FROM THE STATE DIRECTOR’S DESK

The newspaper headlines in The Hindu within a week’s time i.e. “Fisheries Varsity study reveals a highly degraded Vembanad Wetland System” on 18th March and “NGT slaps ₹10 Crore penalty on Kerala Government for failure to protect Ramsar Sites” on 24th March is a direct pointer to the lackadaisical attitude and approach of the Kerala State Government i.e. the primary stakeholder and custodian of the natural wealth of the State, towards the protection of wetlands. For the benefit of the wider public, the category of wetlands includes a wide range of waterbodies including paddy fields, rivers, backwaters, estuaries, freshwater lakes, marshes, swamps, etc. Wetlands caters to two of our basic needs, i.e. both food and water security. But unfortunately, we, including our administrators, bureaucrats, politicians, and the general public consider wetlands as wastelands.

Some years back, when we organised the Global Investor Meet (GIM) in Kerala, the then Vice-Chairman of the Central Planning Commission who was the Chief Guest at the inaugural function remarked “Kerala is fast ahead and Kerala’s people are well educated. We don’t have to force anyone in the State to do agriculture or farming. The food can be produced elsewhere and it can come from outside. Give freedom to the people to convert their agriculture lands for other development needs”. In reality, as of now itself, no one is opting for farming or agriculture and a major portion of the paddy fields are left fallow. But then also, we need to keep the paddy fields as fallow lands, because, even though it does not cater to food security, it does another major role of providing water security. Wetlands are flood plains i.e. when we get excess rainfall during SW monsoon during June-July and NE monsoon during October-November, it is these wetlands, which holds the excess rainwater and help to slowly recharge our groundwater structures. We have reclaimed much extent of our wetlands including paddy fields and that has been done mainly through soil excavated by bulldozing laterite hillocks, which acts as sponges of Planet Earth. So in our pursuit of greed, more and more houses, roads, highways, cricket stadiums, conference facilities, shopping malls, etc.

Critical to mankind and other lifeforms, GW and CC is worsening change is a reality and it is presently the greatest threat to mankind and other lifeforms. Hence Earth Hour becomes more and more relevant for a state like Kerala. Earth Day in the month of April was observed differently by engaging the cyclists of Indus Cycling Embassy for the “My City Treasure Hunt” in which they were encouraged to keenly observe the natural wealth of the Capital City and based on that give answers, take clues and move forward. The Vulture Awareness Outreach Programs organised at Wayanad with HUME and the observation of World Wildlife Day at Pangode Military Station with the participation of school students and teachers from Army Public School Pangode and Kendriya Vidyalaya Pangode helped us achieve great outreach.

Renjan Mathew Varghese
State Director

IMPORTANT NEWS ON NATURE AND ENVIRONMENT

GLOBAL

Almost two-thirds of Elephant habitat lost across Asia, study finds

Elephants have lost almost two-thirds of their habitat across Asia, the result of hundreds of years of deforestation and increasing human use of land for agriculture and infrastructure, a new study has found. The Asian Elephant, listed as Endangered, is found across 13 countries in the continent but their forest and grassland habitats have been eroded by more than 64%—equating to 3.3 million square kilometers of land—since the year 1700, researchers said. The study, published in the journal Scientific Reports, compiles the work of several experts led by Biologist and Conservation Scientist Shermin de Silva, a Professor from the University of California, San Diego. The study found that the greatest decline in Elephant habitats was in China,
First-ever World Seagrass Day focuses on conservation

Some 15 per cent of the entire world’s seagrass has been lost in the past 10 years, putting at greater risks already threatened Manatees and Sea Turtles says the United Nations Environmental Programme (UNEP). So, on 1st March 2023, it called for more action to protect one of the most widespread and important marine ecosystems on the Planet, marking the first ever commemoration of World Seagrass Day. Seagrasses are marine flowering plants that are found in shallow waters from the tropics to the Arctic Circle, covering over 300,000 square kilometres of the ocean floor. Although not as colourful as coral reefs, or mysterious as mangrove forests, they provide a wealth of benefits to humans and marine life. Seagrass meadows – often referred to as a type of “blue forest” - supply food and shelter to thousands of species of fish, seahorses, turtles, and other marine animals, and sustain some of the world’s largest fisheries. Seagrasses improve water quality by filtering, cycling and storing nutrients and pollutants, thus reducing contamination in seafood. As part of the marine ecosystem, they store up to 18 per cent of the world’s oceanic carbon. (Source: The UN News, 1 March 2023)

'Devastating' melt of Greenland and Antarctic ice sheets is found

Using 50 satellite estimates, researchers found that Greenland’s melt has gone into hyperdrive in the last few years. The Greenland and Antarctic ice sheets are now losing more than three times as much ice a year as they were 30 years ago, according to a new comprehensive international study. Using 50 different satellite estimates, researchers found that Greenland’s melt has gone into hyperdrive in the last few years. Greenland’s average annual melt from 2017 to 2020 was 20% more a year than at the beginning of the decade and more than seven times higher than its annual shrinkage in the early 1990s. The new figures “are pretty disastrous really,” said study co-author Ruth Mottram, a Climate Scientist at the Danish Meteorological Institute. “We’re losing more and more ice from Greenland.” Study Lead Author Ines Otosaka, a Glaciologist at the University of Leeds in the United Kingdom, said speeded-up ice sheet loss is clearly caused by human-caused climate change. (Source: NBC News, 20 April 2023)

Lights turned off at landmark sites in various Indian cities during Earth Hour

Lights at prominent venues such as Rashtrapati Bhavan and Howrah Bridge were turned off in support of nature and the planet. Lights at public places and some temples in various cities of India including Mumbai, Kolkata and the national capital were turned off between 8.30 p.m. to 9.30 p.m. as part of the global ‘Earth Hour’ event. The annual event is observed in order to raise awareness about energy conservation. Speaking about the essence of Earth Hour, World Wide Fund for Nature (WWF)-India spokesperson said, “Earth Hour 2023 is asking individuals, communities and businesses to join the biggest hour for Earth, by switching off and giving an hour by doing something positive for the planet. Anyone anywhere can join the biggest hour for Earth. While landmarks and homes across the country and world switch off all non-essential lights, we’re also asking individuals to ‘switch off’ in other ways, by providing 60 minutes from their daily schedule and engaging in any activity of their choice that helps celebrate our planet.” (Source: The Hindu, 26 March 2023)

About 246 Vultures spotted in first-ever synchronised survey in Tamil Nadu, Kerala and Karnataka

Current estimates do not indicate a healthy population, experts say. As many as 246 Vultures were spotted in the first-ever synchronised survey conducted along the borders of Tamil Nadu, Kerala and Karnataka on 25 and 26 February 2023. The estimation was carried out in the Mudumalai Tiger Reserve (MTR) and the adjoining landscape consisting of Sathyamangalam Tiger Reserve (STR) in Tamil Nadu, Wayanad Wildlife Sanctuary (WWS) in Kerala, Bandipur Tiger Reserve (BTR) and Nagerhole Tiger Reserve (NTR) in Karnataka. A total of 98 Vultures were seen in MTR, two in STR, 52 in WWS, 73 in BTR, and 23 in NTR. During the survey, conducted in four sessions and six hours, Volunteers sighted White-rumped Vultures (183), Long-billed Vultures (30), Red-headed Vultures (28), Egyptian Vultures (3), Himalayan Griffon (1), and Cinereous Vulture (1). The current estimates cannot be considered a sign of a healthy population, increasing wild carcass availability was one of the major steps needed to be taken for Vultures to thrive said S. Bharathidasan of Arulagam, an environmental organisation. According to him, the survey has to be conducted thrice every year to better understand the population trend in Vultures. (Source: The Hindu, 14 March 2023)
SC modifies judgment on Eco-Sensitive Zones around protected forests

Bench led by Justice B.R. Gavai reasoned that eco-sensitive zones cannot be uniform across the country and has to be ‘Protected Area-specific’. On June 3, 2022, the Apex Court ordered the 1-km buffer zone for protected areas to act as a “shock absorber”. However, the Centre and several States, including Kerala, had returned to the Apex Court seeking modification of the June 2022 judgment, saying the judicial direction affected hundreds of villages in the peripheries of forests. The court agreed and said that “the purpose of declaring ESZs is not to hamper the day-to-day activities of the citizens. If the direction as issued is continued, it would certainly hamper the day-to-day activities of the citizens residing in ESZs. As such, we find that the direction needs to be modified”. The court said a stringent observance of the June 2022 judgment would cause more harm than good. For one, man-animal conflict would only increase rather than abate. However, it made it clear that “mining within the National Park and Wildlife Sanctuary and within an area of one kilometre from the boundary of such National Park and Wildlife Sanctuary shall not be permissible” (Source: The Hindu, 27 April 2023)

NGT slaps ₹10 Crore penalty on Kerala Government for failure to protect Ramsar Sites

The Principal Bench of the National Green Tribunal in New Delhi has slapped a penalty of ₹10 Crore on the Kerala Government for its failure to check the indiscriminate pollution of the Vembanad and Ashtamudi Lakes, listed as Ramsar Sites. The Bench, led by its Chairperson Adarsh Kumar Goel, said in its order dated March 22 that the penalty imposed on the basis of the ‘polluter pays principle’ had to be deposited in a ring-fenced account to be operated under the authority of the Chief Secretary. The penalty of ₹10 crore had to be utilised for conservation/ restoration measures by preparing an action plan to be preferably executed within six months. It would be open to the Chief Secretary to collect the amount from erring officers/ departments/ industries/ individuals in accordance with the law by an appropriate mechanism and hold erring officers appropriately accountable departmentally or by way of prosecution and also to proceed against other entities, railways, local bodies, and industries [responsible for the pollution] within three months, it said. (Source: The Hindu, 24 March 2023)

State

Fisheries Varsity study reveals a highly degraded Vembanad Wetland System

A five-year study by the Centre for Aquatic Resource Management and Conservation, Kerala University of Fisheries and Ocean Studies, has revealed a highly degraded, dysfunctional, and debilitated Vembanad Wetland System that affects the lives and livelihood of around eight million people in Alappuzha, Pathanamthitta, Kottayam, and Ernakulam districts. The study says the wetland system faces declining ecosystem services and degradation in functional abilities from anthropogenic and natural disturbances. “The probability of a natural revival of the system is limited and therefore science and technology-based interventions are recommended,” says a brief for policymakers. The wetland system, a Ramsar Site, is home to vast wetland areas, including the unique Kuttanad polders (55,000 ha), most of which lie at or below sea level. The system has seen its water retention capacity reduced by 85.3% from 2,617.5 million cubic metres in 1990 to 384.66 MCM in 2020. The sharp decline in the water holding capacity of the Lake is due directly to the significant reduction in (43.5%) area of the lake (from 365 km² in 1900 to the present 206.30 km²). (Source: The Hindu, 18 March 2023)
SPECIES OF THE ISSUE

DUGONG
*Dugong dugon*

Dugongs are cousins of manatees and share a similar plump appearance, but have a dolphin fluke-like tail. And unlike manatees, which use freshwater areas, the dugong is strictly a marine mammal. Commonly known as “sea cows,” dugongs graze peacefully on sea grasses in shallow coastal waters of the Indian and western Pacific Oceans. They weigh over 800 pounds and measure around 10 feet in length. They are threatened by seagrass habitat loss or degradation because of coastal development or industrial activities that cause water pollution.

ACTIVITIES OF WWF-INDIA
KERALA STATE OFFICE

Environment Education

Earth Hour 2023

CHILDREN'S CORNER

Match the Baby Animal to its Adult

<table>
<thead>
<tr>
<th>No</th>
<th>Baby</th>
<th>Mamma</th>
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<tbody>
<tr>
<td>1</td>
<td>Fawn</td>
<td>Eagle</td>
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<tr>
<td>2</td>
<td>Joey</td>
<td>Fox</td>
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<td>3</td>
<td>Kid</td>
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<td>4</td>
<td>Gosling</td>
<td>Deer</td>
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<td>5</td>
<td>Foal</td>
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<td>Kit</td>
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<td>7</td>
<td>Fledgling</td>
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<td>9</td>
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<td>Goat</td>
</tr>
<tr>
<td>10</td>
<td>Nymph</td>
<td>Kangaroo</td>
</tr>
</tbody>
</table>

(1) Deer (2) Kangaroo (3) Goat (4) Goose (5) Horse (6) Fox (7) Eagle (8) Swan (9) Whale (10) Grasshopper
The Kerala State Office of WWF-India observed Earth Hour 2023 in Thiruvananthapuram and Kochi. Cyclothon was held at Thiruvananthapuram and Kochi in association with the Indus Cycling Embassy (ICE) and their sub-group Sheroes ICE. The event saw 75 participants at Trivandrum and 67 participants at Kochi. Placards were put up on the cycles and Earth Hour T-Shirts were given to each participant. A unique program for this year was "Pedal for the Planet – You have the Power to Light Up Your Life" campaign and for this, the State Office collaborated with Government Engineering College, Barton Hill to build an LED Pandal which lights up when a person rides a stationary bicycle connected to a motor and battery. The student club – Formula Barton Racing (FBR) Club took up the challenge and created a unit out of recycled materials. It was put up at Shanghumugham Beach area on the 24th and at Museum and Zoo Premises on 25th March. Interactive games were conducted at the Museum and zoo compound on March 25th and the winners were given LED lights. The message on Earth Hour was displayed at Kochi Metro and Thiruvananthapuram Central Railway Station.

All the events were shared on Facebook Live by Mr. Renjan Mathew Varghese. Other social media pages were constantly updated. Certificates of Participation were given to the participants of the Cyclothon and certificates of appreciation to the FBR team. Many volunteers and citizens observed Earth Hour 2023 at their residence. The print media also covered the event on 24th March. The outreach for Earth Hour in 2023 was around 3000.

Earth Day 2023
WWF-India, Kerala State Office and Indus Cycling Embassy jointly organized Earth Day Program on 23rd April 2023 titled “My City Hunt”. There were 32 participants belonging to all age groups for the program. The cycling group was divided into 5 teams and each team was assigned routes. Then they were given clues by completing tasks like photographing plants, finding environmentally relevant offices/institutions, etc. The ride started and ended at Manaveeyam Veedhi.

Magical Mangroves

Magical Mangroves 2023 concluded on 10th March 2023 in an online program. The KLSO Team participated in the program and Ms. Anushreedha, presented an account of the Magical Mangroves campaign in Kerala. The Song of Mangroves by Mr. Raphy Neelamkavil was showcased during the program, and he also spoke about his experiences. He was also selected as the Best-Performing Volunteer from Kerala.

Volunteer Testimonials – Earth Hour - “I had the pleasure of volunteering different interactive games, promoting sustainable energy consumption and observance of 🌍Earth Hour🌍 on the day. It was amazing to see how much impact we can have by working together towards a common goal. Let’s show the world that we have the power to light up our lives in a sustainable way!” quoted Akshaya N.C.

Vulture Outreach Program

The Vulture population faces various pressures, mainly anthropogenic. In this regard, WWF India has published a poster titled “Bring back the Vultures” to educate the masses on the importance of Vultures, the threats they face, and...
what can be done to protect them. In Kerala, Vulture species are only seen in the district of Wayanad. So, an awareness and outreach program for Teacher Trainees on the Vultures was conducted at St. Gregorios Teachers’ Training College, Meenangadi, Wayanad on 9 March 2023 in association with HUME Centre for Ecology and Wildlife Biology. Two technical sessions were included: 1) “Vultures – species, significance, and status” was taken by C K Vishnudas, Executive Director, HUME Centre for Ecology and Wildlife Biology. 2) “Vultures – Threat and conservation initiatives” led by Dr. Rathish R L, Assistant Professor, Kerala Veterinary and Animal Sciences University (KVASU) and also a member of HUME Centre. A poster/ collage designing competition was also held as part of the program and the students competed wholeheartedly. A total of 120 participants attended the outreach program.

World Wildlife Day 2023

The WWF team was invited by Pangode Military Station to observe World Wildlife Day 2023 on 3 March 2023 in their campus. The students from Army Public School and Kendriya Vidyalaya were invited to the program. Brigadier Lalit Sharma, Station Commander, of Pangode Military Station, Thiruvananthapuram, inaugurated the program. The WWF team took a session on Forests and Wildlife and conducted a quiz – “Spots and stripes”. WWF posters, banners, and other outreach resources relating to Wildlife were also displayed on the corridor for children to read and learn.
**Invited Talks**

The State Director delivered a talk titled “Climate Change: Environmental Degradation and Natural Disasters in India” on 2 March 2023 at the National Online Conference on Climate Change in India organized by Sree Sabareesa College. The talk was attended by 57 participants.

**A session for “Summer Naturally Camp” - organized by At Quest Sustainable Solutions**

At Quest Sustainable Solutions is a Bangalore-based sustainability consultancy that provides education, technology, and implementation services for institutions and individuals. Ms. Anushreedha, Project Officer, was invited to take a session in their “Summer Naturally” program for children from grade 5 to 10 on Earth Day 2023. The theme of SDG 13 and 14 and the work WWF-India carries out to fulfill these two goals were explained to the children. 243 students participated.

**Discussion with PCFML Team – Positive Change for Marine Life (PCFML)** is a community-level initiative at Kovalam led by Mr. Karl Goodsell work on coastal and marine conservation, waste management, etc. Karl and his team visited the Kerala State Office to discuss the possibilities of collaborating with WWF in ocean-related activities in the days ahead.

**Inauguration of Christ University Nodal Office Environmentalists Forum** – The State Director was invited to felicitate the function and speak on Earth Hour 2023 organized by the Nodal Office of Christ University on 25th March. Shri. Pradeep Kumar, Chairman of Kerala State Pollution Control Board was the Chief Guest, and he inaugurated the Forum in the function presided over by Dr. Sabu Joseph, President of the Forum. Dr. Subhash Chandra Bose, Former Director, CCDU, Water Resources Department delivered the keynote address.

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