

BIOINVASION

EIACP Newsletter on Biological Invasions

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ENVIRONMENT DAY SPECIAL EDITION



LIFE
Lifestyle for
Environment



AMRITA
VISHWA VIDYAPEETHAM

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Cover Page

Photo | *Parthenium hysterophorus*

Credit | Nikhila K

About "*Parthenium hysterophorus*"

Parthenium hysterophorus, also known as Congress Grass, is a highly invasive weed native to the Americas. It became invasive through contaminated soil and water, as well as human activities like trade and travel, allowing it to spread rapidly across the globe. The consequences of its invasion are severe, including skin allergies and respiratory issues in humans, reduced crop yields and livestock productivity, and altered ecosystems leading to loss of biodiversity. Its invasive nature also contaminates soil and water, making it a significant threat to environmental and human health.

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From the Co-ordinator's Desk

Welcome to our Environmental Day special issue, where we dive into the heart of World Environment Day 2024—a global celebration with the powerful theme, "Land restoration, desertification and drought resilience." This year's theme calls on all of us to take action, and the response has been nothing short of inspiring.

In this edition, you'll discover how our community rallied together with a shared vision to make a tangible impact. From dynamic campaigns to innovative projects, we've turned passion into progress. You'll also find the winning entries from our research article writing competition, showcasing the scientific breakthroughs that could shape the future of our planet.

As you journey through these pages, you'll see the incredible power of collective effort and the ripple effect of each small step toward sustainability. This issue isn't just a reflection of our past efforts—it's a call to keep pushing forward, to innovate, and to restore our earth together.

We hope these stories inspire you to join the movement and make every day an opportunity to contribute to a greener, healthier world.

Through this newsletter, our aim is to raise awareness about the impacts of biological invasion on natural ecosystems among different target groups, such as school children, college students, the scientific community, the general public, and policymakers.

Dr Maya Mahajan

Coordinator| EIACP RP

Restoring degraded lands: Success stories and lessons learned

Jagrati Solanki | Assistant Environment Engineer
Rajasthan Pollution Control Board (RSPCB)



Land restoration or rehabilitation is the process of ecological restoration of a site to a natural landscape and habitat, safe for humans, wildlife, and plant communities (as per UNCCD). This article explores some of these success stories and the valuable lessons they offer.

The Gravity of Land Degradation

Land degradation poses a severe threat to biodiversity, food security, and the livelihoods of millions worldwide. Unsustainable agricultural practices, deforestation, and industrial activities have left vast tracts of land barren and unproductive. However, innovative approaches to land restoration are proving that with the right strategies, degraded lands can be revitalized.



Success Story 1 | The Loess Plateau, China

The Loess Plateau in China, once one of the most degraded areas on Earth, now stands as a beacon of hope. Decades of overgrazing, deforestation, and unsustainable farming had turned this region into a dusty, eroded landscape. In the 1990s, the Chinese government, with support from the World Bank, initiated a large-scale restoration project.

Through the implementation of terracing, tree planting, and the prohibition of grazing on fragile slopes, the Loess Plateau underwent a dramatic transformation. Vegetative cover increased, soil erosion reduced significantly, and agricultural productivity soared. The project not only restored the land but also improved the livelihoods of millions of farmers, demonstrating that environmental restoration and economic development can go hand in hand.



Loess Plateau | Before & after restoration

Success Story 2: The Great Green Wall, Africa

The Great Green Wall initiative in Africa is another exemplary effort in combating desertification and land degradation. Stretching across 11 countries from Senegal to Djibouti, this ambitious project aims to create an 8,000-kilometer belt of greenery to halt the advance of the Sahara Desert.

Communities have come together to plant millions of trees, restore natural habitats, and implement sustainable land management practices. In Senegal, for instance, over 11 million trees have been planted, leading to the regeneration of once-barren lands and the return of wildlife. The Great Green Wall not only mitigates the effects of climate change but also empowers local communities by creating jobs and improving food security.



Success story 3: Costa Rica's Forest Restoration

Costa Rica's Forest restoration efforts are a testament to the power of political will and community involvement. By the 1980s, deforestation had reduced the country's forest cover to just 26%.

protecting and restoring forests. As a result, forest cover has rebounded to over 50%, biodiversity has flourished, and ecotourism has become a major economic driver. Costa Rica's success underscores

Recognizing the ecological and economic importance of forests, the government implemented a series of policies to incentivize reforestation and conservation.

Payment for Ecosystem Services (PES) programs were introduced, offering financial incentives to landowners for the importance of aligning environmental goals with economic incentives.



LESSONS LEARNED

Community Engagement is Crucial

One common thread in these success stories is the active involvement of local communities. Restoration projects are most effective when they are inclusive, participatory, and address the needs and aspirations of local people. Empowering communities through education, capacity- building, and economic incentives fosters a sense of ownership and ensures the sustainability of restoration efforts.

Integrated Approaches Yield Better Results

Successful land restoration requires a holistic approach that integrates ecological, social, and economic dimensions. Combining traditional knowledge with modern science, promoting sustainable land management practices, and addressing underlying socio-economic issues are key to achieving lasting results. Restoration projects should be designed to enhance biodiversity, improve soil health, and create economic opportunities.

Policy Support and Institutional Frameworks are Essential

Strong political will and supportive policies are fundamental to the success of restoration initiatives. Governments play a critical role in creating enabling environments through legislation, funding, and institutional support. Policies that incentivize sustainable land use, protect natural resources, and promote research and innovation are vital for scaling up restoration efforts.

Monitoring and Adaptive Management are Key

Effective restoration is an ongoing process that requires continuous monitoring and adaptive management. Establishing robust monitoring systems helps track progress, assess the impact of interventions, and identify areas for improvement. Flexibility to adapt strategies based on monitoring results ensures that restoration efforts remain responsive to changing conditions and challenges.

Land Degradation and Desertification in Rajasthan

Dr. Pankaj Kumar, Mr. Amar Singh Dhabhai | RSPCB | Jaipur



Rajasthan is the driest state in India where, two thirds of its geographical area is covered by Thar Desert, and the state has only 1.16% of the surface water in India. The average rainfall in Rajasthan is 531 mm against the national average of 1,200 mm. In the absence of surface water, reliance on ground water is excessive, and water table is depleting at an alarming rate in most of the area except in canal command area. Due to the severe climatic condition mentioned above, the forest & tree cover of Rajasthan State is only 7.11% (forest cover is 4.69%, and tree cover is 2.42% respectively), which is far below the national average of 23.4%, and the open forest cover out of the total forest is as high as 71.8 %. Furthermore, the state faces a major challenge of desertification due to recurrent drought and increasing human and livestock pressures. Especially in western Rajasthan, desertification is causing wind erosion and deposition, followed by water erosion, as well as water logging and salinity. More than 60% area of western Rajasthan is affected by the desertification and requires intensive management to contain desertification.

Reflecting these severe conditions above, the Government of Rajasthan announced state specific forest policy called “Rajasthan State Forest Policy 2010”, in which the Forest Department sets the target of more than 20% of vegetal cover to achieve and declares to take actions for

combating desertification. According to the State Forest Policy, additional 45,000 square km of afforestation and pasture development is the gap to bridge in a reasonable timeframe. In order to achieve the above-mentioned target with sustainable forest management, people’s participation is indispensable. Forest guards in the State are forced to look after 10 to 15 km² area as against the ideal norm of 5 to 7 km², which is unrealistic for the sustainable forest management only by the effort of the Rajasthan Forest Department. Although capacity development of the forest department is continuously undertaken, it is very significant to conduct afforestation activities through the participatory scheme of Joint Forest Management (“JFM”).

Desertification is a complicated global threat with negative socio-economic influence. As per the assessment of the Food and Agriculture Organization (FAO), about 19.5% of dry lands globally is affected by soil degradation. Claimed that 6-7 million hectares of land is lost every year due to land degradation processes including soil erosion and desertification. The United Nation Environment Program (UNEP) defined desertification as “land degradation in arid, semi-arid, and dry sub-humid areas resulting mainly from the adverse human impact”. However, the most widely accepted definition of desertification is provided by the United

Nations to Combat Desertification (UNCCD). According to the UNCCD, desertification is “land degradation in arid, semi-arid and sub-humid areas resulting from various factors including climatic variations and human activities”. The United Nation Environment Program (UNEP) defined desertification as “land degradation in arid, semi-arid, and dry sub-humid areas



resulting mainly from the adverse human impact”. Desertification and land degradation are outcomes of anthropological activities that have led to a multitude of environmental problems. ABSTRACT 93 International Journal for Modern Trends in Science and Technology

Along with the gradual destruction of the Aravali ranges, the mighty Thar desert in western Rajasthan is expanding fast because of migration of people, changes in the rainfall pattern, spread of sand dunes and unscientific plantation drives. The degradation of land is posing a threat to the desert ecology, while the climate change has contributed to the spread of arid region. With these findings, a study on desertification of Thar region conducted by the Central University of Rajasthan has predicted that the sandstorms from the desert will travel as far as the National Capital Region (NCR) in the years to come. The sandstorms will become intense with the erosion of Aravali hills, which act as a ‘natural green wall’ between the desert and the plains.

This study was carried out to estimate the economic losses caused by land degradation in different agroclimatic zones of Rajasthan. The economic losses were calculated by using an estimation model based on the amount of degraded land in each zone multiplied by the total value of output per hectare. Economic losses due to land degradation in the state as a whole 55.24 billion per year at 2017-18 prices. The highest losses were reported in the flood-prone eastern plain (10.67 billion) and the lowest in the Luni basin transitional plain (1.37 billion).

The magnitude of economic losses in Rajasthan varied according to the severity of degradation, climatic factors, farming activities (including the number of crops cultivated and crop productivity) across agro-climatic zones. Land degradation is a major concern not only for India, but also for Rajasthan agriculture, on which the majority of the population depends for their livelihood.



Many policies and programs have been implemented in Rajasthan over the last few decades to address this issue, but the results have been disappointing (Sharma et al. 2014a). The analysis of the causes and extents of land degradation is critical for developing appropriate policies to address the degradation problem. Keeping the preceding context in mind, it is worthwhile to estimate the economic losses caused by land degradation, which threatens the sustainability of agricultural production in the state of Rajasthan.

Land degradation is an issue of increasing global concern. It threatens not only the productivity of land but also water quality, human health and the fundamentals of ecosystems on which all life depend. It has also close connection with other major global issues, particularly climate change and biodiversity. It has been estimated that globally around 24 billion tons of fertile soil and 27,000 bio-species are lost each year. While land degradation is acutely felt in the world's arid lands, some 80 per cent is actually occurring outside these areas. For this reason, there is an urgent need to halt and reverse land degradation for ensuring food, water and environment security as well improving living conditions of population residing in such areas.

Desertification, along with climate change and the loss of biodiversity were identified as the greatest challenges to sustainable development during the 1992 Rio Earth Summit which paved the way for the conceptualization and formulation of the United Nations Convention to Combat Desertification (UNCCD). The Convention's 195 parties, including India, work together to improve the living conditions for people in dry lands, maintain and restore land and soil productivity and mitigate the effects of drought. Wind Erosion is the most significant cause of land degradation/desertification in Rajasthan.

The wind erosion is playing a prominent role, in the western flank of the state and is found active with full force in the core of desert, causing sand blasting, sand drifting, which results active dunes and interdunal plains. By the arid zone standard, Rajasthan is one of the most densely populated desert areas in the world. The density population per square km is 48 as compared to 3 persons per square km in most desert regions of the world. With a base of roughly 3.567 million in 1901, the population of these arid areas has registered a linear increase to 10.236 million (roughly about threefold increase) over the base year of 1901 to 1977.

To satisfy the land requirements of the growing population in these arid areas, increasing marginal lands are being brought under the plough leading to a substantial rise in the sown area while leading to a loss in grazing lands. Moreover, people have the tendency to produce more food on shrinking plots and then turn to intensive agricultural techniques and over-cropping which makes soil face a constant danger of erosion and depletion.

Another significant implication of over cropping is that it reduces the available organic matter in the soil. Humus is lost and the ability of soil to retain water is reduced. This speeds precipitation runoff, increasing the risk of flooding and erosion thus making the area more susceptible to drought and further processes of soil erosion and desertification. To add to the problem of the growing population and land requirements of the densely populated area, the diminishing grazing land also leads to the inevitable overexploitation of the ever-shrinking grazing areas. As more lands are being trampled on by cattle and livestock, the soil becomes increasingly more compact, making it harder for any vegetation to grow on. Once the land is free of vegetation that would otherwise have held the topsoil layer, it becomes prone to natural erosive processes such as wind or water. Grazing pressures can contribute to accelerated nutrient losses, rates of erosion, land degradation in the form of soil damage and reduced plant yield.

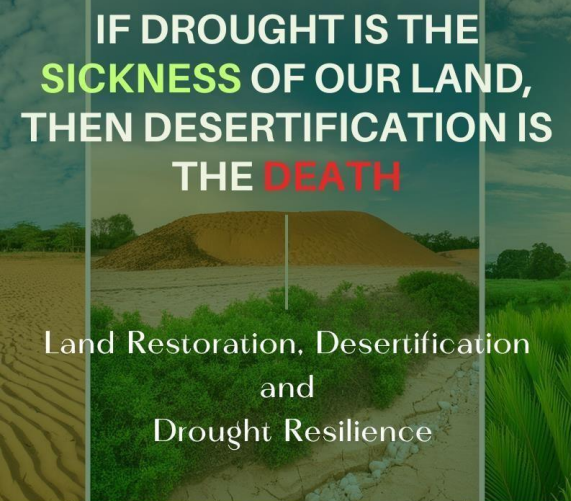
There is an urgent need for people and planners to recognize desertification as a pressing problem in the Western Dry Region of Rajasthan. The large growth rate in the human population in almost all the districts covered under this region pose an ever-increasing need for generating income and employment opportunities largely dependent on land-based activities as the literacy rate of the rural population is remarkably low in this region.

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World Environment Day 2024- “Celebrating the Decade of Restoration” | Infographics by EIACP AVV

IF DROUGHT IS THE SICKNESS OF OUR LAND, THEN DESERTIFICATION IS THE DEATH




Land Restoration, Desertification and Drought Resilience




Desertification

Degradation of fertile land into arid desert due to combination of natural processes and human activities





Restoration

Land restoration can reverse the creeping tide of land degradation, drought and desertification



Nature's comeback


We need a strategy that will permit both development & conservation. The starting point of that strategy is the **Land** itself!

REVIVING LAND, BEATING DROUGHT

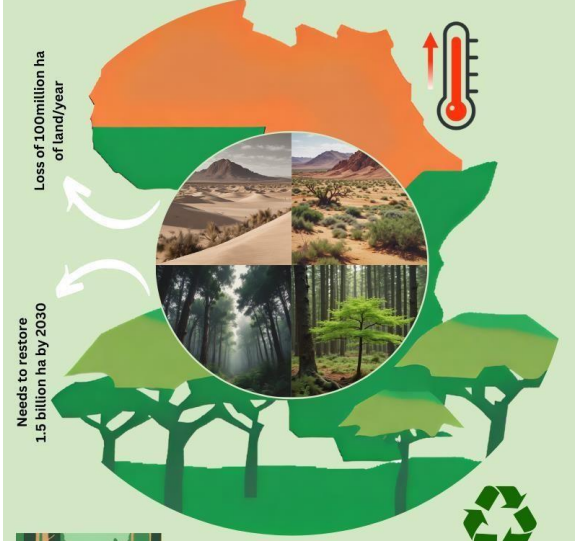
-The Success Stories-

The Loess Plateau in China | Desertification to Ecosystem Restoration



Terracing of hillsides, construction of check dams, planting trees and grasses, restoration of water resources, increased agricultural productivity and improved living conditions for local communities


Loss of 100 million ha of land/year



Needs to restore 1.5 billion ha by 2030




Success Restoration stories from India

Ecological restoration of degraded rainforests, grasslands and savannahs and water harvesting



The Great Green Wall in Africa

Initiative to expand arable land in the region bordering the Sahara Desert

ENVIRONMENT DAY ACTIVITIES | June 2024

EIACP RP at Amrita Vishwa Vidyapeetham, under the coordination of Dr. Maya Mahajan, EIACP Coordinator, celebrated the month of June 2024 with a series of impactful programs aimed at fostering environmental awareness and scientific temperament. World Environment Day and World Sea Turtle Day were the major focus of the month.

World Environment Day

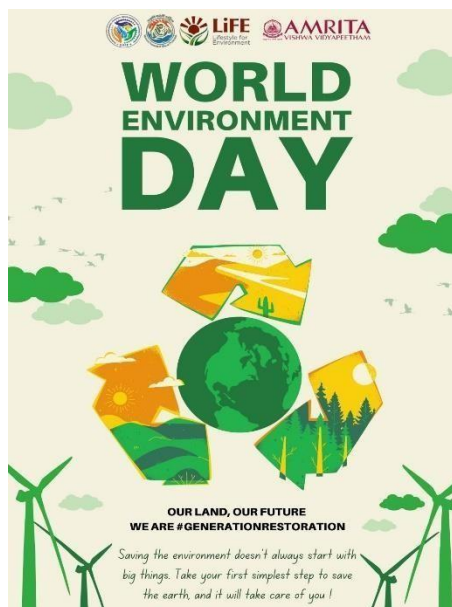
The World Environment Day celebrations were held on June 5th and 6th, 2024, featuring a variety of activities engaging students, the public, and nature enthusiasts. Below is the detailed report of the events conducted.

General Awareness Poster

To kickstart the celebrations, general awareness posters were widely circulated within the campus and among our partners. These posters emphasized the importance of environmental conservation and encouraged active participation from the community. Additionally, Environment Day posters were distributed to highlight the significance of the day's events and to invite participation from students and the broader community.

Essay and Painting Competition

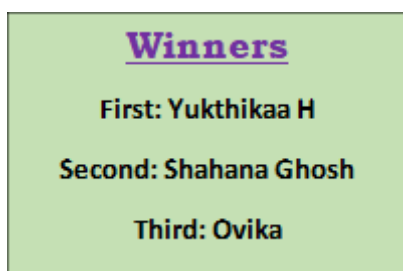
To engage young minds in environmental conservation, a combined essay and painting competition was announced. The competition was divided into two age groups:



Essay Competition (Age: 12-18 years)

Topic: The importance of land restoration for biodiversity conservation

Participants were encouraged to write essays exploring the critical role of land restoration in preserving biodiversity. This competition aimed to foster critical thinking and awareness about pressing environmental issues.



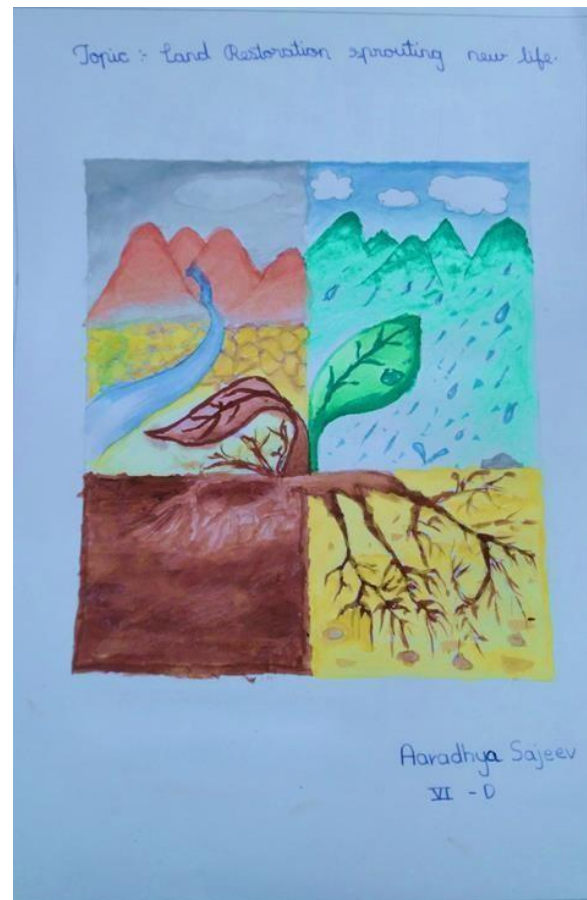
Painting Competition (Age: 9-11 years)

Topic: Restoration - Sprouting of new life

Younger participants were invited to showcase their creativity by painting their vision of restoration and the rebirth of nature. The competition aimed to inspire children to express their understanding



and appreciation of the natural world. Participants were instructed to submit their entries through the weblink provided in the poster.



First: Aaradhya Sajeev



Second: Diyanika P



Third: T Praneesh

Winners

First: "Land Degradation and Desertification in Rajasthan" by Dr. Pankaj Kumar, Mr. Amar Singh Dhabhai

Second: "Restoring degraded lands" by Jagrati Solanki

Scientific/Research Article Writing Competition

In an effort to promote scientific inquiry and a deeper understanding of environmental issues, a scientific/research article writing competition was announced. This competition was open to nature enthusiasts and aims to pave the way for budding researchers to share their insights and findings on environmental topics.

Topic: Restoring the degraded lands; The success stories and lessons learned.

Animal Feeding Drive

On the occasion of World Environmental Day, EIACP –RP Amrita Vishwa Vidyapeetham, organized an Animal Feeding Drive out of a profound sense of compassion and responsibility towards the stray animals on the campus, led by Dr. Maya Mahajan and members from EIACP, in collaboration with passionate members of the animal club. The aim was to provide nourishment and care to these vulnerable creatures, highlighting the importance of empathy and environmental stewardship on 5th June 2024 World Environmental Day.

EIACP RP Amrita Vishwa Vidyapeetham | Coimbatore | Tamil Nadu

On the occasion of

World Environment Day 2024

Invite entries for

Scientific Article Writing Competition

Topic : Restoring degraded lands; The success stories and lessons learned

Instructions:

- Only participants aged 18 and above are allowed to participate
- Article should not exceed more than 8 pages
- Submit your entries only through the link provided
- Last date of submission: 30/06/2024
- Winning articles will be published in our coming newsletter

Submit your entries at:
https://docs.google.com/forms/d/e/1FAIpQL5dtpZZTfPkSwBHgK7LpoukthWjOrDab_igMPCmQQQQ/viewform

WORLD ENVIRONMENT DAY
5 JUNE 2024

ANIMAL FEEDING DRIVE

VENUE : - EIACP OFFICE, ROOM NO. E108
ACADEMIC BLOCK 2
DATE : - 05/06/2024 | TIME : - 5PM

The Animal Feeding Drive commenced at 4:30 PM with a ceremonial feeding session dedicated to Brownie, a cherished stray dog who has become an endearing part of the campus community. Brownie was presented with a meal of boiled eggs as a token of appreciation and love. This symbolic act set the tone for the rest of the event, emphasizing the compassion and responsibility the campus community holds towards its stray animal inhabitants.



The feeding drive began at the AB2 Centre for Sustainable Future Department. The route covered various parts of the campus, providing food and water to the stray dogs and other animals encountered along the way. The volunteers, comprising members from EIACP and the Animal Club, played a crucial role in ensuring the event's success. They carried boiled eggs, biscuits, and water, feeding and caring for the animals as they moved along.



During the stroll, the volunteers interacted with 12 stray dogs and several cats that inhabit the campus. The animals

were provided with nourishing food and clean water. The feeding sessions were marked by moments of pause and reflection, allowing the volunteers and participants to appreciate the joy and relief their actions brought to these animals. Dr. Maya Mahajan's contribution to the event was significant.

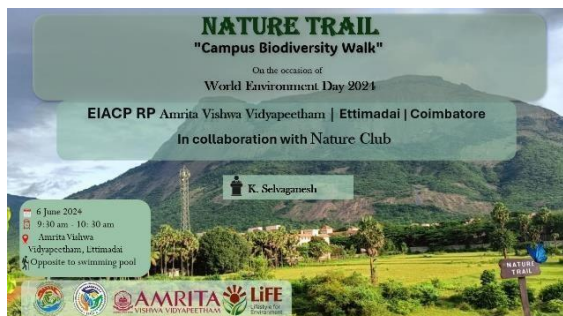


The Animal Feeding Drive concluded at 6:30 PM at the Main Building with a photo session involving the Animal Club members. This closing activity served as a platform to emphasize the importance of extending care and kindness to all living beings, including the stray animals in our community. The event, led by Dr. Maya Mahajan and supported by passionate volunteers, underscored the values of empathy and environmental stewardship, making a lasting impact on the campus community.

Nature Trail: To Explore the Unexplored

On 6th June 2024, fifty enthusiastic students from Amrita Vidyalayam, Ettimadai, gathered at the Amrita Vishwa Vidyapeetham (AVV) campus to participate in an enlightening nature trail entitled "Campus Biodiversity Walk", organized by the EIACP RP. The event aimed to celebrate World Environment Day 2024 with a focus on this year's

theme: Restoration, Desertification, and Drought Resilience.



The event was inaugurated by Dr. Maya Mahajan, EIACP Coordinator, who addressed the gathering. Dr. Maya emphasized the critical importance of celebrating Environment Day, urging the young minds to understand and appreciate the need for environmental conservation. She elaborated on the theme of the year, highlighting the interconnected challenges of restoration, desertification, and drought resilience. Her inspiring words set a thoughtful and enthusiastic tone for the day's activities.

Following Dr. Maya's address, Ms. Nikhila K, Information Officer, introduced the speaker of the nature trail, Mr. Selvaganesh. Known for his extensive knowledge and passion for birdwatching, Mr. Selvaganesh is a renowned birder from Coimbatore.

His expertise and enthusiasm promised a memorable and educational experience for the students.

The session began with a guided walk through the lush thickets of the AVV campus. Mr. Selvaganesh encouraged the students to attune their ears to the natural sounds around them, particularly the calls of various bird species. This immersive experience was designed to heighten their awareness and appreciation of the rich biodiversity present on the campus.

Bird Watching and Identification

During the trail, the students had the opportunity to observe and identify a variety of bird species. Mr. Selvaganesh's detailed explanations helped them understand the distinctive features and behaviors of each bird. The following birds were spotted during the trail:

1. Common Hawk Cuckoo, White-cheeked Barbet
2. Rufous Treepie, Shikra
3. Common Tailorbird, Coppersmith Barbet
4. Pale-billed Flowerpecker, Oriental Magpie Robin
5. Asian Koel, (Seven Sisters)
6. Large-billed Crow



Selvaganesh Explaining Bird Watch



Educational Insights

Mr. Selvaganesh shared valuable insights with the students, such as how to distinguish between male and female peafowl, highlighting the vibrant plumage of the males compared to the more subdued colors of the females. He introduced the concept of biomimicry and pointed out the differences between house crows and large-billed crows, focusing on their physical and behavioral distinctions.

Spotting Exotic and Invasive Species

During the trail, Dr. Maya Mahajan took the lead in identifying and describing exotic species, such as *Wedelia trilobata* (Singapore Daisy). She explained its characteristics and the impact of such species on local ecosystems. Ms. Karthika M. Nair, EIACP Program Officer, supplemented this information by

discussing invasive alien species and their ecological consequences.

Plant Identification

Mr. Selvaganesh's proficiency in botany was evident as he helped students identify various plant species on the campus. They recognized several plants, including:

1. *Peltophorum pterocarpum*
2. *Bauhinia purpurea*
3. Fish-tailed Palm
4. *Albizia saman*
5. Indian Tulip Tree
6. Pongamia sp.
7. False Ashoka

Interactive Sessions and Butterfly Identification



Ms. Nikhila K engaged the students with interactive sessions, asking questions about Tamil Nadu's state animal, plant, and butterfly. She explained the ecological significance of butterflies and helped students identify several butterfly species during the trail, including:

1. Plain Tiger
2. Glassy Tiger
3. Common Crow
4. Common Grass Yellow
5. Common Emigrant
6. Common Rose
7. Crimson Rose
8. Chocolate Pansy
9. Lemon Pansy
10. Dark Blue Tiger
11. Great Eggfly

Cicada Acoustics and Enthusiastic Participation

Mr. Selvaganesh also provided an intriguing explanation of cicada acoustics, describing how these insects produce their distinctive sounds. The students, thoroughly engaged, asked numerous questions about birds, plants, trees, and general natural phenomena. Their curiosity and enthusiasm were palpable, and they quickly learned to identify birds by their calls.

The nature trail, which lasted for one and a half hours, covered the dense and diverse wild woods of the AVV campus. The session was a resounding success, providing the students with a rich, hands-on learning experience. They left with a deeper understanding of and appreciation for the natural world, inspired to continue exploring and protecting their environment.

Nature's Narrative: A Transformative World Environment Day Event

On the occasion of World Environment Day 2024, the EIACP RP at Amrita Vishwa Vidyapeetham organized a special film screening highlighting the urgency and importance of environmental conservation. The event, which took place in the Sandeepani Hall, saw an enthusiastic turnout with 70 students and 6 staff members from the nearby Amrita Vidyalayam, Ettimadai, alongside members of the Student Welfare Committee and numerous nature enthusiasts from the campus. The event featured the screening of "A Life on Our Planet (2020)" a profound documentary film by Sir David Attenborough. The film was a powerful testament to the beauty and fragility of the natural world, documenting the environmental changes over the course of Attenborough's life. A sobering yet hopeful message was delivered through the documentary, urging humanity to rethink its relationship with nature and take actionable steps towards ensuring a sustainable future.



Kicking off at 11:00 AM, the event began with an opening note from Karthika, Program Officer, the stage was set for an immersive journey into the heart of

nature's plight. Through a masterful combination of breathtaking visuals and compelling storytelling, the documentary captivated the audience and shed light on the critical importance of taking immediate environmental action. To ensure a comfortable and enjoyable experience, snacks and refreshing drinks were provided to all the participants during the show time.

Following the screening, Dr. Maya Mahajan, Co-Ordinator at EIACP Amrita Vishwa Vidyapeetham took the stage to deliver an insightful speech. She underscored the vital significance of conserving nature, reminding everyone that protecting nature is indispensable for the continuation of life on earth. Building on Dr. Maya's impassioned words, Nikhila, the Information Officer at the EIACP

After this, a dynamic discussion session was held, allowing participants to share their insights and ideas inspired by the film. The dialogue fostered a sense of community and commitment towards a common cause, and the participants agreed to integrate sustainable practices into their daily lives.

Discussion on sustainable living

As a meaningful conclusion to the program, under the guiding spirit of Dr. Maya, everyone in the Sandeepani hall joined together in taking a heartfelt pledge. The entire crew, united in their mission, made a solemn pledge to preserve nature, forests, and ecosystems by adopting sustainable practices, reaffirming their commitment to protecting the planet for future generations. The event concluded with a



Centre, addressed the audience, urging them to recognize the urgency of the environmental crisis. She pointed out the need for collective action, encouraging students to unite in their efforts towards building a sustainable future.

vote of thanks delivered by Karthika, the Program Officer. Expressing gratitude to all attendees and contributors, she emphasized the significance of their presence and participation in furthering the cause of environmental conservation.



Overall, the event was a resounding success, leaving attendees inspired and motivated to take proactive measures in their daily lives to protect and preserve the environment.

World Sea Turtle Day Protecting the Marine Hero's: EIACP RP AVV'S Call to Action!

The World Sea Turtle Day 2024 celebration at EIACP RP Amrita Vishwa Vidyapeetham, was marked by the release of the infographic "Call for Action: How Can We Protect the Marine Heroes". This event was aimed to raise awareness about the critical importance of sea turtle conservation and to inspire actionable steps within the community.

The infographic was circulated among the students, researchers, organizations, nature enthusiasts and the public. The

release of the infographic served as an educational tool, empowering the nature-lovers community with knowledge and practical steps to contribute to conservation efforts. The event highlighted the importance of collective action in addressing environmental issues and inspired the public to become active advocates for marine conservation.



Security guard Bijay Rout has touched our hearts with his remarkable dog rescue efforts, showcasing a compassion and dedication that goes beyond his duty to keep our community safe. With a selfless spirit and a passion for animal welfare, Dr. Maya Mahajan, a renowned environmental scientist with a heart for animals, collaborated with Bijay, leveraging his expertise in dog rescue. Under his guidance, they successfully rescued a stray dog and brought it to their shared home, providing a loving and safe place for the furry friend.



Bijay, a security guard at Amrita University, hailing from Keonjhar, Odisha, has spent the last eighteen months not only protecting the campus but also capturing the hearts of its furry inhabitants. Among them was a devoted mother dog and her six playful puppies. As fate would have it, four of the puppies found forever homes, leaving behind two loyal companions - a male and a female.

The male puppy, Julu, formed an unbreakable bond with Bijay, religiously visiting him every evening for a snack and a dose of affection. Bijay, who had left behind a beloved dog at home, found a piece of his heart in Julu, and their friendship blossomed into an unforgettable tale of companionship and love. In a heartwarming display of compassion, a group of students from Amrita University's Computer Science and Engineering and Artificial Intelligence Engineering departments banded together to support Julu, a loyal canine friend to security guard Bijay, who was struggling with a painful insect bite. Despite Bijay's tireless efforts to nurse him back to health, Julu's condition remained dire, prompting the students to seek out expert help. Their collective efforts led them to Dr. Maya Mahajan, a passionate and committed animal lover, whose guidance has been instrumental in Julu's steady recovery. This inspiring tale of unity and compassion serves as a poignant reminder of the boundless impact that can be achieved when we come together to support one another in times of need. Dr Chakravarthy of 'Barks and Meows' pet Clinic in Kovaipudur, Coimbatore, Tamil Nadu teamed up with Dr. Maya and Security Bijay to save Julu's life.



Before Treatment

With Dr. Maya's swift response and Dr. Chakravarthy's expert care, Julu received the treatment he so desperately needed, and his condition began to improve. In a remarkable gesture of kindness, Dr. Chakravarthy provided the necessary medication free of charge, a labor of love for the beloved canine. Meanwhile, Dr. Maya went above and



After Treatment

beyond, purchasing food for Julu to ensure his recovery was nourished and supported. Apart from these, students at Amrita University; especially Anudeep Rao, Shaun Sunny, Vivek Rajasekhar, Lokesh Budda, Ananthkrishnan Chaklathllam of Computer Science Engineering and Srujal Sathawane of Artificial Intelligence Engineering have enthusiastically contributed to this initiative and provided assistance to the best of their abilities.

Through their collective efforts, Julu's remarkable recovery serves as a beacon of hope, inspiring us all to embrace the incredible difference we can make in the lives of others through even the smallest acts of kindness and generosity. This poignant tale of compassion and community reminds us that we all have the power to make a positive impact on the world around us, one small act of kindness at a time. As Julu's story spreads joy and inspiration, we are reminded that love, care, and compassion can cross species and transform lives.



BARKS & MEOWS
PET CLINIC

A Tale of Compassion: How Oliver Found His Way Back to Life – Karthika M Nair

A story of compassion and teamwork unfolded at Amrita Vishwa Vidyapeetham (AVV) when a severely wounded dog, later named Oliver, was discovered on campus. Mauli Rajguru, Lingesh, Harsha and Mukesh sought the help of Dr. Maya Mahajan, an animal lover and the coordinator of EIACP AVV. With her guidance and support from Mr. Mahesh, (General Manager ARC)



Before Treatment

Yashaswini and Tharun, volunteers of Amrita Animal Welfare Society (AAWS) quickly transported Oliver to Barks and Meows hospital, where more than 60 maggots were removed from his neck and head region under sedation. However, Oliver's battle was far



Dr. Chakravarthy Treating Oliver

from over. Two days later, AAWS volunteers noticed that wound was very severe. Further treatment and costly medicines were required. The AAWS volunteers, undeterred by the Dr. Maya once again provided crucial assistance. AAWS launched a fundraising campaign, successfully gathering the funds needed for Oliver's treatment. A veterinary team from 'Barks and Meows' in Coimbatore, led by Dr. Chakravarthy, was brought in thanks to Dr. Maya's intervention and Ms. Nikhila's support. They treated Oliver's wounds and even provided the AAWS members with a basic first aid lecture. Tharun, Nitish and Kanishka AAWS volunteers regularly went to ARC, where Oliver was kept to feed nutritious food and medicines for 3 weeks. Mr. Deenu of Ettimadai took care of Oliver during his recovery. The collective efforts of the AAWS (Amrita Animal Welfare Society) with the guidance of Dr. Maya and the support of the veterinary team, saved Oliver's life. Their dedication turned a dire situation into a story of hope and resilience.

Request for Articles and feedback

Your feedback on this issue, as well as short articles on Biological Invasion/ Invasive Alien Species and Poems, artworks, paintings related to biodiversity conservation, waste management, climate change etc for our upcoming newsletter issues are most welcome. You can send your entries with your contact details to our e-mail: bioinvasion.envis@gmail.com

Thunbergia grandiflora, a Southeast Asian native, has become a highly invasive weed in tropical ecosystems worldwide. Originally introduced as an ornamental plant, it has escaped cultivation and spread rapidly, outcompeting native species for resources and habitat. This aggressive climber chokes trees, alters ecosystem processes, and disrupts biodiversity, leading to a decline in native plant and animal populations. Its invasion also affects forest regeneration, increases fire risk, and impacts local livelihoods, making *T. grandiflora* a significant environmental and economic concern. Currently, it is listed as invasive in Central America, the West Indies, Africa, and numerous islands in the Pacific including Hawaii, Fiji, French Polynesia, Palau, and Samoa. Urgent management and control measures are necessary to mitigate its devastating consequences and preserve ecosystem integrity.



Back cover: *Thunbergia grandiflora* PC | Maya Mahajan



LIFE
Lifestyle for
Environment



AMRITA
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