FROM THE STATE DIRECTOR’S DESK

Work on our Conservation Projects and Environment Education is moving forward with very relevant initiatives and impactful on-ground interventions. We have initiated the much awaited and ambitious project titled “Assessment of Kerala’s Top Ten Rivers at Risk and Formulation of River Restoration Plans and Programs” supported by the Dept. of Environment and Climate Change, Govt. of Kerala. Since much work on rivers of Kerala have been done by various agencies, institutions and individuals, in the initial phase of the project, we are carrying out thorough library referencing and secondary data collection and compilation through institutional visits and interaction with experts. This will help us identify the gaps and bridge it during our primary data collection. All the on-ground surveys and data collection with regard to the project “Post-Flood Assessment on Impact of Biodiversity for Select Faunal Groups (Birds, Butterflies, Amphibians and Odonates) has been completed. The Team Leader Mr Sujith V Gopalan is now analysing the data and information and drafting the Study Report to be submitted to Kerala State Biodiversity Board, Govt. of Kerala. Under the Marine Programme, we could conduct the Training of Marine Enforcement Officials on Marine Fisheries Certification with special emphasis to ETP Species in Thiruvananthapuram which witnessed the participation of officers from all leading enforcement agencies in the field of marine and coastal protection including the Dept. of Fisheries, Govt. of Kerala. The experts in the respective fields from CIFT and CMFRI were the resource persons for the one-day training. On the Environment Education front, as usual, our Volunteer Engagement Programme is moving forward in full steam with multiple initiatives engaging different sections of the society, namely, inviting project ideas on plastic pollution from teams of college students under the ECHO (Building Environment Conservation Heroes) program, conducting quiz, delivering invited talks etc. As in previous years, this year also we could conduct the Trivandrum Bird Race covering almost all the prominent birding sites across Thiruvananthapuram District and this has been made possible only with the active involvement of our Expert Birders and Amateur Birder Volunteers. Through this on-ground survey, every year, we are able to make a thorough assessment of the status of bird habitats in the district, the bird population and its changes, major threats and challenges etc. and this documentation has been helping us and others through the year in our policy and advocacy level work against tree cutting, wetland reclamation etc. To expand our work with Volunteers, we are now putting in effort to initiate and establish Volunteer Hubs, mainly in Colleges. Noorul Islam College of Dental Sciences (NICDS), Neyyattinkara had expressed interest for the same and in this background we conducted an Orientation Session for the students and teachers and further on developed an Annual Volunteer Action Plan for the year and submitted to the Faculty-in-charge. Paid Eco-Trails have not been a success in Kerala till now. But in these past two months, we have been able to organise two Eco-Trails for school students in and around Munnar supported by HRW&EPA and also River Walk in Kellar with the objective of traversing a segment of a river, to know, understand and enjoy it and thereby protect the river. Ek Prithvi is a rather new environment education program launched by WWF-India mainly targeting Government schools. Inspite of our efforts to engage with Government schools, we have not been able to get formal permission from the Director General of Education. But without letting our hopes down, we are engaging unaided schools under the Ek Prithvi programme and hence we have been a late entrant. Over the past two months, we have moved forward quickly with the program with the Leadership Training for the School Management, Orientation Workshops for the Teachers, Backyard Trail for the students etc. We also participated in the National Children’s Science Congress organised in Thiruvananthapuram this year by KSCSTE by putting up our exhibition stall in the venue at Mar Ivanios Vidya Nagar. We are also taking up possible relevant initiatives under the Give Up to Give Back Campaign. We were also invited to be part of the National Seminar organised by Govt College Nattakam, Kottayam and also in the LBSP for Kochi facilitated by ICLEI South Asia.

Renjan Mathew Varghese, State Director

IMPORTANT NEWS ON NATURE AND ENVIRONMENT

GLOBAL

Alliance of World Scientists – declaring climate emergency

A global coalition of scientists led by William J. Ripple and Christopher Wolf of Oregon State University says “untold human suffering” is unavoidable without deep and lasting shifts in human activities that contribute to greenhouse gas emissions and other factors related to climate change. In a paper published in BioScience on November 5th, 2019, the authors, along with more than 11,000 scientist signatories from 153 countries, declare a climate emergency, present graphics showing trends as vital signs against which to measure progress, and provide a set of effective mitigating actions. The scientists point to six areas in which humanity should take immediate steps to slow down the effects of a warming planet: Energy, Short-lived pollutants, Food, Economy and Population. “Global surface temperature, ocean heat content, extreme weather and its costs, sea level, ocean acidity, and area burned in the United States are all rising,” Ripple said. “Globally, ice is rapidly disappearing.
as demonstrated by decreases in minimum summer Arctic sea ice, Greenland and Antarctic ice sheets, and glacier thickness. All of these rapid changes highlight the urgent need for action. Mitigating and adapting to climate change while honouring the diversity of humans entails major transformations in the ways our global society functions and interacts with natural ecosystems,” the paper states. “We are encouraged by a recent surge of concern. Governmental bodies are making climate emergency declarations. Schoolchildren are striking. Ecocide lawsuits are proceeding in the courts. Grassroots citizen movements are demanding change, and many countries, states and provinces, cities, and businesses are responding. As an Alliance of World Scientists, we stand ready to assist decision makers in a just transition to a sustainable and equitable future.” (5th November 2019, Oregon State University)

**Vietnam deer rediscovered after nearly 30 years**

A very rare species of small, deer-like animal thought to be on the verge of extinction has been spotted in the northwestern jungle of Vietnam for the first time in nearly 30 years. Known as the Silver-backed Chevrotain or Mouse deer, a specimen was last recorded in 1990, according to a study published on November 11 in the journal Nature Ecology and Evolution. The species, Tragulus versicolor, was first described in 1910 based on several animals found near Nha Trang, about 450 kilometres northeast of Ho Chi Minh City. With no confirmed sightings since 1990, experts assumed the species must have been pushed to the brink of extinction by hunting. Working with colleagues Barney Long and Andrew Tilker, the experts got together with local villagers to sift through reported sightings. Tilker cautioned in a blog post however that “just because we found this species relatively easily doesn’t mean it is not threatened”. Forests in southeast Asia are under tremendous pressure from growing populations and development “so we need to get ahead of the curve” on conservation, Tilker added. In May, a United Nations body of biodiversity experts, known as IPBES, issued a landmark report warning that up to one million species face the risk of extinction due to humanity’s impact on the planet. (The Hindu, 12 November 2019)

**Engineering students turn stubble into bio-products**

‘Green Gears’ wins national award at IISF for their solution to crop-burning - Their experiment - manufacturing of bioproducts from the paddy stubble through steaming method- won the Nava Bharat Nirman Award at the Indian International Science Festival (IISF) held in Kolkata on November 7. IISF is a national platform created by the Ministry of Science and Technology, Ministry of Earth Sciences, and Vijnana Bharathi, promoting innovation in Science and Technology. The group - D. Sushma Yadav, G. Meenakshi, G. Srikanth, and D. Mahesh Kumar - from the Mechanical Engineering Department of Raghu Engineering College near Bheemunipatnam town in Visakhapatnam district is led by Assistant Professor Rajesh Singuru. Under their experiment, stubble is steamed until it turns into pulp to manufacture degradable bioproducts. Guided by IISF scientists, the group is also examining possibilities to come up with a start-up, helping farmers to generate income through the eco-friendly practice. (The Hindu, 15 November 2019)

‘Green gardens’ lead the students the organic way

‘Green garden’, an initiative of OfERR, a non-governmental organisation and HCL Foundation, aims to kindle an interest among school children in organic gardening. Under this initiative, which started a month back, a group of students’ water and monitor growth of vegetables at the garden in their school. A range of vegetables, including lady’s finger, tomato, brinjal, and greens, are grown organically by students at these gardens. Three Corporation Schools in Madurai city are executing the project. They are Pandian Nedunchezhian Corporation HSS, Sethupathi Pandithurai Corporation HSS and Kasturiba Gandhi Corporation Girls HSS. The gardens have kindled an interest in organic farming, say teachers. (The Hindu, 10 December 2019)

India suffers most pollution-linked deaths in world, study finds

The report by the Global Alliance on Health and Pollution (GAHP) found pollution to be the largest environmental cause of premature death on the planet, causing 15% of all deaths – some 8.3 million people. India and China led in the number of pollution deaths, with about 2.3 million and 1.8 million respectively, followed by Nigeria, Indonesia and Pakistan. “India has seen increasing industrial and vehicular pollution from urban growth while poor sanitation and contaminated indoor air persist in low-income communities,” the report said. Drawing its data from the Institute of Health Metrics Evaluation, founded by the Bill and Melinda Gates Foundation, the report broke risk factors into four categories: air, water, occupational, and lead. (The Guardian, 19 December 2019)

**State**

State gets a ‘Pachathuruthu’ panchayat

Kodumon grama panchayat has become the first complete ‘Pachathuruthu’ panchayat in the State on 4th November 2019. 26 green belts developed in 18 wards in the panchayat as part of project. Electricity Minister M.M. Mani formally declared Kodumon a complete ‘Pachathuruthu’ panchayat at an official function held at an auditorium near Kodumon. He said that the ‘Pachathuruthu’ project launched by the Haritha Keralam Mission was part of the Government’s greening mission. ‘Pachathuruthu’ project is meant to address the ill effects of the climate change by conserving the natural forests and by greening the fallow lands across the State. The project was implemented in association with the State Biodiversity Board, Mahatma Gandhi National Rural Employment Guarantee Programme, Agriculture

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Mruthika/ November-December 2019
EXPERT TALK

SPECIES OF THE ISSUE

Myristica Sapphire
(Calocypa laidlawi)

It is a small damselfly with big eyes and several vermilion spots on the head. Its thorax is dark with a narrow vermilion mark on dorsum and pale yellow marks on the lower part of lateral sides. Female is black with yellow markings on the face, thorax and abdomen. Abdomen is black, marked with yellow mid-lateral stripes and dots. Fore-wings are transparent. It breeds in forest streams and rivers flowing through the Myristica swamps.

O KERALA, FLOOD ENGULFED!

The flood waters surged on devastatingly, in a terrible fury and vengeful rage, flooding roads and sweeping away bridges, engulfing houses in a series of landslides, flooding entire cities, towns and villages, leaving nothing behind, in its horrifying wake. Keralites watched in utter shock and disbelief as almost everything people owned were swept away into oblivion. People in low-lying areas awoke to see their houses submerged, the flood waters on the ground floor, rising steadily to the top of the first floor. They were evacuated in the nick of time by canoes and helicopters before their homes became their graves! Keralites can never, ever forget the thousands and thousands of helping hands, the non-residents of Kerala, the foreigners and all the other states in India, trying their best to uplift the suffering people. Rescue teams gave up their lives to save others, the sons of the sea, the poor fishermen, who if they had not come, so many lives would have been lost. When the flood victims saw death face to face, those poor fishermen saved their lives. The small boats and the big boats, the small canoes and the big canoes, whatever they had, they brought with them. Keralites can never forget their selfless dedication and commitment. A humane heart, with a passion to save lives, offered his own back as a stepping stone for women to step into boats as the height was too much for them to climb, honorable humanity at its very best! Thousands of youngsters, the middle-aged, the older generation and even the children stormed from all over Kerala to help in the relief and rescue work. The Army, Navy and Air Force, Coast Guard, Police and Fire Force rallied together and worked selflessly day and night to save flood victims. With hearts full of gratitude, we give thanks to all of them. All the other states in India marveled at the unity of Keralites. Anticipating the impending disaster, we organised our own disaster management systems, personal control rooms and information centres.

We worked so hard to help to save our people. Our brethren in other countries burnt the midnight oil to give assistance to the rescue operations at home. To respond to challenges, to resist difficulties, to fight unitedly in the quest for life – these
admirable qualities are ingrained in our blood. We have a unique mindset. We are overcomers. We Keralites are united as one heart, one mind, one people. Let us move forward as one, with holy hope in our hearts, shattering all barriers, erected by man, to separate his brothers. Let us touch the hearts of our people, to know their sorrows, stand with them in their heartbreaks, and share unparalleled goodwill and love for one another in times of grief, irrespective of caste, creed or religion. O, our Mother State, how beautiful you were! The rivers and the mango groves, the paddy fields and the pineapple fields, the big forests of rubber trees, O the greenery, how many times we stared upon your beauty in the early morn and sunset. All of a sudden, the rupture of nature swallowed you up, bits and pieces left behind untouched, untended. The beautiful cardamom estates and the lovely tea plantations, the toil and sweat of thousands and thousands of workers, all swept away in the flash of a second! O Mother Nature, were you cruel to us? O, did we do anything to annoy you? Pardon us, forgive us...

The beautiful forests, the elephant-sized teak trees, where the deer and the mighty, famous Indian elephants, all enjoyed your beauty, Mother Nature! O, the horrible landslides swept away the awe-inspiring beauty of God’s own country, O Mother, when will we get it back? We Keralites enjoyed your beauty, especially the children during their long holidays, O Mother, where will they go next time? Mother Earth, you broke down. The beautiful mansions erected by man, to separate his brothers. Let us touch the hearts of our people, to know their sorrows, stand with them as one heart, one mind, one people.

The little torch was the only flicker of light. The child in the womb did not wait for the horrendous cruelty of nature. The helicopter’s helping hand airlifted the mother and her unborn child to the hospital, where within minutes, the baby boy was born into the world. The rich and the poor, all escaped barefooted to the same camp, with only the wet clothes they wore. We all learnt a lesson that we are all one. Mother dear, we are your beloved children, Working hand in hand, We will beautify you, Each seed we will plant, Whether it is papaw or teak tree, We will sow it. The paddy field will regenerate, With paddies bl

December 5th is recognised as the World Soil Day. Find the following words that are associated with types of Soil:-

1. Sandy
2. Peat
3. Clay
4. Laterite
5. Porous
6. Loam
7. Silt
8. Chalk
9. Alluvium
10. Histosols

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A talk on Ecological Footprint and GIVEUP Campaign was taken for the Volunteers of AMAS as part of a training at Trivandrum Club on 21st November 2019.

**Thiruvananthapuram Bird Race**

Thiruvananthapuram Bird Race was conducted on 1st December 2019 at 8 sites in the district with the participation of 48 bird expert and budding birders. Each team started their journey to their respective birding locations and reported back by lunch time. They enjoyed the birding and shared their experience with others. The gathering concluded with lunch.

Senior Education Officer led two Eco-Trails for High Range School, Munnar in association with HRW&EPA with the participation of 160 School Students and Teachers on 11th and 12th November 2019 in Pambadumshola National Park.

**River Walk**

A River Walk was conducted on 15th December at Kallar, a tributary of Vamanapuram River. There were 25 Volunteers who came from different institutions took part in this event. It was co-ordinated by KLSO team and was supported by 4 staffs from the Kerala Forest Department. The walk included clean-up drive, learning about aquatic ecosystem and its biodiversity. ‘Feel the River’ was the most enchanting part of the River Walk. The outcome emerged in the form of stories, posters, pencil sketches and write-ups.
Ek Prithvi

Orientation Workshops

The workshops were conducted in Shree Vidyadhiraja Vidyamandir Higher Secondary School, Neyyattinkara 8th and in Sree Vivekananda Memorial Public School, Aralumoodu, Neyyattinkara on 14th November with the participation of 68 School Teachers. Resource materials like Teacher’s Handbook, Students Workbook and Project books, Posters on Water, Energy and Paper were distributed. Floor Game printing on canvas is in progress as we wanted to avoid printing on flex. Mr. Jithu Prabhakar has been appointed as the Intern in the Ek Prithvi project. We have conducted the Baseline Survey in five schools with 1104 students and Pamphlet Intervention Survey in four schools with 761 students. As for the School Estate Development, had individual discussions with all the 5 school authorities and came up with slightly different items like Butterfly Garden, Bird Bath, Bird Feeder etc.

Backyard Trail for Ek Prithvi Schools

As part of providing experiential learning, students of the Ek Prithvi Schools were taken to the Elephant Rehabilitation Centre at Kottur for a Backyard Trail cum Eco-Trail. They visited the ERC and had a short Eco-Trail within the nearby forests. Senior Education Officer, Education Officer and Ms. Veena M., the consultant for Eco trails led the teams. The students enjoyed the life of elephants from calves to the senior most one which is 71 years old. The Eco Trail provided a good opportunity to see, know and feel the biodiversity richness in forms of plants, birds and butterflies.

Leadership Training Program of Ek Prithvi

Leadership Training Program was successfully conducted on 23rd December 2019 at Peppara Wildlife Sanctuary on 23rd
For WWQ 2019, we conducted the City-level Quiz on 3rd October 2019 with the participation of 61 teams. The Quiz was conducted at YMCA Hall, Pulimoodu, Thiruvananthapuram and the Quiz Masters were Ms. Merlin Mariam Varghese, Project Officer (Rivers) and Mr Renjan Mathew Varghese, State Director.

National Children’s Science Congress 2019

We were invited by Kerala State Council for Science technology and Environment for putting up a stall of WWF-India and its activities in connection with the National Children’s Science Congress 2019. It was a great opportunity for us to highlight our Ek Prithvi Program and other EE activities in a national Platform and hence we went ahead and participated in the four-day exhibition conducted from 27th to 31st December 2019. We have setup the stalls with our EE collaterals and other major activities of WWF-India. We also had an installation of a Tiger made out of waste materials erected in the background of a painting. Other things were a standee on “WWF@50” made of natural materials like jute and bamboo, a snow man made of used paper cups, origami of little Pandas which were tied along a string and hung on the top of the stall.
Give Up to Give Back (GUGB) Campaign

A class on “Ecological Footprint and Sustainable Development” and Awareness Session on GUGB were taken for the NSS Volunteers of Olathanni on 23rd Dec at Thirupuram Govt HSS.

National Seminar at Govt. College, Nattakam

The State Director was invited as Resource Person to lead two sessions in the National Seminar organised at Govt. College, Nattakam on 22nd November, 2019. The sessions were titled “Habitat Protection and its challenges” and “Man-Animal Conflicts”. The session paved way for good networking with College Teachers and Students and also to increase their level of awareness on this subject.

Launch of celebration of 50 years of WWF India

The formal launch was conducted with a special day with started off with the Staff Outing by bird-watching at Punchakkari and Staff Get-Together in the office followed by lunch on 27 November 2019. This really helped to create synergy towards the year-long celebration.

Training of Marine Enforcement Officials with Marine Programme

A workshop was organised for Marine Enforcement Officials in the State on ETP Species & MSC Certification on 6 December 2019. Mr Pravin Kumar, Project Officer, Fish Forward II led the workshop. The sessions were handled by resource persons from CMFRI, CIFT and other such institutions. The objective of the workshop was better networking and capacity building.

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