

In-situ Conservation of Flora & Fauna @ TCS (Butterflies & Sacred Snake Grove)

Sector : IT Industry

Category : Green Infrastructure & Ecology

Presenter

Dr. Laxmikant Naik
Senior Consultant

Environmental Sustainability, Health & Safety



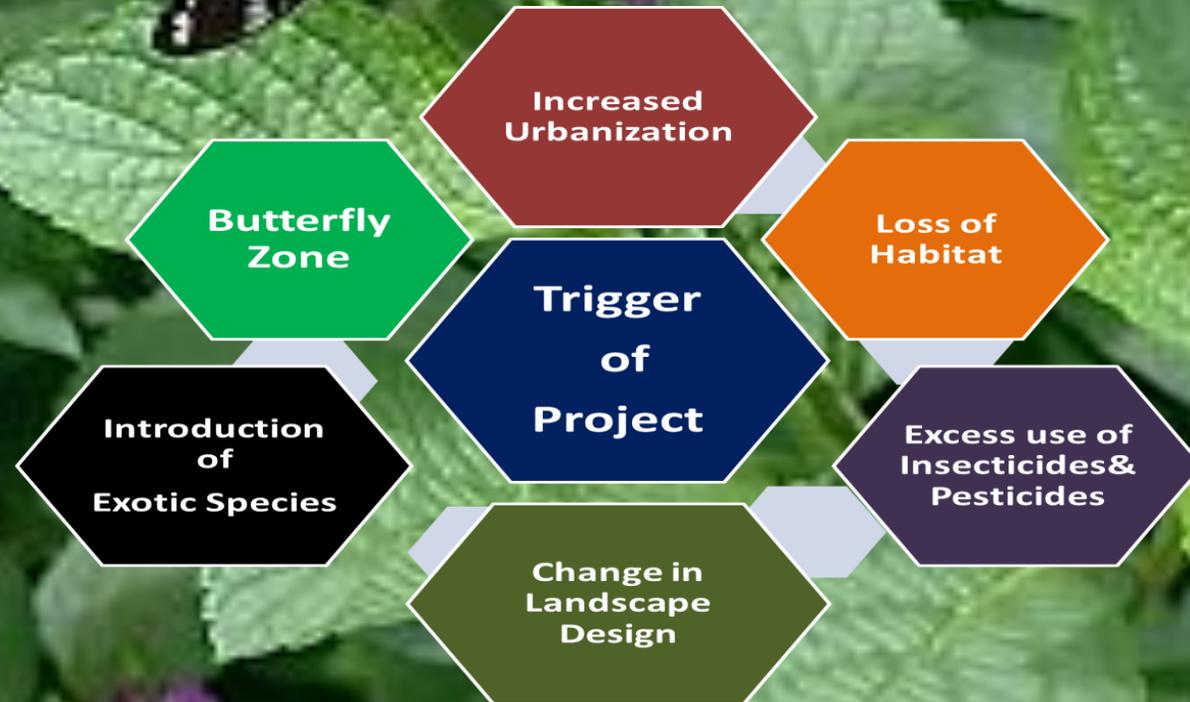
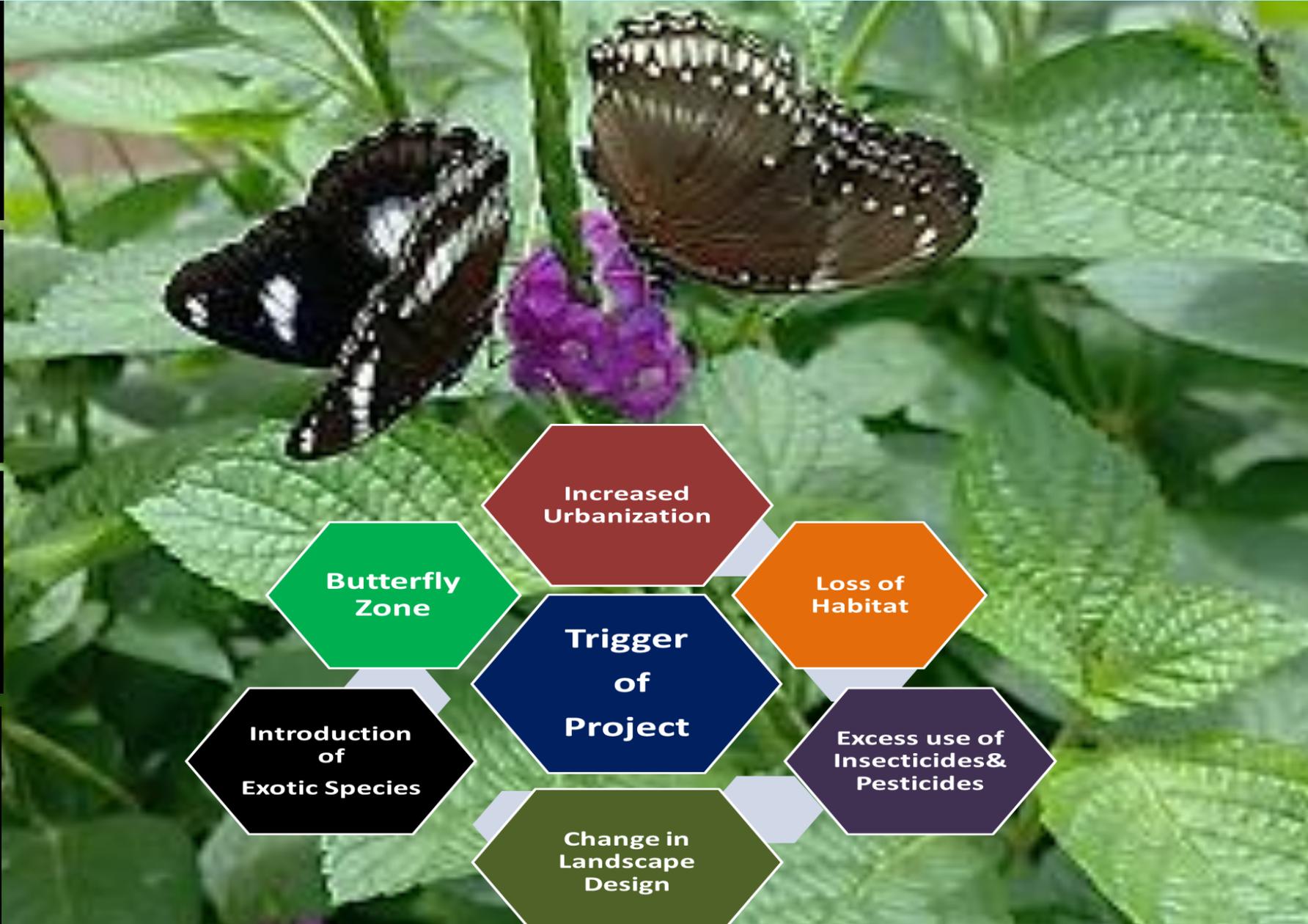
Company Details : Sustainability Drivers @ TCS



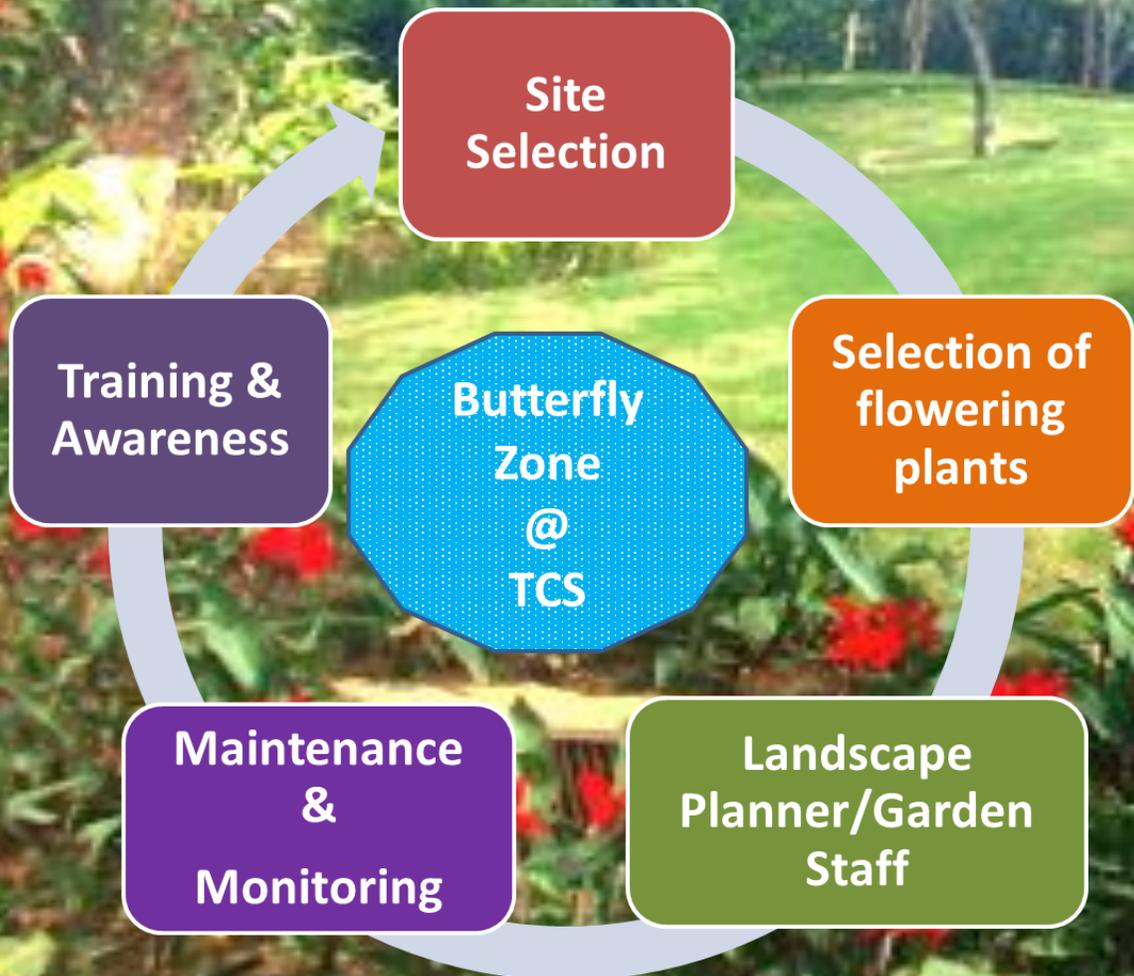
IT Services	Engineering & Industrial Services
Asset Based Solutions	IT Infrastructure Services
Global Consulting	BPO



Project -1 In-situ Conservation of Butterflies @ TCS : Trigger of the Project



Butterfly Zone @ TCS : Schematic Representation of Approach



TCS Campuses under consideration for Butterfly Studies

SN	Name of Campus	Location/Type (W/L) Owned/Leased	Area (Acres)
1	Adibatla	Hyderabad	78.47
2	Banyan Park	Mumbai (W)	22.50
3	Deccan Park	Hyderabad (W)	22.50
4	Garima Park	Gandhinagar(W)	25.50
5	Gitanjali Park	Kolkata (W)	50.00
6	Kalinga Park	Bhubaneswar (W)	45.00
7	New Campus	Kochi (W)	15.60
8	Peepul Park/ DC	Trivandrum (W)	22.50
9	Siruseri	Chennai	70.00
10	Sahydri Park	Pune (W)	50.00
11	Sholinga Nallur	Chennai	22.0
12	Synergy Park	Hyderabad (L)	69.23
13	Think Campus	Bangalore (L)	10.00
14	Yantra Park	Thane (W)	13.70

Details of project : Selection of Flowering Shrubs/Herbs



High Nectar flowering shrubs of *Stachytarpheta indica* (Snake weed) & *Caesalpinea pulcherima* (Peacock Flower) @ Yantra Park



Lantna camera Yellow @ Peepul Park, Triandrum Purple variety @ Syahyadri Park, Pune & Red variety @ Kalinga Park , Bhubaneswar

Uniqueness of Project : Distribution of Butterflies @ TCS

Identification Guide
The Book of Indian Butterflies
ISAAC Kehimkar (BNHS)

Families

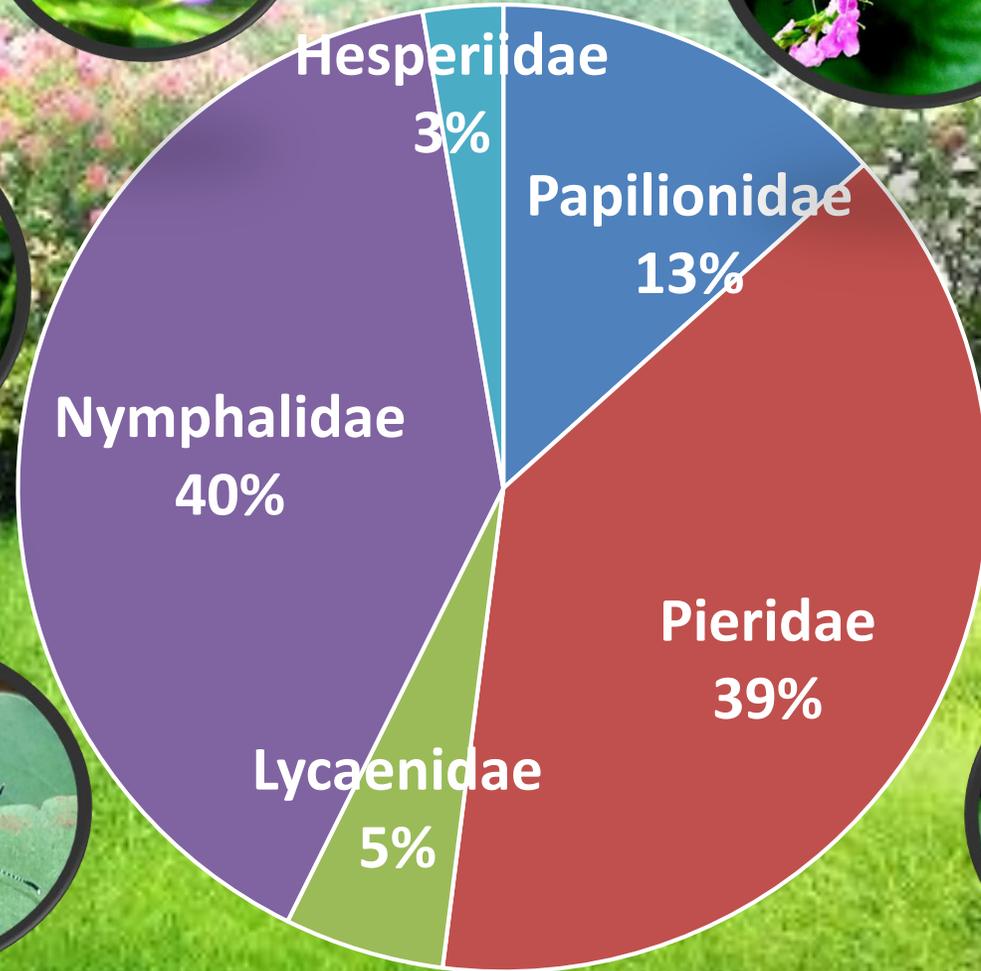
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Genera

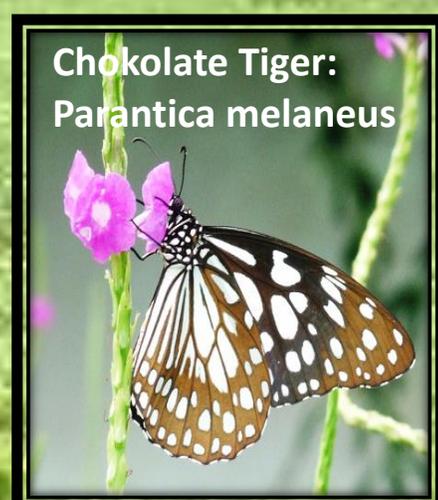
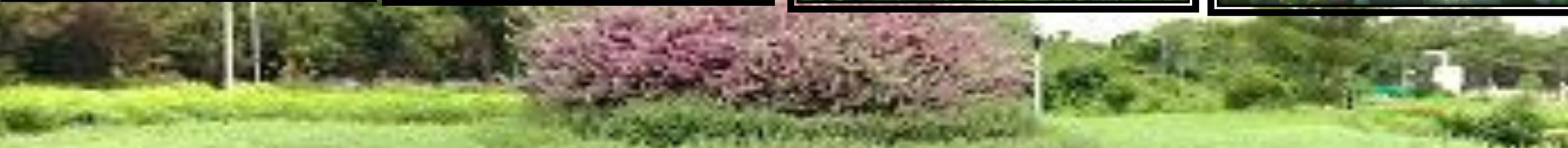
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Species

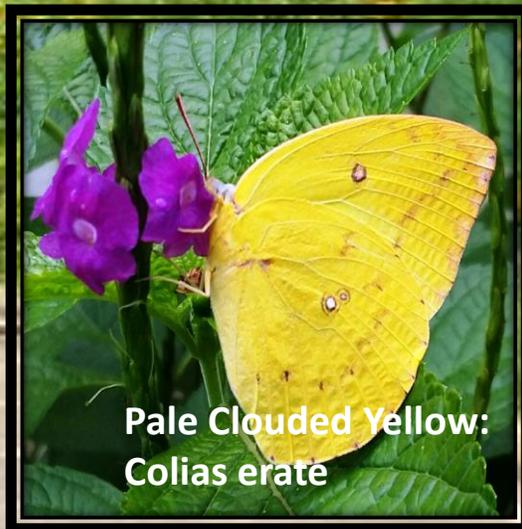
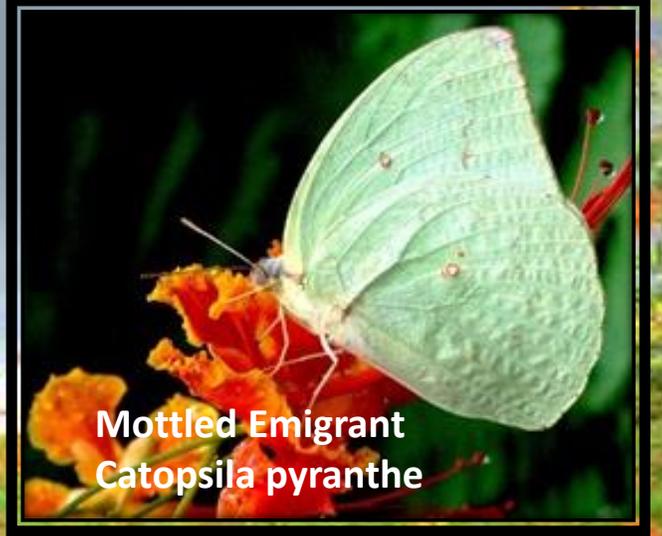
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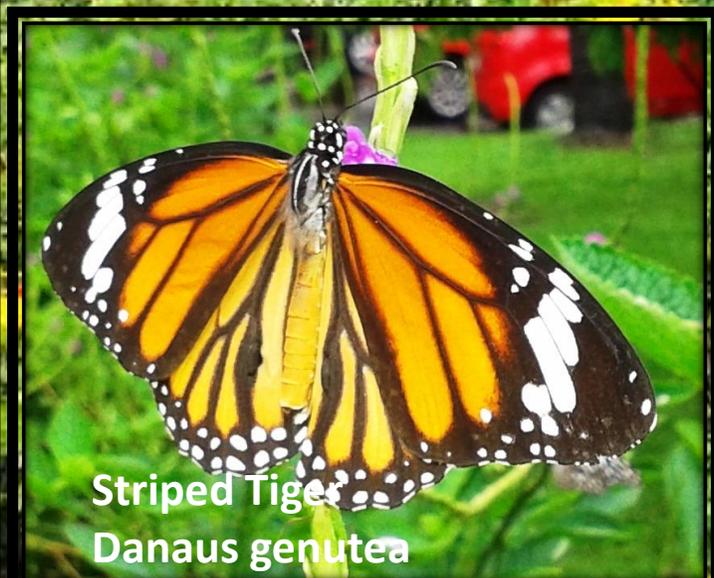
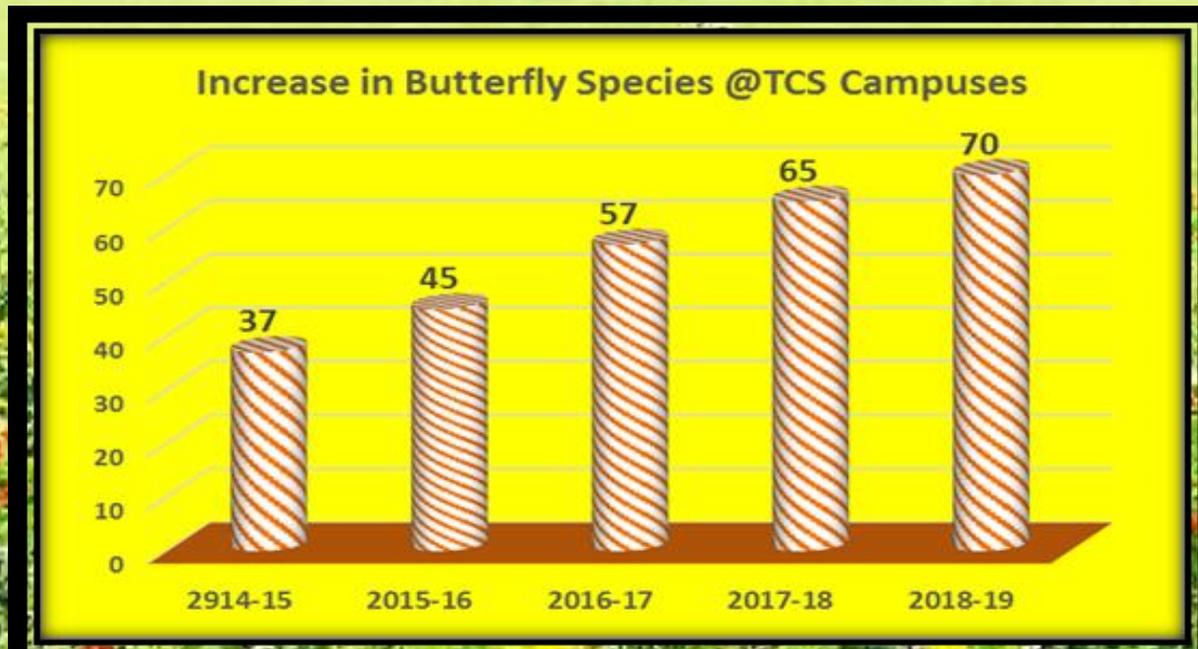
Dominant Species of Butterflies @ TCS : Nymphidae : Brush Footed



Uniqueness : Dominant Butterflies @ TCS : Pieridae –Whites & Yellow



Uniqueness : Increase in Species abundance i.e. diversity



Special, Endangered & Rare Butterflies @ TCS



Blue Mormon
Papilio polymnestor



Dead Leaf Butterfly: *Kallima alampara*



Peacock Pansy : *Junonia almana*



Danaid Eggfly
Hypolimnastis misippus

Project – 2 Conservation of Sacred Snake Grove @ New Centre, Kochi



IGBC Gold Rated Green Building

Total Area : 15.71 acres

Open area : 65%

Sarpa Kavu : 4 acres

ISO 14001

ISO 45001



Trigger of the project & Schematic Representation Approach



Uniqueness : TCS Efforts towards Sacred Grove Conservation

Sacred Snake Grove - Abode of Snakes

Restricted
Zone



- ❖ *Ahaetulla dispur* - Green vine Snake
- ❖ *Ahaetulla nastula* - Brown Vine Snake
- ❖ *Bungarus caruleus* - Common Indian Krait
- ❖ *Daboia russelii* - Russell's Viper
- ❖ *Naja naja* - Spectacled Cobra
- ❖ *Ptyas mucosa* - Indian Rat Snake

Rescue &
Release



Uniqueness of the Project : Reporting of Endangered Wildlife Species



Indian Monitor Lizard
(*Varanus bengalensis*)



Small Indian Civet Cat
(*Viverricula indica*)



Indian Dhole
(*Cuon aplinus*)

Snake Awareness Session for Guards & Associates : TATA Sustainability Month



Tangible & Intangible benefits of the Project

Tangible

- NA . Not as such, however appreciation by Clients/Visitors /Guests/Associates is value add to the business

Intangible

- **People & Society** : Increase in Butterfly species abundance & diversity /endangered of species scared grove in fragmented Urban Landscape.
- In-situ conservation also lead to conservation of habitat for several life forms in ecosystem
- **Moral & Motivation** : Increase in aesthetic environment by adding colors to wilderness & source of environmental education
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- **Skill Upgradation** : Skill development for contract staff Butterfly Zone / Sacred Grove conservation

Replication potential of project within group



Visit by TATA Sustainability Group



Visit by Swatch Bharat Survekshan Team
Govt of India

Replication
potential

- **Step Initiated**
- Creating awareness about significance of Butterflies & Butterfly Zones / Sacred Snake Grove
- **Achievement Sharing**
- Conducting awareness presentation, site visits (TATA Sustainability Group/ KSBB)
- **Other Knowledge Sharing Platforms**
- Conferences, Symposium (Maharashtra /Kerala State Biodiversity Boards) Awards etc



Visit by Chairman Kerala State Biodiversity Board



Plantation by Guests in Butterfly Zone

List of Challenges Face & Brief on Countering

Challenges Face

- **Technical**
- Change in landscape design @ TCS campuses
- **Administrative**
- Discussion & participation with architect & landscape planner. Site selection, Species recommendation i.e. butterfly host plants in designing of landscape
- **Maintenance**
- Training & Awareness to contractors
- Continues monitoring of butterfly zone during breeding season
- No use of insecticides/Pesticides during breeding season

Achieving International /National benchmark /Standards/ Awards



ICC- Environmental Excellence Award 2018



Bombay Chamber Civic Award 2019

International Standards

- Convention on Biological Diversity
- United Nation Sustainability Development Goals (SDC No -14)
- International Union for Conservation of Nature

National Standards

- India's National Biodiversity Action Plan
- State Level Biodiversity Action Plan



ICC- Environmental Excellence Award 2019

Appreciation by Kerala State Biodiversity Board, Trivandrum



I wish to congratulate you and TCS for your great service to urban biodiversity conservation and to create an ecosystem suitable for your IT professionals.

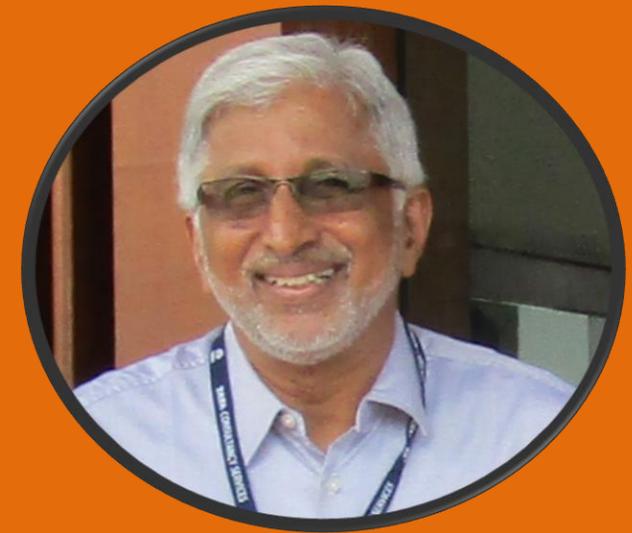
TCS is doing a wonderful service and is a global model for other companies to emulate for Urban Biodiversity Conservation.

Prof. Dr. Oommen V. Oommen

FNASc. FRE, FAS

Chairman

Kerala State Biodiversity Board



Learnings from the Project

Learnings

- In-situ conservation is challenging in terms of site /species specific conditions
- Changes in landscape design is an important issue for accommodating conservation program
- Identification of various internal & external stakeholders ,their role & involvement in conservation program
- Conducting training & awareness program
- for stakeholders to achieve desired output of conservation program
- Competency building & skill enhancement of stakeholders is essential for ensuring the sustainability of project
- Continuous monitoring & measurement of different aspects of projects i.e. Habitat status/appearance/disappearance of species et
- Increase in biodiversity ensured to strengthen ecosystem services
- Conducting site visits of project with Senior Management/Guest/Visitors/Associates etc

THANKS

सर्वे भवन्तु सुखिनः
सर्वे सन्तु निरामयाः,
सर्वे भद्राणि पश्यन्तु
मा कश्चिद् दुःख
भागभवेत्।

**TCS holistic approach towards
sustainability & Coexistence**