

Conservation Highlights of WWF-India, Kerala State Office

FROM THE STATE DIRECTOR'S DESK

The impact of Climate Change is taking a heavy toll on the small State of Kerala also. Every day there are newspaper reports of how the land, lives, and livelihood of the people of Kerala are being affected by climate change. I delivered a talk recently at the National Conference on Climate Change in India organized by Sree Sabareesa College and to prepare my PPT I carefully reviewed all the newspaper articles and I was awestruck by the multifold direct and indirect impact: (1) With a coastline of 573 km, Kerala is recently witnessing an unusual phenomenon called "Swell Waves/ Swell Surges" in which unexpectedly during the night huge waves crash inland devastating lives and livelihoods. This has very much impacted the Turtle Conservation efforts also, especially through the washing away of the relocated nests. (2) Tourism, especially coastal and high-range tourism, is being severely impacted with IMD declaring the closure of beaches and banning travel, especially night travel, to high-range destinations. (3) Kerala is a land of spices, and with its cultivation, especially in the high ranges, the spice farmers are bearing the brunt of increasing heat in which acres of cardamom and other

species have died out, causing loss in lakhs of rupees. (4) With the increasing temperatures, more and more people are buying and installing air-conditioners and power consumption is soaring in the State. With the very limited power generation within the State from hydel power sources, the Kerala State Electricity Board is spending large amounts on power purchase from the Central Grid which is mainly powered by thermal power plants, which again accelerates global warming and climate change. (5) Incidents of sunstroke and sunburn are now becoming very common, even leading to death. (6) Incidents of forest fires and increasing human-wildlife conflicts are also very much connected to increasing temperatures and water stress. (7) With the onset of monsoons, the problem is of severe waterlogging and flooding, because the State has lost most of its floodplains, i.e. paddy fields and wetlands. The situation ahead seems very frightening. Until and unless there is concrete collective action to address the issue, and mitigate and adapt to climate change, the challenges, especially for the next generation are going to be drastically different.

Renjan Mathew Varghese
State Director

RECENT DEVELOPMENTS IN NATURE AND ENVIRONMENT

Global

'A momentous day for nature': EU approves first-of-its-kind law that could bring back biodiversity

After months of deliberations, the EU's Nature Restoration Law has finally been approved. The first-of-its-kind regulation aims to restore Europe's damaged ecosystems and boost biodiversity. "There is no time for a break in protecting our environment," says Alain Maron, environment minister for the Brussels region. "Today, the Council of the EU is choosing to restore nature in Europe, thereby protecting its biodiversity and the living environment of European citizens." Environmental organisations have celebrated the law's passing, with The Nature Conservancy's Noor Yafai

calling it "a momentous day for nature" that will deliver "a vital boost to efforts to implement international climate and biodiversity targets". WWF EU also celebrated the "game-changing law for Europe's degraded ecosystems" calling it "a huge win for the EU's nature, citizens and the economy". The Nature Restoration Law aims to restore at least 20 per cent of the EU's land and sea areas by 2030, and all degraded ecosystems by 2050. (Source: Euro News, 17 June 2024)

U.S. Tightens Car Mileage Rules, Part of Strategy to Fight Climate Change

The new measure requires automakers to achieve an average of 65 miles per gallon for all the car models they sell by 2031. The Biden administration tightened vehicle fuel mileage standards, part of its strategy to transform the American auto market into one that is dominated by electric vehicles that do not emit the pollution that is heating the Planet. The new mileage standards announced by the Transportation Department are among several regulations the administration is using to prod carmakers to

produce more electric vehicles. In April, the Environmental Protection Agency issued strict new limits on tailpipe pollution that are designed to ensure that the majority of new passenger cars and light trucks sold in the United States are all-electric or hybrids by 2032, up from 7.6 percent last year. In addition to the regulations, the 2022 Inflation Reduction Act, provides tax credits for buyers of new and used electric vehicles, along with incentives for charging stations and grants and loans for manufacturers. The push for more E.V.s comes as the world's leading climate experts say that retiring the internal combustion engine is critical to staving off the deadliest effects of global warming. (Source: *The NY Times*, 7 June 2024)

Environmental Changes Are Fuelling Human, Animal and Plant Diseases, Study Finds

Biodiversity loss, global warming, pollution and the spread of invasive species are making infectious diseases more dangerous to organisms around the world. Several large-scale, human-driven changes to the planet — including climate change, the loss of biodiversity and the spread of invasive species — are making infectious diseases more dangerous to people, animals and plants, according to a new study. Scientists have documented these effects before in more targeted studies that have focused on specific diseases and ecosystems. “It’s a big step forward in the science,” said Colin Carlson, a biologist at Georgetown University, who was not an author of the new analysis. “This paper is one of the strongest pieces of evidence that I think has been published that shows how important it is health systems start getting ready to exist in a world with climate change, with biodiversity loss.” The new analysis, which was published in *Nature*, focused on five “global change drivers” that are altering ecosystems across the planet: biodiversity change, climate change, chemical pollution, the introduction of nonnative species and habitat loss or change. (Source: *NY Times*, 8 May 2024)

National

Nearly 6 million trees disappeared from farmlands in three years, says satellite mapping study

11% of fully grown trees seen via satellite in 2010-2011 were no longer visible when reviewed from 2020. In a mere three years, from 2019 to 2022, India may have lost close to 5.8 million full-grown trees in agricultural lands, says a satellite-imagery based analysis by researchers at the University of Copenhagen, Denmark, and published in the peer-reviewed journal *Nature Sustainability*. Additionally, 11% of such trees detected via satellite during 2010-2011 were no longer visible when reviewed from 2018 to 2022, leading the researchers to conclude that these trees had “disappeared.” 18 to 2022. However, this doesn’t necessarily imply that India’s overall tree cover, or trees outside forest,

is declining as the analysis was specific to only large trees above a certain size. The Forest Survey of India (FSI) conducts regular surveys of tree cover — both inside and outside forests — but only publishes data on the changes in acreage and not individual trees. The latest FSI report says that India’s tree cover has increased in 2021 over 2019. The present analysis however focusses on Indian farmland and tracks individual trees, albeit only big ones, relying on maps from multiple ‘micro-satellites’, and machine learning analysis to estimate trends, beginning 2010. About 56% of India is covered by farmland and 22% by forest. With the largest agricultural area in the world, changes in tree cover here, while critical, have been largely “overlooked,” the authors say. For their analysis, the researchers combined satellite-imagery from two repositories — RapidEye and PlanetScope — to estimate changes in tree number from 2010 to 2022. These have resolutions of three to five metres, meaning that the satellite can “see” large trees, three to five metre apart, as individual trees. The FSI relies on data from the Sentinel satellite that has a coarser resolution of 10 metre — implying that they can tell apart blocks of trees but not individual ones. (Source: *The Hindu*, May 17, 2024)

Wildlife Conservationist and Biologist AJT Johnsingh no more

Noted Indian Wildlife Biologist and leading Conservationist Asir Jawahar Thomas Johnsingh, popularly known as AJT Johnsingh among wildlife enthusiasts, passed away in Bengaluru on June 7, after a brief illness. He was 78. Johnsingh will be laid to rest next to the tomb of his wife Kousalya at Dohnavur close to the Western Ghats near Kalakkad. A statement from Johnsingh’s family said India’s bravest green warrior and staunch defender of earth’s flora and fauna had passed on to his final home. “We can’t hear his voice anymore but we can hear him in the chirp of every bird, roar of every tiger and trumpet of every tusker. Generous beyond comparison and teacher beyond equal, we the Johnsingh family know that he has left behind legacy difficult to match in the world of conservation,” the statement said. He has received various awards including Padma Shri Award for his exemplary work. Chief Minister M. K. Stalin condoled the death of A. J. T. Johnsingh saying that his humility, compassion, and dedication to science-based conservation will continue to guide us. Heartfelt tributes and deepest condolences to his family and loved ones. (Source: *The Hindu*, 8 June 2024)

State

Kerala govt. forms technical panel to study efficient river water utilisation

Observing that Kerala is yet to tap the full potential of its west and east-flowing rivers, the State government has formed a technical committee to draft long-term recommendations

on efficient use of river water resources for irrigation, flood control, and drought mitigation. Constituted on the recommendations of the State Planning Board, the panel has E.J. James, Pro Vice-Chancellor, Karunya University, and former Executive Director, Centre for Water Resources Development and Management (CWRDM), as its Chair. The panel's terms of reference include the preparation of a list of vital river water-related interventions for agriculture and flood control, drafting of a proposal for efficient utilisation of 30 TMC of Cauvery River water by 2030, and conservation of water in the seaward-flowing rivers for use in the summer. (Source: *The Hindu*, 23 May 2024)

Kerala's development policy ensures both industry expansion and environmental protection: CM

The State government is following a policy of sustainable development with a two-pronged approach of expanding industries and basic infrastructure while also ensuring measures to protect the environment, Chief Minister Pinarayi Vijayan has said after inaugurating the State Pollution Control Board's (PCB) Environment Day celebrations at the Kerala Arts and Crafts Village at Vellar here on 12th June. He lauded various initiatives of the PCB including the implementation of the action plan to revive polluted stretches of 21 rivers. The water quality of 11 of these rivers has been improved. Steps have been taken for monitoring of antimicrobial presence. Mr. Vijayan said the State government is pushing ahead with efforts to achieve a carbon neutral Kerala by 2050 by significantly reducing the emission of greenhouse gases. An action plan is being prepared for this purpose. The possibility of reoccurrence of severe disasters in the future fuelled by climate change cannot be ruled out. Agencies like the PCB have a key role to play in the government's efforts to tackle climate change. (Source: *The Hindu*, 12 June 2024)

SPECIES OF THE ISSUE

Myristica Swamp Tree Frog *Mercurana myristicapalustris*



It is a rare arboreal species endemic to the Western Ghats. They are medium-sized frogs; males are smaller, measuring 35 mm in length, while females are up to 65 mm. They have a slender body, which is rusty-brown in colour with small black speckles on the back. The chest, belly and throat are glandular. The snout is rounded and protruding. They have large webbed toes, while the fingers are free with large discs. They have distinct dark eyes, with horizontal and oval-shaped pupils. They breed during the pre-monsoon.

CHILDREN'S CORNER

Connect the dots and draw a frog



ACTIVITIES OF WWF-INDIA KERALA STATE OFFICE

Documentation of the Biodiversity and Preparation of a Coffee Table Book for Thiruvananthapuram Zoo.

The final print run of the Thiruvananthapuram Zoo Coffee Table Book has been completed after all corrections, editing, and finalization. The committed 4000 copies of the Coffee Table Book were printed at Orange Printers, delivered to the Directorate of Museums & Zoos and officially handed over to Mr. Abu S., Director, and Ms. Vijayalakshmi, Education Officer on 23rd May 2024. Copies of the Book were handed over to Smt. J. Chinchurani, Minister for Animal Husbandry, Dairy Development and Zoos, and Shri. V. Venu, IAS, Chief Secretary, by the Director, Museums and Zoos, and received much appreciation for the effort put in and the final outcome as this beautiful publication.



Bird Watching Camp

As part of the newly released book, “Pakshikalum Oru Manushyanum” by Suresh Elamon, who is a renowned Wildlife Photographer and Documentary Maker, Kerala Forests and Wildlife Department organized a Birdwatching Camp at Aripa Forest on 17.05.2025, and WWF-India was invited to lead the on-ground event, with A.K. Sivakumar, Senior Education Officer, invited to be the lead resource person. He first gave an orientation on birding in general and also specifically about the Aripa Forests. The participants were divided into 3 groups and were led by Sivakumar, Sathish, and Reji Chandran. The three teams entered their observations in eBird and at the end of the days birding, produced a trip report, which enumerated 73 species of birds, including the Sri Lankan Bay Owl and many endemic birds. Around 30 participants attended the program. Clear instructions on the safety of the participants were given by the WWF-India team and the forest department staff. A.K. Sivakumar attended the meeting in the evening at Kerala Institute of Tourism and Travel Studies (KITTS), where the author Shri Suresh Elamon spoke about the book and interacted with bird enthusiasts.



ECHO – Building Environment Conservation Heroes

The State-level ECHO finale was conducted on 31st May 2024 in an online mode (on Zoom), considering the erratic rainfall in the State and the difficulty in travel. All the prior requirements from colleges - group/team photos, individual photos, draft final presentations submitted by the teams

were reviewed by the in-house team, and suggestions were given for improvement. The jury members were Joe John George, Consultant, UNICEF-India, and Renjan Mathew Varghese (In-house). Anushreedha was the Coordinator and Emcee for the program, and Sivakumar supported the smooth conduct of the program and delivered the vote of thanks.



College of Engineering, Thiruvananthapuram were the State-level Winners for ECHO 2023-24. The KLSO team of Renjan Mathew Varghese, A K Sivakumar and Anushreedha S S visited the campus and handed over the Panda Trophy to the Principal, Dr. Savier J S in the presence of Dr. Anil R, HOD of Civil Engg. Department, Dr. Sumi, the teacher convener, and the core team members – Gopikrishnan S, Dilse P Dil and Saipriya P. The team was also given a certificate of participation and backpacks from the decathlon as a token of appreciation.



Anushreedha gave away the certificates to the students and Teacher Convener at Mar Baselios College of Engineering, Thiruvananthapuram on 25th June. The certificates for Mar Ivanios College, Second Runner-Up were given away by A.K. Sivakumar and Anushreedha S.S. on June 26 in the presence of Dr. Meera George, Principal, Dr. Suboj Babykutty, HOD, Dept. of Zoology, and Dr. Susan Kurian, Teacher Convener for ECHO.

Observation of the UN International Day for Biological Diversity 2024

UN International Day for Biological Diversity 2024, on the theme “Be Part of the Plan” was held at the Sree Narayana Institute of Ayurvedic Studies and Research, Puthur, Kollam



District on 22 May 2024. The State Director (Kerala), WWF-India, was invited to give the lead talk. He delivered the talk titled “WWF Living Planet Report: Fear the Facts or Face the Challenge” and conducted an interactive session on “Communicating Conservation” by giving attractive captions to wildlife photos. Around 50 participants, including students and teachers, attended the program.



Invited Talk - National Conference on Climate Change in India

Sree Sabareesa College is India's first aided college run by tribal management and affiliated to Mahatma Gandhi University, Kottayam. For the last several years, the management, students and faculty of Sree Sabareesa College have put in a lot of effort every year to meticulously organize the National Conference on Climate Change in India on the online platform. This year, the Fifth National Conference



on Climate Change in India was organized online from 27-29 May. Renjan delivered the talk on “Climate Change and its Impacts on Land, Lives, Livelihoods and Lot More” on 29 May 2024. Around 45 participants joined the session online on Microsoft Teams and the session witnessed some productive Q&A towards the end.

Internships

Four students Akshay Sebastian, Amal Saju, Basil Paul, Jebin Reji from Yeldo Mar Baselios College, Kothamangalam successfully completed a 10-day internship with us from 7th to 20th May 2024. Their topic was “Drafting an action plan tailor-made for Kerala schools based on the publication ‘Planning for Zero Waste At Schools – A Toolkit- by Adeline Mertenant and Christian Zurbrugg published by Eawag-Swiss Federal Institute of Aquatic Science and Technology, Department of Sanitation, Water and Solid Waste for Development (Sandec) Uberlandstrasse 133, 860, Dubendorf, Switzerland, and they presented their work on 16th May 2024. The students were given Internship certificates and WWF-India merchandise on 20th May 2024.



Fire and Safety Session for State Office

All the KLSO staff attended the fire and safety session on May 24, 2024, taken by the team from Fire and Rescue Station Chakai, Thiruvananthapuram. They demonstrated how to use the fire extinguishers available at the office and the precautions to be taken to avoid any incidents. Their team was led by Mr. Rajesh R.



PhD Open Defense of Jeyaraj at Department of Botany, University of Kerala

The KLSO Team of Renjan, Sivakumar and Anushreedha attended the PhD open defense of the TTPC intern Mr. Jeyaraj on 23rd May 2024. The team supported and wished him well for his future endeavors.



Visit of WGNL Team for meetings with Kerala Forests & Wildlife Department

The Western Ghats Nilgiris Landscape Program Team of Nikhilesh Narayanan, Boominathan, Tiju Thomas and Mullai Pandian led by Ms Vishaish Uppal from WWF-India Secretariat came down to Thiruvananthapuram to have formal discussions with the Kerala Forests & Wildlife Department to update them of our work and to discuss the way forward and seek permissions for the work ahead. The entire program was facilitated by the State Director. The meetings were conducted on 14th and 15th May with PCCF & HoFF, Shri Justin Mohan, APCCF (ED & TW), Shri Pramod Krishnan, Dr Sanjayan Kumar, Dr Amit Mallick and a few others.



Ms. Vishaish had a separate meeting with Dr. Balakrishnan, Member Secretary, Kerala State Biodiversity Board, to discuss how WWF-India can support KSBB in the revision of the Kerala State Biodiversity Strategy and Action Plan.



Interaction with Visiting Students of Christ (deemed to be University), Bangalore

The State Director attended the inaugural event by Shri Jayaprasad, IFS, PCCF (Wildlife) & Chief Wildlife Warden on 27th May at 5.00 pm at the Christ Nodal Office at Vazhuthacaud. On the 29th, the State Director had an interactive session with the 15 students and faculty presenting the work done by WWF in the country and the State followed by Q & A session and open interaction.



Wild Wisdom Global Challenge

A.K. Sivakumar, Senior Education Officer met Sri. E. Ramankutty, Director of Bharatiya Vidya Bhavan, Kochi Kendra and handed over the citation for being the Outreach Partner in the WWGC 2023 along with the Activity Report. They assured the participation of all the schools under the Bharatiya Vidya Bhavan across the State this year and ensured participation from more CBSE schools in the state. He then met N. Santhosh Kumar, Deputy Commissioner of Kendriya Vidyalaya Sangathan, Ernakulam Region, at his office and handed over the citation for being the Outreach Partner in the WWGC 2023 along with the Activity Report. They also assured the participation of all 44 schools under their jurisdiction in the WWGC 2024.

UNEP TTPC - Sundara Suthira Shanghumugham

Sundara Suthira Shanghumugham, the year-long campaign to restore the iconic Shanghumugham Beach of the Capital City to its grandeur was launched today, on the day of World Ocean Day 2024. It is a joint initiative of the Dolphods Foundation and WWF-India along with other stakeholders as part of World Ocean Day and World Environment Day to restore the beauty and keep the nostalgic beach clean with multiple intervention in the future. Ms. Seraphine Freddy, Ward Councilor of Shanghumugham unveiled an Art Installation in the shape of a fish which will be used to deposit used plastic bottles.

The Beach Cleanup Team of 80 Volunteers comprising students, researchers, NGOs, the public, and the collective of local vendors of the beach collected 18 sacks of segregated waste. This waste was then audited by type and weight. The lion's share of the collected waste was cloth waste (31 Kg),

followed by glass bottles (27 Kg), paper waste (25 Kg) plastic carry bags (20 Kg), and plastic wrappers (15 Kg). Though the team collected only 4.5 Kg of single-use plastic spoons & single-use plastic/ Styrofoam bowls, the numbers were high. Plastic water bottles and lids (17 Kg), rubber (6 Kg), abandoned fishing gear (3 Kg), diapers and masks (12 Kg), toys (2 Kg), and miscellaneous wastes of 17 Kg were the other wastes collected. Plastic Fishers, who work in scientific plastic waste disposal, collected this waste for their use.



World Environment Day Observations

WWF-India, Kerala State Office was invited for talks across many educational institutions and Renjan Mathew Varghese and Anushreedha S.S. led the talks

L'école Chempaka, Kallayam, 5 June, 2024, 2:30 PM



Anushreedha SS, represented the organization and delivered a talk on the theme for World Environment Day 2024 – Land restoration, desertification and drought resilience at L'école Chempaka, Kallayam on 5 June 2024. She also planted a sapling of fruiting tree along with the students on

their school premises. Ananya Yadav of grade 7 Periwinkle delivered the welcome address. A token of appreciation was given to Anushreedha by Ms Dhanya Vijayan, coordinator Senior school. Shruthi Pillai of grade 8 Daisy delivered the Vote of Thanks. The talk was attended by 80 students.

Kerala University College of Teacher Education (KUCTE), Alappuzha - Wednesday 5th June

Dr. Santhi S. Rajan, the Principal welcomed the gathering. Renjan Mathew Varghese delivered the title talk on “Land Restoration, Halt Desertification and Build Climate Resilience” in tune with the global theme for WED 2024 as decided by UNEP. The title talk stressed the seven points laid out by UNEP on their campaign website. The program was attended by around 50 participants. The day's event ended with all gathering to plant a mango sapling on the KUCTE Campus.



Thangal Kunju Musaliar Institute of Management (TIM) on Thursday 6th June 2024

Renjan Mathew Varghese was invited to give the title talk for WED 2024 addressing the MBA Students. Dr. Veni Nair, Director, TIM, delivered the welcome address which was followed by the title talk. Renjan spoke to the students on the theme for the World environment Day 2024 – Land Restoration, Halt Desertification and Build Drought Resilience. The Q&A session followed and saw active participation from the students. Around 100 students attended the talk.



Kerala University College of Teacher Education (KUCTE) Anchal, Kollam on Friday 7th June 2024

The welcome address was given by Dr. Lesha M.S., Programme Coordinator and Assistant Professor, Dept. of Natural Science. The meeting was presided over by Dr. Sheeba L., Principal, KUCTE Anchal. Renjan Mathew Varghese, delivered the inaugural address followed by the title talk on “Land Restoration, Halt Desertification and Build Drought Resilience”. Smt. Sheena George, Assistant Professor, and Vishnu J.S., Chairman, College Union felicitated the function. Smt. Shafina R., Student Representative delivered the vote of thanks. The talk was attended by around 80 Teacher Trainees.



Observation of World Ocean Day 2024

Observation of World Ocean Day 2024 on the theme “Catalysing Action for Our Ocean and Climate” was jointly organized by Ocean Society of India (OSI), Kerala Academy of Sciences (KAS), and Dept. of Aquatic Biology & Fisheries, University of Kerala supported by Ministry of Earth Sciences, Govt. of India at the C.V. Raman Hall, Central Laboratory for Instrumentation and Facilitation (CLIF), University of Kerala, Karyavattam Campus on Tuesday 11th June, 2024. Renjan Mathew Varghese delivered the talk titled “Marine & Coastal Conservation Challenges: WWF Initiatives”. Students and faculty of the Dept. of Aquatic Biology & Fisheries, Dept. of Environmental Science, Dept. of Zoology, and Dept. of Botany attended the event, totaling around 200. Ms. Anushreedha S.S., Project Officer and Mr. Jeyaraj S., Intern from WWF-India, attended the event.



Meeting of Trivandrum Birding Team under WWF-India

A meeting of the active Birding Volunteers in the ongoing Bird Monitoring Programs was called for a meeting at

the Nodal Office of the Christ University, Vazhuthacaud, Thiruvananthapuram for an informal discussion on how we can improve our ongoing programs and the possibility of on-ground conservation initiatives. Around 22 Volunteers and the KLSO Staff Team attended the meeting. The minutes were noted for further action.

Annual Kerala Bird Monitoring Meeting at KAU, Thrissur

A team of six Volunteers (Reji Chandran, Arun C.G., Abhirami G.S., Ashitha Jose, Harith A., Anju Junu) attended the Annual Kerala Bird Monitoring Meeting at KAU, Thrissur held on 9th July 2026. Anushreedha S.S. attended the program online.

Third Commemoration of C. Rajendran, Founder Director of AMAS Kerala

Renjan Mathew Varghese and A.K. Sivakumar attended “Ormmappaythu”, the 3rd Commemoration of Sri. C. Rajendran, Founder Director of AMAS Kerala who was an active friend and supporter of WWF.



EDITORIAL BOARD

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