

# **BEST PRACTICES**

## **BEST PRACTICE I**

### **TITLE OF THE PRACTICE: GREEN COVER**

#### **Objectives of the Practice**

- To envelope the campus in greenery.
- To become carbon neutral campus soon.
- To orient the campus towards sustainable living.

#### **The Context**

Green cover aids effective carbon sequestration. In 2021, green campus initiative was initiated as per the Higher Education Council policy. The project envisages a carbon-neutral campus with increased green cover and carbon mitigation strategies.

#### **The Practice**

The space consists of a fruit orchard, butterfly garden, tropical plant zone, flower garden, tuber-spice/fern garden. Thrust areas: a) Rejuvenating old trees. b) Maintenance of walkways c) Creation of vegetation zones d) Creating Pathways, Water Features, nesting and breeding areas e) Setting up composting areas f) Drip irrigation and fertigation.

#### **1. Landscaping**

In 2021, a startup company named Grun Agro Ventures Pvt started landscaping work on the Maharaja's College campus as part of the higher education council's green campus initiative. The space has been divided into a fruit orchard, butterfly garden, tropical plant zone, flower garden, tuber spice/fern garden, and beautifying work on the existing trees, in accordance with the DCE-approved proposal submitted by said startup company.

Thrust areas were a) Rejuvenating old trees and other canopy trees that form part of the present ecosystem b) Maintenance of walkways and other civil structures that form part of the garden scape c) Creation of various vegetation zones in and around the campus d) Creating Pathways , Water Features , nesting and breeding areas for creatures e) Setting up distributed composting areas for composting plant debris and organic matter, f) Automatically controlled drip irrigation and fertigation system.

## Flower garden



Features	
Area	540
Plant type	Various flowering
Irrigation	Drip & Sprinkler

## Tuber spice garden



Features	
Area	2,000 sqm
Plant type	Turmeric / ginger
Irrigation	Drip & Sprinkler

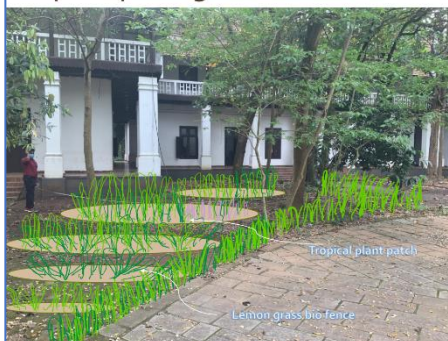
## Revitalizing

### Activities

De weeding, tree trunk and base cleaning	45,000 INR
Tree trunk crochet art work	1,00,000 INR
Bird feeder installations	15,000 INR
Wall graffiti works over existing tree trunk bases	1,50,000 INR
	3,10,000 INR



## Tropical plant garden



Features	
Area	910 sqm
Barrier crop	Lemon grass
Plant density	10/sqm
Plant type	Tropical shade loving
Irrigation	Drip & Sprinkler

## Butter fly garden

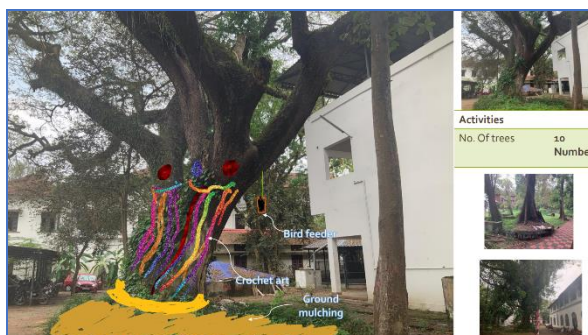


Features	
Area	900 sqm
Barrier crop	Oxy bamboo
Irrigation	Drip & sprinkler
Host plant varieties	50

## Orchard



Features	
Area	900 sqm
Barrier crop	Oxy bamboo
Tree count	40
Trees	Native fruit bearing
Irrigation	Drip



Activities	
No. Of trees	10 Numbers



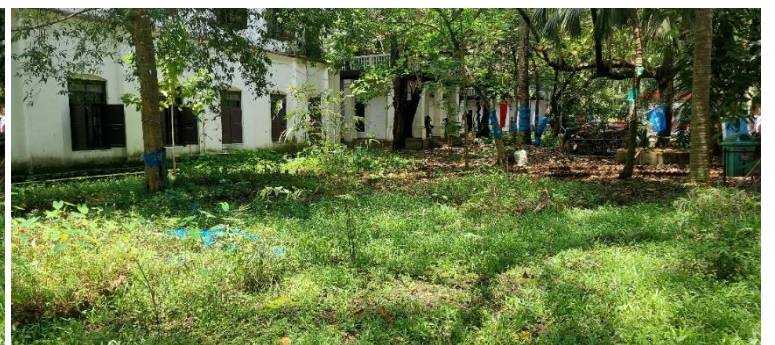
## Progress of work

Sl. No	Area	Activities	Work completed
1	Fruit Orchard	Barrier plant – Oxy bamboos, tree 40 nos., irrigation drip	Tillage and soil manipulation completed, prepared soil bed for fruit trees; Drip irrigation installed; Planted 25 fruit trees
2	Butterfly garden	Barrier plant – oxy bamboos, drip irrigation & sprinkler, host plants – 50	Tillage and soil manipulation completed; demarcation of BG and host plant soil bed completed, Bamboos planted only on outside boundary with drip irrigation; Sprinkler and irrigation installed; masonry work for defining areas; planted some ornamental plants inside the masonry areas
3	Tropical plant zone	Barrier crop – Lemon grass, tropical shade loving plants – Drip and sprinkler irrigation	Bamboos planted along boundary as barrier plants with drip irrigation; planted some tropical plants
4	Flower garden	Various flowering plants, drip and sprinkler irrigation	Soil tiling and manuring; drip irrigation; planted some flowering plants
5	Tuber spice/fern garden	Planting of tuber spice and tropical ferns; installation of drip irrigation	Soil tilling and creation of mounts for planting tuber crops and ferns; drip irrigation
6	Beautification	De weeding, tree trunk base cleaning, Tree trunk crochet work, bird feeding devices, wall graffiti works over tree trunk	Hanging art pieces such as dream catchers, crochet palisades etc over trees; crochet work/yarn bombing of tree barks





**Orchard**



**Butterfly Garden**






## Oxy bamboo along border with drip irrigation



Planted 239 oxy bamboos along borders

## 2. Book Publication

Book Published: TREES OF MAHARAJA'S, Ernakulam



### IQAC & DEPARTMENT OF BOTANY MAHARAJA'S COLLEGE, ERNAKULAM

*Cordially invites you to join us for the*

## BOOK LAUNCH

### Trees of Maharaja's College Ernakulam

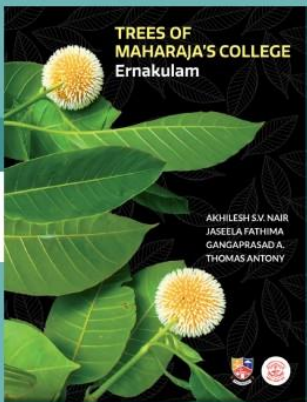
A collaborative venture of Maharaja's College (Ernakulam) & Centre for Biodiversity Conservation (University of Kerala) as part of the Digital Garden Project

**Book release**  
**Prof. (Dr.) Oommen V Oommen**  
Emeritus Professor, Dept. of Computational Biology & Bioinformatics, (University of Kerala) & Former Chairman of Kerala State Biodiversity Board.

<b>Introductory Remarks</b> <b>Dr. N Ramakanthan</b> Chairman, Governing Council	<b>Presidential Address</b> <b>Dr. Pooja P Balasundaram</b> Principal	<b>Special Address</b> <b>Dr. A Gangaprasad</b> Director, Centre for Biodiversity Conservation
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**25.02.2022**  
**Friday**

**10.30 AM**



**TREES OF MAHARAJA'S COLLEGE  
Ernakulam**

ARVILESH V NAIR  
JASEELA FATHIMA  
GANGAPRASAD A.  
THOMAS ANTONY



<https://meet.google.com/zdb-fjzb-mny>

*Venue: VIP Lounge*

### Felicitations

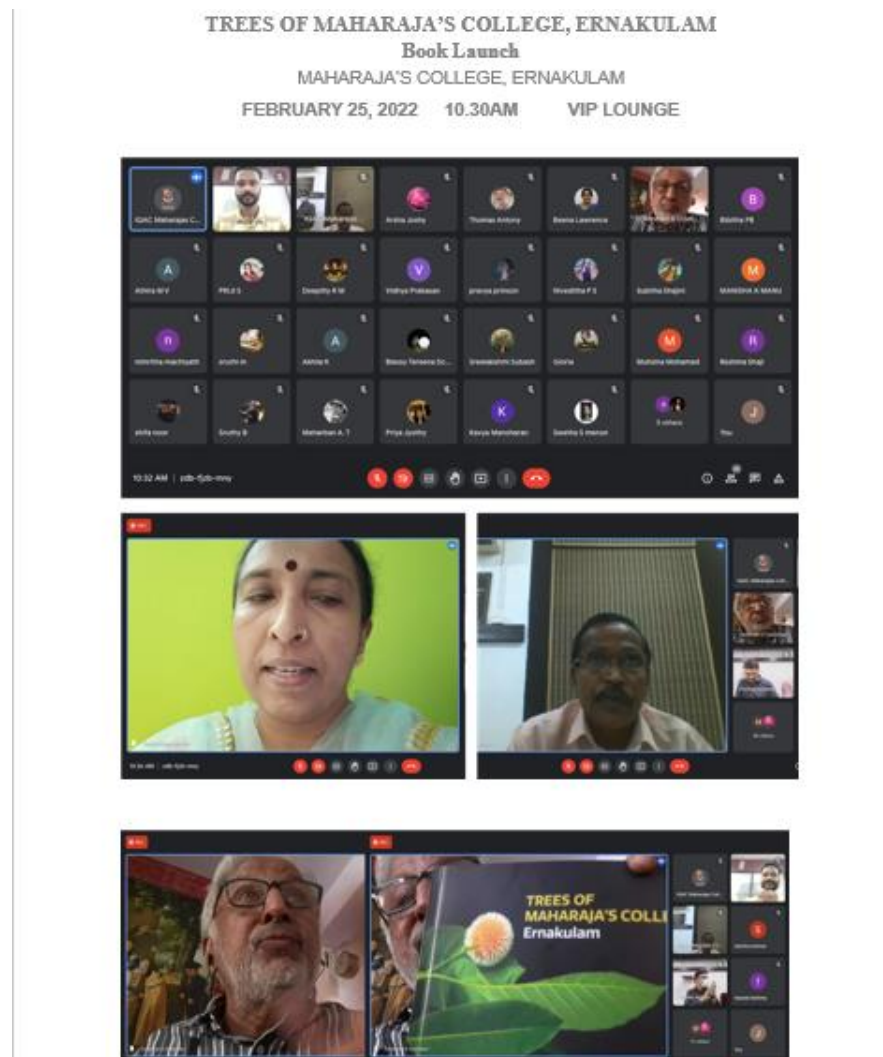
<b>Dr. Shajila Beevi S</b> Syndicate Member	<b>Dr. KV Jayamol</b> Vice Principal	<b>Dr. MS Murali</b> PTA Secretary	<b>Sri. Santhosh T Varghese</b> Former IQAC Coordinator
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*Published by* **Centre for Biodiversity Conservation** University of Kerala Kariavattom, Thiruvananthapuram 695 581

*Design & Printing* **Godfrey Das**

*Photo Credits:* Akhilesh S.V. Nair, Jaseela Fathima, Gangaprasad A., Mathulakshmi Suresh, Abinav Pulickal Mohandas

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### Book Launch

The book- "Trees of Maharaja's College, Ernakulam"- published as a sequel to the Digital Garden project aimed at documenting the Floristic Diversity of Maharaja's College was released by Prof. (Dr.) Oommen V Oommen (Former Chairman, Kerala State Biodiversity Board & Emeritus Professor, Department of Computational Biology and Bioinformatics, University of Kerala on February 25, 2022. The project was a collaborative venture of Maharaja's College, Ernakulam and Centre for Biodiversity Conservation, University of Kerala. Dr. Jaya S (IQAC Co-ordinator)



welcomed the gathering. The book launch ceremony was presided over by the Principal Dr. Pooja P Balasundharam. The book was introduced by Dr. Jaseela Fathima (Assistant Professor of Botany). Dr. Zeenath (Head, Department of Physics) received the first copy of the book on behalf of the Principal, Dr. Pooja P Balasundharam. A glance through the book was jointly presented by the authors, Mr. Akhilesh SV Nair (Research Scholar, Department of Botany, University of Kerala) and Dr. Jaseela. Prof. (Dr.) A Gangaprasad (Hon. Director, Centre for Biodiversity Conservation, University of Kerala) addressed the gathering.

### 3. Botanical Garden



The Department of Botany maintains very old and rich Botanical Garden and it preserves rare species of plants labelled with scientific names. The department also keeps a biodiversity register to record new varieties of plants.

### 4. Mulching Units



*Four mulching units were set up in various locations to compost the leaves, debris and organic matter*

**Mulching units for composting leaves and debris**

## 5. Role of Student Functionaries

The student functionaries such National Service Scheme, NCC, Science Forum, Nature Club engage in caring these trees and plants. They clean the surroundings every week and engage in activities promoting conservation of natural resources inside and outside the campus. They champion the cause of sustainable development by conducting awareness programmes and competitions among the students on environment day, ozone day and earth day.

## 6. Syllabus With Green Cover

Environmental education helps the students to understand environmental issues vividly and how to keep the ecosystem healthy for a sustainable future.

Our undergraduate syllabus has selected environmental science/education as one of the core course. The college is offering three year undergraduate programme in Environment Chemistry.

## 7. Green Campus Initiatives

The college office and departments have considerably reduced the use of paper for official purpose.

Botany Alumni Association, Maharaja's College had contributed 100 steel glasses to the department. These glasses are being used for functions for serving tea/coffee/water/juices instead of paper /plastic glasses.

**R.V. Metals**  
HOME APPLIANCES & STAINLESS STEEL WARES DEALERS  
X1/8796, M. G. ROAD, ERNAKULAM, COCHIN - 682 035  
GSTIN : 32AACFR6091812F

Phone : 94460 53927  
88481 87338

Bill to: **BOTANY ALUMNI ASSOCIATION - MAHARAJA'S COLLEGE**

Place of Supply: **ERNAKULAM**

Bill of Supply No: **19914** Date: **18/3/2022**

Description of goods	HSN/SAC	Qty	Unit	Rate	Amount
<b>SS Glass</b>		<b>100</b>		<b>48.4000</b>	
Total					<b>4800</b>

Amount chargeable in words: **Four thousand eight hundred only**

For R. V. Metals  
Authorized Signatory

**Purchase of steel glass**



### 5. Evidence of Success

Student functionaries care the green cover. The green lush of the campus gets more enriched with variety of plants. The Green Cover project revamps subsequent activities such as carbon mitigation plans, and sustainable living skills. The Department of Botany digitalized the tree diversity using the QR code labelling and introduced Digital Garden reliable information regarding the plants and trees in the campus within a few seconds making the information retrieval easy and interesting. . It also documented tree diversity Maharaja's College and Centre for Biodiversity Conservation, Thiruvnanathapuram published it under the title 'Trees of Maharajas'.

[https://maharajas.ac.in/digital\\_garden](https://maharajas.ac.in/digital_garden)

### 6. Problems Encountered and Resources Required

Maintenance of vegetation requires inspection, pruning, watering, fertilization, and pest-management which demands workforce and finances. Annual evaluation of carbon neutrality - green audit, adds financial burden. Although campus community is involved in caring trees, the sustainability of the practice can be guaranteed by professional guidance.

## BEST PRACTICE II

### TITLE OF THE PRACTICE: INCLUSIVE EDUCATION

#### Objectives:

To recognise every student is diverse with different capabilities and ensure equal access to opportunities in education.

To eliminate barriers in the education of the disadvantaged and facilitate their holistic development by enabling their effective participation in education process.

To collaborate with agencies to facilitate comprehensive education to students outside the campus.

## **The Context**

In tune with the vision of our college, education programme envisages equal learning opportunities to all students regardless of their abilities, disabilities, background or other differences so that every learner is valued and fully participated in learning process. Our college accommodated 62 differently abled students in the campus during 2021-22.

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## **The Practice**

Maharaja's college can proudly claim as the first one in Kerala to welcome the transgender students. Our college hosts maximum number of differently abled students and arranges facilities physically accessible to them. We took measures to identify their key issues and to educate them. Equal Opportunity Cell has been formed to address their needs and provide opportunities to overcome their social exclusion.

The college has provided assistive technologies such as JAWS screen reader, text to speech software and Braille translator to the visually impaired community. The college has renovated its verandas, entry and exit doors to common areas for improving their accessibility. Differently abled friendly toilet block has been constructed during the year 2021-22.



**Mazhavillu – Teach Science for Kerala**

Under the project Mazhavillu –Teach Science for Kerala, sponsored by the state government, our college facilitates physical and laboratory facilities to promote scientific aptitude of school children. Our college has been entrusted to implement this project which has visualised to resolve the lack of proficiencies of primary class students in mathematics and science and demonstrate them through experimental method.





**Mazhavillu –Teach Science for Kerala**



**Faculties of Maharajas Interacting with the School Students at Physics and Zoology Labs.**

### ***Scribe Club***

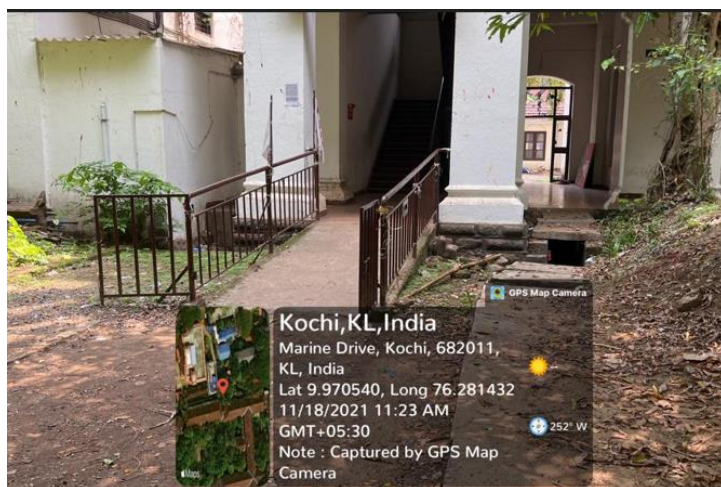
A scribe club convened by a faculty is formed to assist the visually impaired students in reading as well as writing during examinations. The club constitutes 40 students from various departments. Those who have registered under the club can write examinations on behalf of the differently abled students. The selected scribe must be junior student of the examinee. The members in the club assist them to commute in the campus and to locate and reach their assigned rooms during examinations. The club also helps the visually challenged students to get access of soft copies of reading materials. The club also offers its members to write examinations of the visually challenged students in the nearby colleges also.

### **Evidence of success**

Initiatives to sensitise empowerment to students from diverse backgrounds help the campus in familiarizing with the holistic goals of education. The congenial environment in the campus empowers the differently abled community to attain their milestones. Their presence in the campus has created an inclusive and compassionate society.

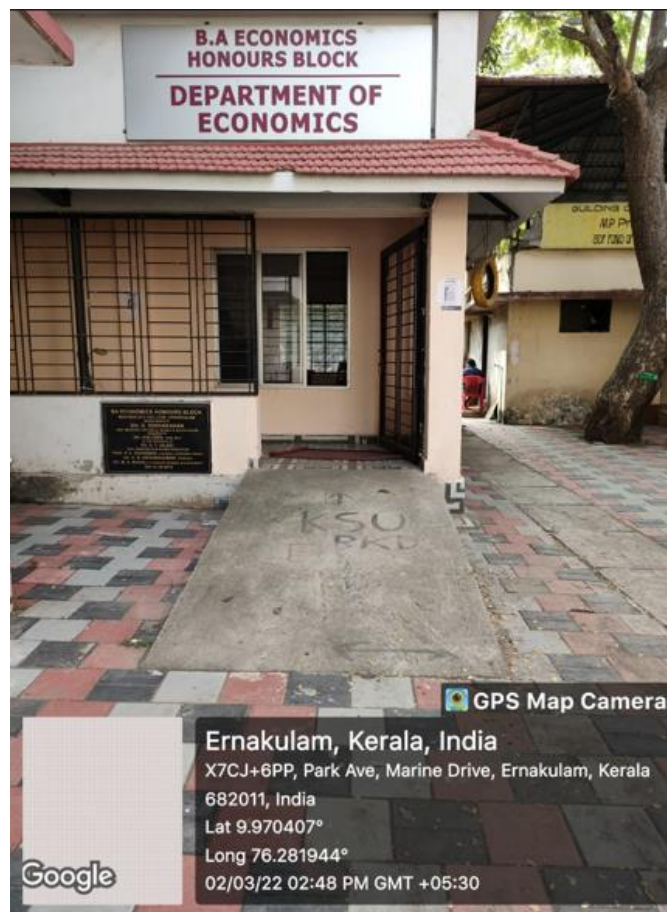
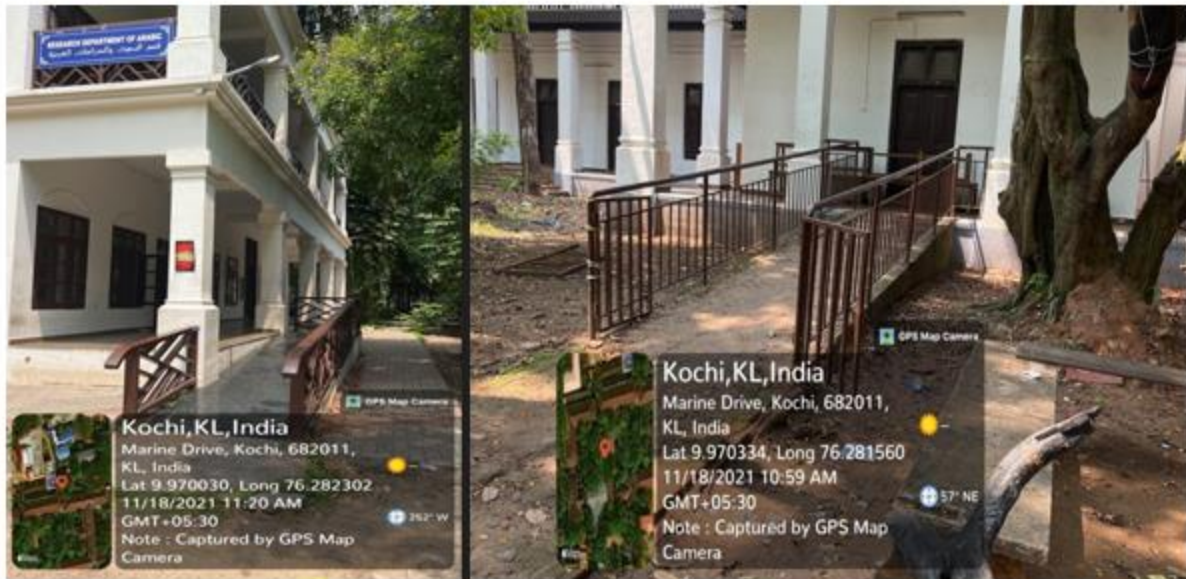
### **Problems and Resources Required**

Inclusion of people with different capacities require facilities enabling their access to varied opportunities and the college has many financial and official barriers in fulfilling this vision in the voyage.





## Ramps



## Differently Abled Friendly Toilet



## Tiled Path

