over 6 acres is a clean and green campus, was built keeping in mind the biodiversity of the surroundings. The layout of campus was planned in detail keeping in mind not only the aesthetic value but also to encourage the students and residents to make use of the outdoor facilities, which would help in the physical and mental well-being of the residents.

Places were earmarked for the indoor courtyard, front garden and vegetable garden and a lot of trees were planted during the construction stage itself. As the institute started functioning more and more plants were added to increase the green cover of the campus. Flowering plants like marigold, butterfly pea plant, jasmine etc. which are very essential for attracting bees and other pollinators are grown not only for adding colour but also to help the fruit bearing plants which are growing in the vegetable garden.

Fruit plants having medicinal properties like soursop, pomegranate, pomelo, chickoo, guava, papaya were also grown. Herbs and spices used for everyday cooking having medicinal properties like curry leaves, cinnamon, allspice, bishops weed, bay leaves, basil, sage, mint are grown not only in the ground but also in pots.

Air purifying indoor plants like snake plant, money plant, aloe vera, peace lily and other ornamental plants were placed all around the campus and inside the office spaces to balance the supply of fresh air.

The campus also has regular avian visitors and residents like owls, kingfishers, mynas, egrets, sparrows, pigeons, magpie robins, red vented bulbuls, green bee-eaters, crows, eagles etc. Insects and pests like earthworms, millipedes, lizards, garden lizards, bandicoots, ants, grasshoppers, spiders, frogs, squirrels, monkeys and occasionally snakes have been spotted in and around the campus.





Bee Keeping

To enrich the pollination of the plants, honey bee cultivation was also initiated in a limited manner. We have a contract with Raika Beekeeping and Pollination Services, Benaulim, Salcette, Goa. The agency provides training to our gardeners for the regular cleaning and upkeep. Honey is collected twice a year.



Green Cover – Diversity of Vegetation in the neighbourhood

Situated in the rural area of Raia, our institute is surrounded with variety of trees, plants, paddy fields. Two big and old banyan trees are growing in the neighbouring areas. These photos give you a view of the greenery adjoining and around the Institute.



There are many mangroves, springs, paddy farms, organic vegetable farms, integrated vegetable farms, prawn cultivation, cashew plantations also in our surrounding villages.



Spring



Paddy Farm



These pictures in the vicinity of VMSIHE are witness to the beauty of nature that Manora-Raia is blessed with.

Need for a Green Report

A green audit will empower an Institute to improve its environmental and economic performance by recognizing opportunities to enable development through sustainable practices thereby reducing costs and wastage and boosting the overall environmental quality, health, hygiene and safety.

Objectives

1. Encapsulating an environmental vision for the Institute and developing processes for its implementation.
2. Compliance with ISO environment standards.
3. Studying and assessing environmental impact on the air, water, soil, employee health and safety and society at large.
4. Identifying any leakage, spills or other such problems with the operations and processes and rectification.
5. Organising student awareness programmes to encourage them to volunteer, participate and inculcate greening habits.

This audit will help us to study the environmental impact of each and every process and operation within the institute. It will enable the management to develop an environmental strategy for moving towards the greener surrounding in the campus and its benefits to the society at large.

The audit process will collect details required for external auditing in the near future. The background information on the facilities, organisation, layout, processes and relevant regulations and standards have to be taken into consideration. It will enable the institute to realise how relevant the institute can be to promote the cause of eco-friendly positive measures.

Existing Processes

- **Food Waste Disposal Process at V. M. Salgaocar Institute**

The institute deals with Food Production and F&B Services as part of curriculum, the kitchens and cafeteria stations require a proper food disposal system as wet waste is generated. We have installed a system in place for converting food waste generated into organic compost.

There is a separate designated area wherein we have installed the entire system with different machines like double stage compost shredder, composting machine (OWC 30) for converting wet waste such as kitchen waste, garden waste, food processing waste etc. into compost. The system is designed to eliminate odour and also to remove the problem of irritants such as flies and rats. There is curing system and a number of optional accessories for specific waste challenges.



The entire set up is operated and maintained by out- sourced agency: M/s. Shruti Envirocare Pvt. Ltd.

Process

Wet garbage is received at composting machine room from kitchen on daily basis at a fixed time. Generally it is collected at 08.00 am in the morning and at 2.45 pm in the afternoon. On an average around 8 to 12 kg wet garbage is generated and treated.

All the kitchens are equipped with different coloured food grade dustbins to segregate the waste generated in the kitchen. The waste is then kept in the garbage room and is collected by the person in charge of the operation. The food waste is checked and weighed on the weighing scale. The details are recorded. It is then transferred by trolley to the compost plant for further processing. After curing within ten days' time compost becomes ready. We use this compost for plants in our Institute as well as we provide it to the local farmers free of cost.

The Bio-organic Plant is OWC 30, 10 kg's batch & double shredder, capacity @ 100 kg/hour.

Dry Waste and non-biodegradable is collected by VRecycle Waste Management Pvt. Ltd. who is the authorised source to collect this waste.

- **Water Report**

Treatment Plant [Dual Media Filters (DMF) & Activated Carbon Filters (ACF)]

There is also a Water Treatment and Filtration Plant with ACF and DMF Filters having 5M3/Hour, CNP Pumps with Dual Media filters (DMF) and Activated Carbon Filters (ACF)

Both the filters are backwashed every day and whenever the difference pressure increases more than 1.0Kg/cm², then the filters are backwashed again. The capacity of the plant is 50000/litres per day. A standard procedure is followed for the maintenance and monitoring of the system. The filtered water is mostly used for sanitation purpose.

Swimming Pool Water Treatment

For filtration of the pool, sand filters are used. It improves the water flow and provides an ultra-pure water filtration. For the water treatment, aqua zone ozoniser is used. Ozone O₃ is an allotropic form of oxygen. It's strong oxidizing and disinfection properties, and its innocuous by-product, oxygen, make it ideal for the treatment of water. A standard procedure is followed for maintenance and monitoring of the system.

Rain Water Harvesting

VMSIIHE is very eco conscious and spares no efforts to ensure that everything is done in an eco-friendly manner. Rain water harvesting project was built taking into consideration the saving of water, minimising the cost of water. This would be our contribution in taking care of water shortage and utilising surplus water.

Irrigation System

An Irrigation System is working for the garden through sprinklers. There are 6 stations in this system and it serves water from the STP outlet tank and periodically feeds water in all garden areas.

Aqua guard Water Purification System

Aqua guard filtration is used everywhere in the Institute for drinking water which is high level UV filtration. A standard procedure is followed for maintenance and monitoring.

- **Energy Consumption**

The college is well equipped with electricity supply. Each department possess computers, printers, plug points, tube lights, bulbs, etc. In addition to these, other equipment like 2 Diesel Generators (750 KVA and 380 KVA), Freezers, Fire Alarm and Hydrant Systems, 18 UPS, A/C units with R34 gas (less air pollution), kitchen equipment, telephones etc. are used.

Building Management System (BMS)

BMS controls and monitors the large energy consuming system within a building, such as HVAC, fire and security system. The aim of a BMS is to maintain occupant comfort and ensure occupant safety, delivering energy efficiency and lower operating cost. Here we are using BMS in Air-conditioning system for the public areas. A standard procedure is followed for maintenance and monitoring of these systems.

Invertors

Inverters are used in all areas for power supply when a sudden power breakdown occurs. A standard procedure is followed to maintain and monitor this system and these are located in the Girls hostel, Boys hostel, Director's bungalow, library side area, Bulk kitchen and BMS electrical room.

Fire Fighting Systems and Alarms

Fire -fighting systems are installed to prevent loss of life and destruction of property and the environment in case of fire. Our firefighting system comprises of Fire Detection, Fire Extinguishers and Fire Hydrants. Periodically training and demos are conducted by the fire department personnel for students and employees for safety purpose and training and to create awareness for usage during emergencies.

Air Conditioning System

A proper air-conditioning system is used in all class rooms, meeting rooms, all offices and working Hostels. Two types of air-conditioning systems are provided - ducted split and split types. A standard procedure is followed for the maintenance and monitoring of this system. ACs are switched off when not required to ensure that there is no wastage of electricity.

Solar Water Heating System

Solar System has 42 collectors panels with a Hot Water Capacity of 5250 Litres, back up heater 6KW x 3 No's.

Heat Pumps

Existing storage tank is modified incorporating 6 KW heaters and there is a separate electrical panel for the same. In case of breakdown heaters can be used.

Heat Pump 35HP, Kriscool-Cristopia Make. Heating Capacity 18 KW, Storage Tank 1500 Ltrs.

Sewage Treatment Plant

It has a capacity of 56kld/day. Proper procedures are followed for the operation, performance and maintenance of the sewage treatment plant, to minimize water consumption, re-use of water for flushing, gardening purpose and to reduce the operating cost.



Student Awareness Programs

As stated earlier, the garden club was initiated for the first batch of students in 2014 to inculcate an awareness of the environment and the eco-friendly measures taken by the institute and the need and importance of eco-friendly measures: The institute conducted educative sessions like demonstrations, field trips, visits to the spice farms which are in plenty in Goa to encourage and motivate the students to cultivate green habits. The staff members were also encouraged to attend workshops and visit nurseries and farms to enhance their knowledge of gardening. To enable the students to understand the importance of cultivating green habits, efforts were made to invite experts who would be able to throw light and provide experiential learning to the students.

Awareness measures:

- Students dedicate certain hours in a week to assist in planting saplings, weeding, watering the plants as a part of their leadership program.
- The Students and Staff have been nurturing a variety of organic herbs, vegetables and fruit-bearing trees. We use this fresh produce to craft delicious meals.
- An Interactive session on “Organic Farming” was organized for the staff and students of VMSIHE, Raia, as a part of the “Kaizen” gardening club activity. Mr. Miguel Braganza from University of Agricultural Sciences, Bangalore and Additional Director, Organic Farming Association of India [OFAI] explained the benefits of organic farming on health, taste and also monetary gain enjoyed by the people practicing organic farming.
- The NSS Unit of VMSIHE in collaboration with the Raia Panchayat took up a cleanliness drive.
- VMSIHE celebrates Vanmahotsav every year in their campus. Vanmahotsav is celebrated with the intention of creating awareness among the present generation regarding the importance of planting trees and giving back to the nature. The staff and students are briefed about the significance of growing trees and nurturing them for the benefit of mankind. The Forest department of South Goa supplies the institute with variety of medicinal and fruit saplings, which were planted by the gardening club members.



Observations

- i. On analysing the air quality, we could assess that there are pollutants in our environment (either in micro quantities or macro quantities), from the vehicles of the road and the campus. But, there are many plants in our campus that purify the polluted air and compensate enough oxygen.
- ii. Likewise there are sufficient water outlets and water coolers for the students and also for the departments. Outlets and faucets checked regularly to prevent leakages, if any.
- iii. Energy consumption is yet another component that needs to be surveyed and controlled.

Suggestions

1. Air Quality:

More plants need to be planted. Trees which provide shade to be planted inside the college campus.

2. Water Quality:

Timer can be installed for water coolers. Water wastage to be controlled.

3. Energy Consumption

Energy consumption could be reduced. Unnecessary lights and A/C could be switched off. During daylight, lights can be switched off. Energy conserving methods like usage of LED and CFL bulbs can be used.

Conclusion

- Post audit activities to be conducted keeping in mind areas which need to be prioritised.
- Reports can be prepared every alternate year in order to see developments and improvements.

Report prepared by:

Ms. Sujatha Madhavan
Ms. Nelissa Alcasoas
Mr. Savio D'Souza

Acknowledgement

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Our Campus





Solitary Fishtail Palm
(Caryota Urens)