ECO CLUB NEWS LETTER

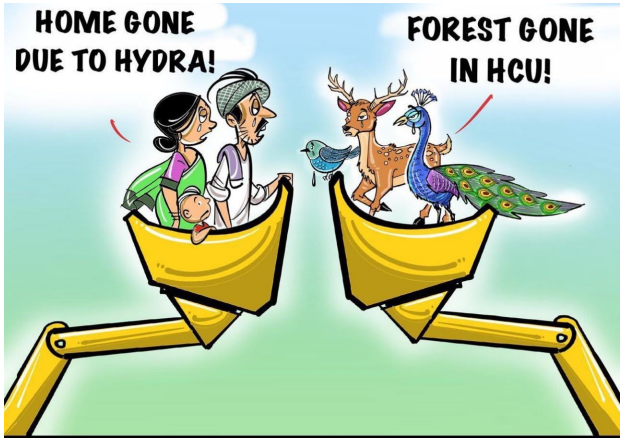
# Ankura

*The Saviours of Nature*

Volume 8 Annual March 2025

# Contents




# About Ankura

*Ankura is an annual news letter brought out by the Eco Club at Andhra Mahila Sabha Arts and Science College for Women. It is one of the best practices of the Department of Botany. The Eco Club received National Environmental Awareness Award from Khadi and Village Development, New Delhi in 2008. The publication was initiated to spread the awareness among the society regarding the basic principles of environment. Our intention is not only to foster a habit of learning about the nature and environment, but to inculcate a thought of eco friendly practices in day to day lives. Being said very wisely, never think small deeds taken up by a committed individuals will never change the world, We believe that we will be successful if we can at least trigger a thought process leading towards the change. Even a journey of thousand miles starts with a single step. Hence we are herewith our* ***eighth volume*** *of news letter trying to better ourselves in every step.*

# Editorial

According to IUCN Congress, 2.2 billion people on earth lack access to clean water. Fresh water species are disappearing water than on land. Approximately 1 million animal and plant species are currently threatened with extinction, many within the coming decades-a rate unprecedented in human history. A staggering 13,056 square kilometers of forest land, exceeding the combined geographical area of Delhi, Sikkim, and Goa, is under encroachment across 25 states and Union Territories. This alarming data, submitted by the Union Environment Ministry to the National Green Tribunal (NGT), highlights the widespread issue of forest encroachment in the country. The NGT had directed the ministry to compile data on forest encroachment in all states and Union Territories last April, following a PTI report that revealed 7,506.48 square kilometers of forest land was under encroachment.

There are international organizations working days and nights to build frameworks for sustainability Amidst such concerning things happening what do we prove by clearance of HCU natural habit which is a home to many fauna. Can we afford the loss incurred by HCU deforestation? What is development when it does a devastation to nature What is the need of development when the environment is brutally harmed is that what we call progression. Progression retrograding the sustainability. Is that what we desire? Supreme Court in it's recent verdict mentioned that Cutting large number of trees worse than killing a human being. Then Damagundam, now HCU what has changed. Policy makers somehow trapped in their own thoughts appear to somehow seem to condemn the judiciary by their acts. But as citizens we have the responsibility to save nature.

It isn't our world it is the world of every single species inhabiting it rather it is more of every species on earth than a human being. They deserve a bit more than we do because they don't function by hurting nature. As the saying goes every life matters to the one living...but for humans every other species' life matters for our living. If the harmony of the ecosystems destroyed then everything is destroyed. Diverse and healthy ecosystems matter. The well-being of people all over the world depends on healthy ecosystems to provide goods, like food and water, and services like climate regulation.

The sanctity of nature is something under rated by the generations today. The power of restoration, regeneration and recovery is unappreciated rather overlooked. Why is it that there is no generosity to think about nature. No anthropogenic artificiality can match up to nature's intricacy. Perhaps, there are things in nature that man can never create.

We have already destroyed it's the time to start and correct our mistakes. But where are we? Miles away from reality. It is all small changes what ever we can do. It is the consistency that matters. The thing here is it is all a very tangled interconnected web of things. We can never think like we are minding our own business and not harming the environment. It is that every choice of ours, every work of ours is linked some part of environment. Our lavish needs may cost a life for some species, cost a home for other. It is not we having home to live in, it the co-living with the nature that makes a meaning full home. Limiting the unnecessary needs is essential... have for your need because nature cant afford the greed. We only borrow things from nature we don't own anything personally. Think on sustainability. Grow your own food plant more trees. Reuse and Recycle. Grow indigenous species. Make and use compost. Be ecofriendly where ever possible and encourage the same. It's time to re nurture things we have already degraded. Small changes lead to big affect.

At last, Nature is never about fashion... here passion is the only fashion.

# Environment Enigma

## RIDDLE RACE

1. I am an important place, fertile and full of wildlife, can you see what I mean?
2. I am an ecosystem full of colorful fish and beautiful corals. People called me with snorkels and tanks. Where am I? A natural wonder, but pollution making it fade away?
3. Often thrown away, but taking hundreds of years to decay?
4. This non-renewable resource is an important source of electricity and energy, but burning it causes serious climate change. What is it?
5. The densely populated and biodiversity-rich region is an important part of the world's balance but is rapidly disappearing due to human activities. What is it?
6. I am a global initiative to reduce carbon monoxide emissions to prevent climate change. What is the name of this initiative?
7. I am a frozen river, a silent giant slumbering beneath the sun. I carve valleys and shape mountains, a testament to the power of ice. What am I?

| | | | |
|---|---|---|---|
| a. | No poverty | j. | Reduced inequalities |
| b. | Zero hunger | k. | Sustainable cities and communities |
| c. | Good health and well-being | l. | Responsible consumption and production |
| d. | Quality education | m. | Climate action |
| e. | Gender equality | n. | Life below water |
| f. | Clean water and sanitation | o. | Life on land |
| g. | Affordable and clean energy | p. | Peace, justice, and strong institutions |
| h. | Decent work and economic growth | q. | Partnerships for the goals |
| i. | Industry, innovation and infrastructure | | |

## LOGO LIST

Know your SDGs - Match them with the logos


Answers

Riddle Race - 1.Wetlands 2. Coral reefs 3.Plastic 4.Fossil fuels 5.Rainforest 6.Paris Agreement 7. Glacier

Logo List : 1a 2p 3l 4o 5i 6e 7c 8k 9b 10f 11q 12n 13g 14m 15h 16d 17j

# The Seed Girl


This is a story of a eight grader whose thought has foreseen so much than we all do… to conserve the richness of mother nature. Harshita Priyadarshini Mohanty had no idea she would become known as the "seed girl" when she started conserving indigenous seeds. The eighth-grade kid from Koraput, Odisha, constructed a seed bank that has more than 80 species of millet and 180 varieties of native paddy.

She was Encouraged by the local agricultural expert Padma Shri Kamala Pujari, and began gathering native seeds in 2023. Harshita received four types of paddy seeds from Kamala ji: Machhakanta, Umuriachudi, Asamchudi, and Koraput Kalajeera, which was GI-tagged in August 2023. Harshita through her endeavours called upon for activism and awareness from 30 States and stated that youngsters need to protect the disappearing Indigenous seeds for the next generation. She continues to be passionate about promoting the use of native seeds because she appreciates their special traits, such as their nutritional content, climate resistance, and ability to adapt to local conditions.

Harshita believes that if farmers conserve indigenous seeds, they don't have to spend money purchasing seeds every season. She diligently searches Koraput's local markets and farmers' fields for native seeds, which she then carefully preserves in clay pots and plastic containers, using neem tablets to keep pests away.

A wide variety of millet kinds and rice varieties, including Rogusai, Tulsi Bhog, and Kalabati (black rice), are included in her seed bank. She maintains 100–250 grams of each type of seed. If there are more seeds than this, she gives them away for free to farmers. "So far this year, she has given seeds to fifty farmers. Harshita aims to become an agronomist. Furthermore, in addition to her seed saving initiatives, Harshitha has organized a group of young people to promote organic farming in five villages within the Boipariguda block.

# Eco Friendly Mycelium Packaging

Mycelium provides a robust, sustainable alternative to plastic foams, such as polystyrene. Rather than break down into microbeads harmful to wildlife and marine habitats, the mycelium packaging breaks down into useful nutrients for the soil. This is what it means to be bio-contributing.

To start manufacturing mycelium packaging, the fungus is placed to grow around a collection of agricultural scraps such as husks or corn stalks. It is then left to grow for a few days until it fully envelops and binds the waste together. Once it forms a solid shape, manufacturers cut off pieces of it to place in a drying chamber.

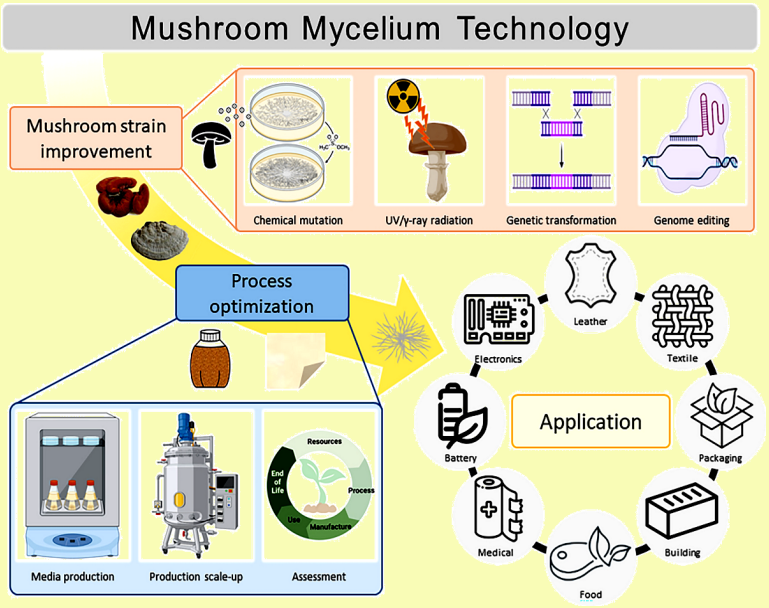
The drying process prevents the mycelium from growing any further. Once it is ready, it is molded into any desired shape or form to fit the required packaging design. Dell, for example, uses natural fungi for their cushion packaging.

Sebastian Cox made lampshades with it, Haeckels packaged their candles in it and IKEA are replacing all their polystyrene with it. Mushrooms are the future of packaging solutions.

Considering the world currently generates 2.01 billion tonnes of solid waste annually, of which paper and cardboard make up 17% of global waste and plastic 12%*, we're in need of a solution.

Mycelium is 100% home-compostable, so not only is it not contributing to global waste, but rather bio-contributing to the soil. Plus it uses only a fraction of the amount of energy needed to produce plastic or cardboard.

Now, we're nearly ready to launch our Seedlip Spice 94 gift box made of this magical 100% natural material. Be sure to sign up to our newsletter to be among the first to know when it's available. Mycelium is also Nature's biggest recycler. It breaks down toxins, such as plastic or oil, turning them into available nourishment to help other living organisms thrive. As it consumes organic matter and contaminating substances, mycelium branches out, quickly creating a web of thread-like filaments [hyphae]. These quick-growing filaments are what makes mycelium an efficient packaging solution. It takes around seven days to grow our mycelium packaging – and, then, approximately 40 days for them to biodegrade.



# Can Dodo Be Back?

***Colossal Biosciences is a pioneering biotech company that's making waves in the field of de-extinction. They're using cutting-edge genetic engineering techniques to bring back extinct species like the woolly mammoth, dodo bird, and Tasmanian tiger.***

## Projects and Timeline

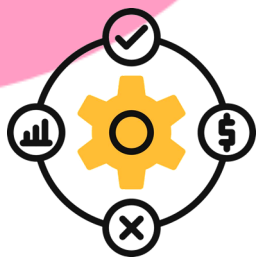
- **Woolly Mammoth**: Colossal aims to have a living woolly mammoth by late 2028. They're currently working on integrating mammoth genes into Asian elephant DNA using CRISPR technology.
- **Tasmanian Tiger:** The company is also making progress on reviving the Tasmanian tiger, with potential births within six to seven years.
- **Dodo Bird:** Colossal is working on editing the dodo's genome and using chickens as surrogate parents.

**De-Extinction Process**:

- **Genome Mapping**: Colossal's scientists sequence genomes from ancient DNA to identify the genetic traits of extinct species.
- **CRISPR Gene Editing:** They use CRISPR technology to edit the genes of closely related living species, essentially "reviving" the extinct species' traits.
- **Surrogate Parents:** The edited cells are then implanted into surrogate parents from related species to produce offspring with the extinct species' characteristics.

## Impact and Implications:

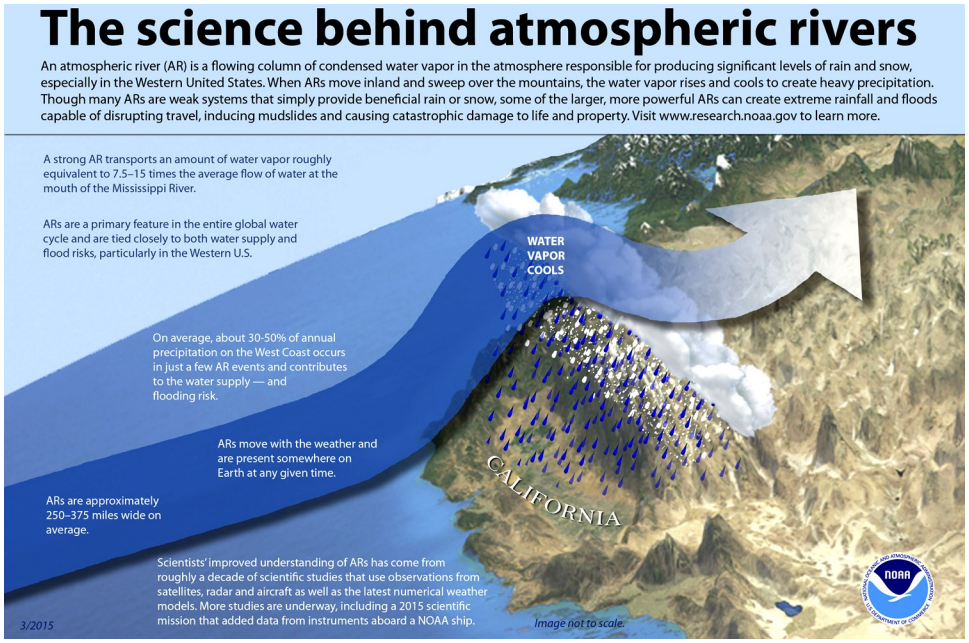
- **Conservation**: De-extinction efforts could have broader applications in conservation biology and species preservation.
- **Technological Advancements**: The company's work in genetic engineering and biotechnology could lead to breakthroughs in healthcare and other fields.
- **Ethical Concerns**: However, some scientists raise concerns about the ethics of reintroducing extinct species and potential risks to ecosystems.



# Atmospheric Rivers

Atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics.

While atmospheric rivers can vary greatly in size and strength, the average atmospheric river carries an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. Exceptionally strong atmospheric rivers can transport up to 15 times that amount.
Not all atmospheric rivers cause damage; most are weak systems that often provide beneficial rain or snow that is crucial to the water supply. Atmospheric rivers are a key feature in the global water cycle and are closely tied to both water supply and flood risks — particularly in the western United States.
While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack.
NOAA research uses satellite, radar, aircraft and other observations, as well as major numerical weather model improvements, to better understand atmospheric rivers and their importance to both weather and climate.



## Sheros 256—Inspiring Women from India

# Sheela Shri Prakash

*Designer of sustainable skyscrapers and cities*

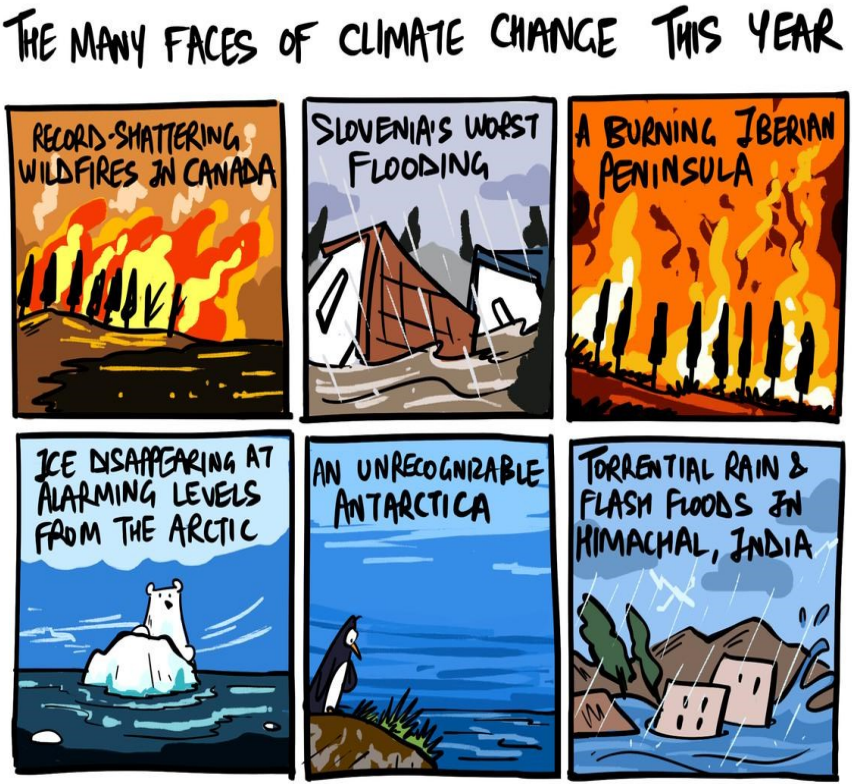
**Sheela Shree Prakash** (1955 July 6) is a well-known figure in architecture, urban design and sustainability. Sheela did her architecture degree from Anna University. Expanded his knowledge through Executive Education Program at Harvard University. She completed the projects involving many constructions in India and around the world. She founded the Reciprocity Foundation to support research, programs, and conferences that contribute to responsible ecology. Sheela was chosen to restore and preserve the Thanjavur Brihadeeswara Temple. Time magazine recognized her as one of the architects shaping the future.

In 1979, she founded the well-known architecture firm Shilpa Architects Planners & Designers. She was the first woman to establish and run an architecture firm in India. She was invited by the World Economic Forum to participate in the Global Future Council in July 2016 on the future of the environment and natural resources. She has been an active member and Area Director of Jounta International, an organization working to improve the status of women around the world.

*A frame using Prakash's concept of reciprocity in design, Photo by Lorenz Lachauer flickr*

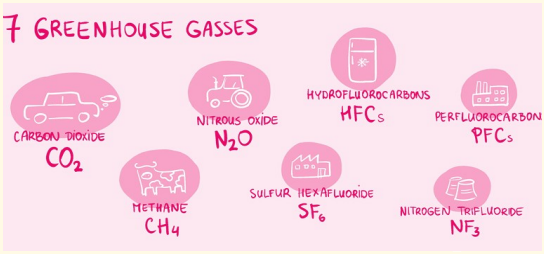
She has been a pioneer in creating sustainable buildings and the concept of reciprocity in design, which has garnered her international acclaim. Her work is not just about constructing spaces but also about creating environments that better the lives of those who live around them.

# What's happening...





# Carbon Foot Print

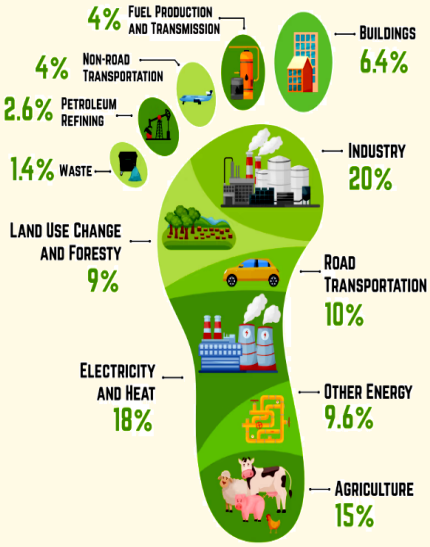



**A carbon foot print is a measure of the amount of green house gases that our daily activities release, mainly in the form of carbon dioxide.**

When calculating carbon footprints, express results as a measure of weight in the form of a carbon dioxide equivalency (e.g., 5 tons of $CO_2$ equivalent, or $CO_2e$ ) per year. There are several online calculators you can use to calculate your own carbon footprint. These will help you estimate your contribution to greenhouse gas emissions based on your own activities, like your home energy use, transportation estimates, and waste output.

*Your carbon footprint considers the entire life cycle of the products and services you consume. This includes emissions from:*

- **Production:** Manufacturing, processing, and transporting the raw materials used to make the things you buy.
- **Use:** The energy consumption associated with using a product, like the electricity needed to power your appliances.
- **End of life and waste:** The disposal or recycling of a product at the end of its usable life.




## *Most Significant Personal Contributors of Carbon Foot Print*

- **Family size**
  1 child adds 58 tons of CO2-equivalent to your annual footprint.
- **Emission-heavy transportation**
  Regular car travel adds about 2.4 tons of CO2-equivalent to your footprint.
  A transatlantic flight adds 1.6 tons.
- **Heating and air conditioning**
  Residential HVAC systems add around 1.5 tons of CO2-equivalent annually.
- **Food and diet**
  Meat consumption increases annual carbon footprint by 0.8 tons of CO2-equivalent.
- **Laundry machines**
  Washer & dryer heating elements generate 0.46 tons of CO2 per person annually.


# Save Damagundam!

The Eco Club Department of Botany on organised a field visit to the Damagundam Reserve Forest in Pudur Mandal, Vikarabad District 28th September 2024. aiming to provide them with personal experience of environmental advocacy and to support the local community in their protest against the Navy VLF Radar , about the potential damage that could be caused to the forest by this project, and its impact on the biodiversity and ecological balance of the region. The forest area was explored and the topology was observed by trekking. The guides and other environment activists joined the participants for a rally with the Puduru residents to protest against the forest destruction. All the participants took part in an awareness rally in the village and understood the problems and experiences of the local villagers.

**Damagundam Reserve Forest**

Damagundam or the Damagudem forest in Vikarabad, about 80 km from Hyderabad, breathes life into Musi. Damagundam Reserve Forest is located in the southern Indian state of Telangana, near the districts of Vikarabad and Rangareddy. It is part of the Deccan Plateau, which is known for its dry deciduous forests and unique biodiversity. Surrounded by lush greenery, there is Ramalingeshwara swamy temple provides a serene and peaceful atmosphere. Its simple stone architecture complements the natural beauty of the forest, adding to its sanctity. The temple is integral to the cultural traditions of the indigenous tribes and local villagers.

The Damagundam Reserve Forest, a vital ecological hub, is home to a diverse array of flora and fauna, including Rare tree varieties, especially medicinal plants approximately 12 lakh trees, over 300 spotted deer, wolves, wild boar, Sambar deer, countless bird species. In the visit the plant species like *Lantana camara*(Korentha), *Ficus benghalensis*(Marri), *Wrightia tinctoria*(Ankudu chettu), *Cyperus sps*(Thunga gaddi), *Abrus precatorius*(Guruvinda), *Tectona grandis*(Teak), *Terminalia tomentosa*(Maddi), *Dalbergia sisso*(Iridi), *Diospyros sps*(thuniki), *Ilex sps, Acacia melanoxylon*(thumma), *Acacia noitica*(Nalla thumma), *Senna sps, Eragrostis, Fimbrystylis, Capparis zeylanica*(Nalla Uppi ), *Terminalia arjuna*(thella maddi), *Abutilon indicum*(thuthura benda), *Acacia catechu* (kachu thumma), *Sida acuta, Tinospora cordifolia*(Tippateega), *Ficus racemosa, Sygygium* cumini(Neredu), *Ziziphus mauritiana*(regu), *Ziziphus rugose*(pariki), *Cleome viscosa*(vaminta), *Tridax procumbens, Tylophora indica*(Meka meyani aaku), *Xanthium stumarium*(sarpagandha), *Calotropis gigantia*(Gilledu), and some other species were personally observed. The forest was lush green with many medicinal plants flourished. It is a homely niche for many fauna residing there peacefully. It is a reserve forest and now this ecologically sensitive area faces an imminent threat of land encroachment due to the planning of Indian Navy to set up a low frequency radar station.

The River Musi meanders through the sylvan woods, home to about 12 lakh rare species flora. The river quenches the thirst of the people in villages, provides water for agriculture, and fills two major reservoirs of Hyderabad, Osman Sagar, and Himayat Sagar, before coursing further east and joining the Krishna River at Vadapally in Nalgonda district.


**Problems Identified**

A major part of this great natural forest will soon vanish forever. On 24 January this year, the government transferred 1,174 hectares (2,901 acres) of the reserve forest land to the Navy for the locating a very low frequency (VLF) radar station at Poduru.. The VLF station is scheduled for completion by 2027 to help fortify the Indian Navy's communications capability for defence purposes. Mooted by the Eastern Naval Command (ENC), Vishakhapatnam, the VLF radar station is intended to communicate with ships and submarines, using low frequency radio waves. he proposed project area of 2,900 acres of forest land

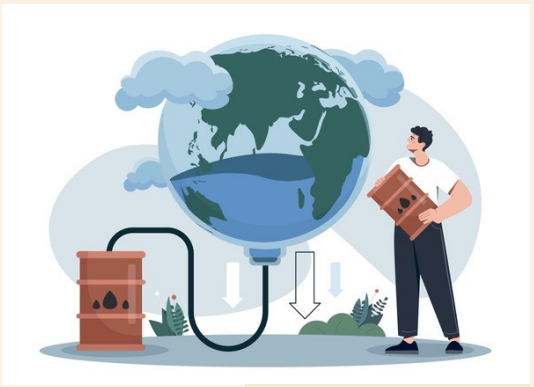
The project will require the removal of 12 lakh diverse trees, impacting at least 60,000 people across 20 villages and the livelihoods of small farmers and cattle grazers dependent on the forest. The project also threatens biodiversity, water table disruption, and climate consequences. The destruction of the forest would severely impact local indigenous communities' livelihoods, as they rely on the forest for resources like firewood, medicinal herbs, and grazing land for their livestock. Additionally, the forest would lead to cultural loss, as it is not just an economic resource but also a cultural and spiritual space for many local tribes and rural populations.

**Conclusion**

The strength and unity of the community were intense. Through their collective efforts, they demonstrated that grassroots advocacy is essential in the fight for environmental preservation. It is learnt that the community's resistance is not just about defending their land; it is about safeguarding their heritage and ensuring that future generations can thrive.

It is understood that a major discussion concerning striking a balance between environmental preservation and national security has been triggered by the Navy's plan to demolish portions of the Damagundam Reserve Forest for its VLF project. Despite the project's strategic significance, it is impossible to overlook the potential harm to the environment and social repercussions. Local residents' and environmental organizations' opposition is a reflection of a larger fight to protect India's natural heritage from pressures of development and encroachment.

# THOUGHT BOX

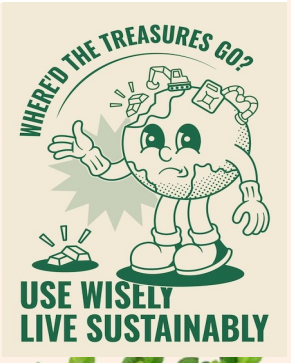


## Depletion of Natural resources, Depletion of Life

*More usage than More replenished!*

The life giving natural resources are being reduced, we ourselves are making us the world lifeless. Overconsumption and using more than need is occurring due to this the usage is faster than replenishment. Population growth an unstable consumption are leading to resource scarcity and economic instability. Ecosystem damage, loss of biodiversity, soil erosion, pollution, and climate change are the consequences of depleting natural resources. Steps to preserve them are like using how much it is needed, adopting technologies to conserve resources reducing consumption. Raising public awareness about the importance of natural resources and the need for sustainable practices.

- Ms.D.Supriya, BZC I Yr.

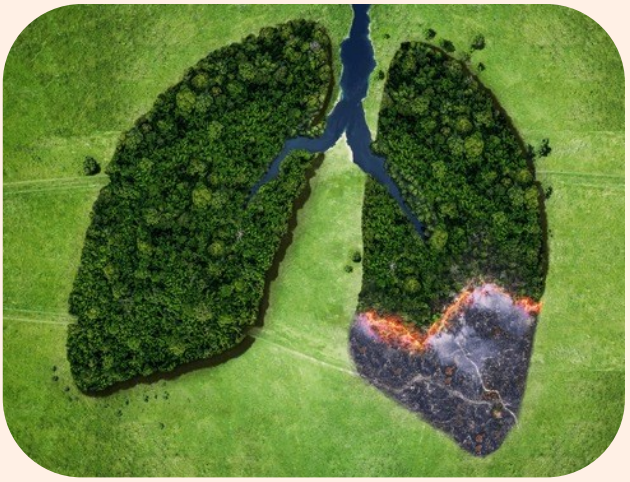



# ECO CAPTURES

## Making and Sale of Eco Friendly Ganesh Idols



## *Deforestation as Climate Driver - Ms.Gowthami, BZC I Year*



***Global warming*** is the phenomenon of gradual increase in the average temperature of Earth. It is mainly caused by the release of Green House gases like carbon dioxide, methane, chlorofluorocarbons etc.
***Deforestation*** significantly contributes to warming. when forests are cleared, the stored carbon is released into the atmosphere as carbon dioxide (coz) a major greenhouse gas. This increase in $CO_2$ traps heat and Exacerbates the green house effect, leading to rising of global temperatures. Deforestation also reduces the planet's capacity to absorb coz further accelerating climate change.
Carbon Release: Trees absorb and store carbon dioxide during photosynthesis. when forests are cut down, this stored carbon is released back into the atmosphere as $CO_2$

***Deforestation as a Climate Driver***
Deforestation is considered a major driver of climate change, with estimates suggesting it contributes 12-20% of global greenhouse
gas emissions Trees absorb and store carbon dioxide. If forests cleared or even disturbed they release carbon dioxide and other greenhouse gases. Forest loss and damage is the cause of around 10 % of global warming. To combat deforestation, implementing sustainable practices like reforestation, promoting responsible consumption and enacting strong regulations are crucial, along with supporting Indigenous rights and educating the public.

## Haritha Haaram

## International Day of Ozone Preservation

## World Environment Day


## ECO CLUB ACTIVITIES 2024-2025

- Eco Club, Department of Botany, organised World Environment day in collaboration with Jana Vignana Vedika on 5th June, 2024.
- Eco Club, Department of Botany, organised Vanamahotsavam plantation programme and an awareness rally on 8th August 2024.
- Eco Club, Department of Botany organised Making and Sale of Eco-friendly Ganesh Idols and awareness on importance of 21 pathra on 6th September, 2024
- Dr.A.Pramila, Ms Sree sravani along with the students attended a webinar in connection with International Day for Preservation of Ozone Layer organized by EPTRI EIACP in collaboration with Telangana Pollution Control Board on 13th September 2024.
- The students of B.Sc BZC participated in Poster Making Competition organized by EPTRI to commemorate 30th International Day for Preservation of Ozone Layer on 16th September, 2024. Everyone recited the ozone protection pledge to bring awareness.
- The Eco Club Department of Botany, AMS ASCW organized an educational tour to Damagundam Reserve Forest on 28th September, 2024.

| *STREAM* | *STUDENT TEAM LEADER* |
|---|---|
| Promotion of Plantation, Bio-Diversity and Survival Monitoring. | Amulya<br>G.Keethana Jhadav |
| Promoting Clean and Safe Drinking Water | Keerthana<br>B.Sravani |
| Energy-Save | Satwika<br>K.Daksha Sai |
| Effective Land Use | Shirisha<br>R.Keerthi Reddy |
| Promoting Effective Waste Management | KVS. Jayamani<br>V.Hansika Reddy |

### *Sub Committee Members of Different streams in Eco Club*

1. Promotion of Plantation, Bio-Diversity and Survival Monitoring. - *Dr.A.Pramila*
2. Promoting Clean and Safe Drinking Water -*Ms.Sree Sravani*
3. Energy-Save - *Mrs P.Sandhya*
4. Effective Land Use - *Dr.Parameshwari Devi*
5. Promoting Effective Waste Management - *Ms.Ruchita*

### *Student organization of Eco club*

| | |
|---|---|
| **PRESIDENT** | **: E.Swarnuthi Reddy** |
| **VICE-PRESIDENT** | **: B.Sushma** |
| **SECTRETARY** | **: KVS.Jayamani** |
| **TRESURER** | **: M.Amulya** |

### *Editorial committee*

Dr. A.Pramila (Editor)
Ms.Jayamani

### *Views and Suggestions*

We welcome, encourage and value all your suggestions If any suggestions or ideas to be implemented or articles related to ***Ankura*** you are most welcome to send us through mail. Please mail it to us on ecoclub18ams@gmail.com

### *Contact*

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### *Thanks*

We are herewith one more edition of our Eco club News letter - ***Ankura*** this year. We have been striving to put our steps forward in fulfilling our vision and mission of Eco club. Acknowledging the kind support and encouragement from our Chairman, Hon. Secretary and Correspondent, Principal , we would like to thank each and every person who helped us in bringing out this news letter.

***Thank You!***

**- Editorial committee**