The world has two years to secure a deal for nature to halt a ‘silent killer’ as dangerous as climate change, says secretary of the UN Convention on Biological Diversity, Cristiana Pasca Palmer. She explains that “It is different from climate change, where people feel the impact in everyday life. With biodiversity, it is not so clear, but by the time you feel what is happening, it may be too late.” The world must thrash out a new deal for nature in the next two years or humanity could be the first species to document our own extinction. Ahead of a key international conference to discuss the collapse of ecosystems, people in all countries need to put pressure on their governments to draw up ambitious global targets by 2020 to protect the insects, birds, plants and mammals that

FROM THE STATE DIRECTOR’S DESK

In November – December, we have been able to formally launch the WWF-India ECHO programme in Kerala. ECHO stands for “Building Environment Conservation Heroes”. This is one of the five pillars of Environment Education of WWF-India and it mainly targets college students. Over the years, we have been doing many environment education programmes in schools. But the youth in colleges were left unreached. They would not be attracted to just seminars and workshops and hence WWF-India has come up with an action oriented programme i.e. the interested students from a college has to register themselves as a team under ECHO and a MoU has to be signed with WWF-India to make sure that they are serious on their agreement. For the first year, the theme selected is “Plastics”. After this, an ECHO Orientation Workshop is organised at the college level as a full one-day programme with technical sessions to make the students understand the various types of plastics around us, realize the quantity of plastics in our everyday life, how we can reduce our plastic print, and also how we can avoid dangerous plastics and properly dispose off the plastics that comes into our life in a safe manner. The day’s workshop is packed with short documentaries, team activities, individual exercises etc. After the workshop, the team is expected to sit and work together to come up with a locally relevant and impactful project related to reducing plastic pollution. The project should be realistic, implementable, impactful, and scalable and should be innovative. In Kerala, in the starting year, we have selected six colleges in Kollam district. We have received project concepts from five colleges. We have also tied-up with Kollam Municipal Corporation since they would be the ultimate beneficiary of these projects, when implemented. We are also working on another pillar of Environment Education of WWF-India i.e. Eco-Trails. Over the years we have been organising Nature Camps. But because of the huge logistics involved and the uncertainty in getting minimum number of participants registered, we have decided to move from two to three days Nature Camps to two to three hours Eco-Trails. Eco-Trails gives the participant, irrespective of age, gender or education level, to move out of their homes and cities have experiential learning in and around natural ecosystems including forests, wetlands etc. observing the natural wonder around them, the teeming biodiversity dependent on these ecosystems, survey and documentation of birds, butterflies, dragonflies, frogs etc., first-hand see the changes – desirable or undesirable happening to these ecosystems and respond in appropriate ways possible by supporting desirable changes or speaking against undesirable ones. So the ultimate objective of Eco-Trails is to make people guardians of their local environment. Eco-Trails will be organized at two levels – general Eco-Trails will be announced and the individual participants will have to pay or institutional/ corporate level Eco-Trails can be organized for captive audiences where the institution/ corporate pays for their students/ staff and even for their families. The nesting season of Marine Turtles have also started this year and the volunteers in the Local Marine Turtle Conservation Groups, especially in Chavakkad, with whom we have been working over the last two years is enthusiastically on the beaches at night patrolling the coast watching out for nesting Turtles. We have organized capacity-building programmes for these volunteers and provided them all possible field-level infrastructure to make their work more effective and efficient. To get the bigger local community sensitized to this work, we have organized awareness and outreach programmes also through the schools, Kudumbasree, LSG, fisherman community etc. We have started our work on the new project titled “Assessment of Kerala’s Top Ten Rivers at Risk” funded by Dept. of Environment and Climate Change (DoECC), Govt. of Kerala. Inspite of the fact that we have 44 rivers flowing across our State, all 44 of them are polluted beyond acceptable limits as per the earlier studies conducted. Water is one of our basic needs and hence we need to conserve water and protect our waterbodies. As suggested by DoECC, we have arrived at a list of 10 rivers in Kerala which needs to be considered in this study on a priority basis. Since many work related to rivers have already been conducted in Kerala by many experts, we plan to have an Expert Consultation Workshop initially to get the views of others also, come to a concurrence and then move forward. Finally, as an outcome of the two years project, we will come out with the River Restoration Plans and Programs for 3 priority rivers envisaged to be implemented in a participatory approach.

Renjan Mathew Varghese, State Director

STOP BIODIVERSITY LOSS OR WE COULD FACE OUR OWN EXTINCTION, WARNS UN

The world has two years to secure a deal for nature to halt a ‘silent killer’ as dangerous as climate change, warns secretary

IMPRESSANT NEWS ON NATURE AND ENVIRONMENT

GLOBAL

Stop biodiversity loss or we could face our own extinction, warns UN

The world has two years to secure a deal for nature to halt a ‘silent killer’ as dangerous as climate change, says secretary

Mruthika/ November-December 2018 / 1
are vital for global food production, clean water and carbon sequestration. This subject has received miserably little attention so far even though many scientists say it poses at least an equal threat to humanity. The issue is also low on the political agenda compared to climate summits. But there are glimmers of hope. Several species in Africa and Asia have recovered (though most are in decline) and forest cover in Asia has increased by 2.5% (though it has decreased elsewhere at a faster rate). Marine Protected Areas have also widened. (*Source: The Hindu, 16 December 2018*)

**COP 24**

COP24 conference took place from 2-15 December 2018 in Katowice, Poland. Countries settled on putting the 2015 Paris Agreement into practice. On current targets, the world is set for 3 degree Celsius of warming from pre-industrial levels, which Scientists say would be disastrous, resulting in droughts, floods, sea level rise and the decline of agricultural productivity. The key deadline is 2020, when countries must show they have met targets set a decade ago for cutting their emissions, and when they must affirm new, much tougher targets. (*Source: The Guardian, 16 December 2018*)

**STATE**

**A forest filled with butterflies**

A recent survey held in the Reserve spotted 221 varieties of butterflies, 11 of which were endemic to the area. With such a rich spread, the Reserve could also hit spotlight as a haven of butterflies. The survey, initiated jointly by the Department of Forest and Wildlife, Parambikulam Tiger Conservation Foundation, and the Wayanad-based Ferns Naturalists Society, was held between November 9 and 12. Sixty experts and fifty forest protection staff participated in the survey in the Reserve. The major species spotted during the four-day initiative include Small Palm Bob, Silverstreak Blue, Orange-tail Awl, and Red-disc Bushbrown. (*Source: The Hindu, 18 November 2018*)

**The sinking island of Kerala**

Munroe Thuruthu, in Kollam district, is slowly going under water, and its fleeing residents join the swelling ranks of climate refugees. The island’s decline began with the construction of the Thenmala dam. Located 70 km away and constructed in the 1960s under the Kallada Irrigation Project, the dam blocked the flow of fresh water as a result of sediments from the Kallada river — the main determinant of the land’s fertility. Today the whole area has turned saline. According to a report prepared in 2016-17 by the Government Engineering College, Thrissur, the 2004 tsunami caused a sudden rise in the volume of building settlements, affecting the life of islanders. As per the 2011 Census, the population growth rate for Munroe Thuruthu was minus 0.57%. In 2001 it was minus 0.36%. Parents often leave the place when their children relocate to other places. Hundreds of families have fled the island in the last few years. The National Centre for Earth Science Studies (NCESS), based in Thiruvananthapuram, has been monitoring the island for the past one year. It has found that the total water-holding capacity of Ashtamudi Lake has decreased by 15% in the last 17 years. Global warming and climate change are seen as the main forces driving the steady inundation. (*Source: The Hindu, 22 December 2018*)

**Indian Bustard on the brink of extinction**

The Great Indian Bustard, that narrowly missed being christened India’s National Bird, is now teetering on its last legs. India, effectively the only home of the Bustards, now harbours less than 150 individuals in five states. Report published by Wildlife Institute of India (WII) in October suggests that around 18 Bustards are likely to die every year (from a population of around 128 in the Thar) due to high-tension cables that intersect priority Bustard habitat here. Bustards, with their poor frontal vision and heavy bodies, cannot manoeuvre away from cables in time. While hunting was probably one of the first factors (the bird was a popular game bird and still is in some pockets, despite being listed in Schedule I of India’s Wildlife Protection Act), Bustard habitats have undergone tremendous changes over the last decades. Intensification of agriculture — including more pesticides, barbed-wire fences and new crops — could endanger the birds’ survival in this landscape. The untamed, arid grasslands that Bustards thrive in are categorised as ‘wastelands’, like most grassland habitats in India. The push to make these areas more ‘productive’ has seen an increase in water availability in these parts, resulting in the spill-over of agricultural land into Bustard habitats. (*Source: The Hindu, 16 December 2018*)

**NATIONAL**

**About 384 Tigers killed in the last 10 years**

As many as 384 Tigers have been killed by poachers in India in the last 10 years, according to the reply given to a question under the Right to Information Act. Between 2008 and 2018 (till November), 961 persons have been arrested for allegedly poaching Tigers. The information was given by the Wildlife Crime Control Bureau (WCCB) in response to a question filed by Ranjan Tomar, a Noida Advocate and RTI Activist. (*Source: The Hindu, 8 December 2018*)

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EXPERT TALK

WWF White Paper on the post-flood approach in Kerala with regard to nature conservation and environment protection

1. A comprehensive (of all possible species) and extensive (maximum geographical area possible) assessment of biodiversity loss has to be carried out using science-based methodology. For this purpose, R&D institutions, University Departments, NGOs and other competent agencies have to be involved. The likely man-animal conflicts post flood have to be monitored and adequate mitigation measures stipulated.

2. Ecology – Economy – Energy – Efficiency - Equity considerations post-flood have to be reckoned in the long term. Ecological Engineering Techniques for management of primary production sectors of Kerala have to be considered and popularised on a campaign mode as a short term measure.

3. Kerala should invest money, machinery and manpower in meteorological data collection in a comprehensive manner covering the entire State and its scientific analysis and dissemination of accurate and timely information to all concerned authorities and users.

4. De-siltation of dams to be carried out with the best available expertise and technology so that the actual water holding capacity can be realised. An extensive revisit of the hydrodynamics of spillways/ barrages/ check dams/ dams and wetlands of Kerala may be carried out as a medium or long term measure.

5. Encroachments within reservoir beds, catchment areas, dam flow channels, river beds and other wetlands should be vacated on a war footing. Flood mapping of major water-bodies of the State should be carried out and permanent physical markings done along with sensitisation of the local population. The same should be carried out for the coastline also. Encroachments and illegal construction should be pulled down and limits should be decided up till where building construction and other activities can be allowed.

6. The Kerala State Disaster Management Authority (KSDMA) should be reconstituted with officers from the forces (Army, Navy, Air Force, Police, NDRF and Fire & Rescue) at the helm of affairs because they are trained to take quick decisions and issue orders and they are followed under the Chain of Command. All others like revenue officials, experts from the respective relevant fields can all be made part of the KSDMA. It should have regional offices in South, Central and North Kerala.

7. Local level Youth Volunteers should be selected, trained and developed to use their service during
disaster situations. In disaster management, response time is crucial. So before the KSDMA/ NDRF team arrives, these local youth can start the preliminary work.

8. **Natural disaster zonation map** should be prepared at the district level, disaster action plan prepared and quick response team constituted at the earliest.

9. **Proper municipal solid waste management** with segregation at source, collection, transportation and safe disposal should be strictly implemented so that careless dumping of unsegregated waste in wetlands and landfills can be avoided. An integrated approach of centralised and decentralised waste management should be adopted.

10. **Eradication of invasive species**, both terrestrial and aquatic, should be carried out on a war footing so that native species thrive in a healthy manner. This can be achieved only if we do this on a totally participatory approach. Sensitization activities should be organised with simple resource materials to make the local people aware about these species and make them understand that “all that is green is not so good”. Proper check and control should be put in place to prevent entry of new exotics into the State. Organisations with available expertise like KFRI can play a key role for terrestrial invasives. For aquatics, Dept. of Aquatic Biology and Fisheries can take the initiative. Prolific growth of invasives occurs because tracts of land are left fallow. As a solution to this, we should promote farming of endemic fruits, vegetables and other edibles.

11. All **aquaculture activities** should be registered with the Fisheries Department declaring the species under cultivation. All crop cycles should be intimated with all related details. Fisheries Department should carry out field monitoring to cross check the information furnished.

12. **Biodiversity hotspots outside forest area** should be mapped and documented properly. As relevant they should be declared as Community or Conservation Reserves.

13. There should be a move towards “**Zero Plastics**” in the State with initial emphasis on giving up single use plastics in our daily life like plastic carry-bags, straws, plastic cutlery etc. Alternatives should be made available in the market at reasonable price. Stringent actions should be taken against defaulters. The LSG Department must issue an order that all the grama sabhas conduct awareness classes and other sensitization programmes to make the people aware about the impact of plastics, especially it’s burning as a result of our use and throw culture, and the need for proper waste management. For all the tourism spots in Kerala, carrying capacity studies should be carried out including the Plastic Footprint and based on that only tourists should be allowed.

14. In **ecologically sensitive areas**, at both macro and micro level, proper scientific zonation should be carried out and guidelines on allowable land use practices and construction should be issued and enforced.

15. The **Biodiversity Management Committees (BMCs)** constituted under the LSGIs, mainly for the preparation of the People’s Biodiversity Registers, should be strengthened in all aspects including giving statutory powers, increasing and improving manpower, provide adequate funding etc. Local ward level grama sabhas can take decisions on this and with their participation, Panchayat authorities can conduct the collective data collection, and with adequate scientific support and proper data analysis, recommendations can be made and implemented in a participatory approach.

(This has been compiled by Renjan Mathew Varghese, State Director with the inputs from other staff of WWF based in Kerala and also from the State Advisory Board Members)

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**CHILDREN’S CORNER**

**Quiz**

1. There was estimated to be almost three billion of these birds at one time. Yet, the last of them, Martha, died in captivity in 1914. Which unfortunate bird was it?

2. The Asiatic Wild Dog, also known as the Red Dog, was once ubiquitous in India. But it is now listed as Endangered, with a count of less than 2,500 adults. By which name is this dog more commonly known?

3. This species of wild cattle, which went extinct in the 17th century, was bred back by the Heck brothers in Germany in the 1920s. Name it.

4. There are only three subspecies of Asian Elephant. The most critically endangered of these has a population of less than 3,000, mainly because the forest blocks in the country are too small to sustain Elephant populations. In which country will you find them?

5. The Axolotl is a species of amphibians found in numerous lakes in and around a capital city. They were originally a staple diet of the local people and are the subject of much research for their miraculous ability to regenerate limbs. Which city would you associate with the Axolotl?

6. This species of whales, referred to as ‘sulphur bottoms’ in Herman Melville’s Moby Dick, was down to an estimated five to 10,000 worldwide before the whaling ban in 1966. More recently their number has climbed to between 15,000 and 25,000. Which species are we talking about?

7. The Asiatic Cheetah was once found all over Asia, with maharajas using them for hunts. Now they are critically endangered and are found in only one country in the continent. Where?
8. The Baiji is a variety of freshwater dolphin regarded as a goddess by local fishermen. It was declared as functionally extinct in the 1980s due to hydroelectric projects and heavy use of the river for fishing and transport. In which river would you have come across the Baiji?

9. This large African mammal had more than eight varieties, three of which — the Cape, the North-Eastern and the Chobe — have already been declared as extinct by International Union for Conservation of Nature (IUCN). The remaining subspecies have just around 4,000 surviving. Name the mammal.

10. In the terminology used by the IUCN, what is the status of an animal species if it is declared as EW? Examples include the Barbary Lion and the Hawaiian Crow?

(Courtesy: Joy Bhattacharya)

Answers at the end...

ACTIVITIES OF WWF-INDIA KERALA STATE OFFICE

Marine Turtle Conservation in Kerala

School level outreach programmes were conducted on November 1 at RPMM UPS Edakazhiyoor and Govt. HSS Chavakkad and in AMUP School Aviyoor, AMUPS Akalad on November 2 at Chavakkad in association with Green Habitat. A separate interaction meeting was also organized with Kudumbasree Members of the area on the beach in the evening on the same day.

Friday Forum

Friday forum for the month of November 2018 was conducted on 5th November 2018. The topic for the forum was “Energy Conservation”. Mr. B.V. Subhash Babu, Energy Technologist of Energy Management Centre (EMC- Kerala), was the expert who interacted with the students on the importance of energy conservation and its significance in our daily life. 42 Students along with 2 teachers attended the Friday Forum.

Friday Forum for the month of December was conducted on 7th December 2018 at Museum Auditorium with the participation of 114 students. The topic was Ecological Footprint and the session was led by Sri. Renjan Mathew Varghese, State Director.
Orientation Workshops on ECHO under VEP

ECHO, the program under VEP to develop Environmental Conservation Heroes across the country was launched in Kerala State in the district of Kollam as all the other districts were deeply affected by the flood. The program was in association with Dept. of Environment & Climate Change, Govt. of Kerala. The launch of the program was held at TKM College of Engineering, Kollam on 3rd November and the chief guest was Adv. Rajendra Babu, Hon. Mayor of Kollam Municipal Corporation. The two-day orientation sessions were conducted in all the five colleges to get the students ready to locally relevant action projects on the theme of plastic pollution. Senior Education Officer, Ms. Anushreedha Sivanandan (VEP-Intern), Ms. Veena M. (Volunteer) and Sri. Shibu K.N., expert in solid waste management led the workshops. The workshops were conducted at TKM College of Engineering, Kollam on 3rd & 4th, 13th & 14th at St. Gregorios College, Kottarakara, 16th & 19th at SN College, Kollam, 23rd & 24th at NSS College, Kottiyam and 27th & 28th at Sree Narayana Institute of Ayurvedic Studies & Research Puthur.

WWF Exhibition Stalls

WWF Exhibition Stall was setup at Muslim High School for Boys, Kaniyapuram as part of Sarga Sangamam 2018. Around 400 students visited the exhibition.

Observance of International Day for Volunteers

As part of observing International Day for Volunteers, 22 Volunteers of WWF gathered at Shanghumukham Beach and restored the avenue plants on the pathway. Wherever pots were broken, they were replaced with new ones, weeds were removed and new plants put in the empty pots already available there.
Energy Conservation Rallies

Kerala State Office organized three Energy Conservation Rallies at Pattambi, Shoranur and Thrithala in connection with Urja Kiran program on 12th, 13th and 14th December 2018 with the participation of around 75 students each from various colleges. Ms. Anushreedha, VEP Intern and Mr. Murukan Pareparambil, Volunteer co-ordinated the rallies.

Field Study Trip for students of MSc Wildlife Science of TERI University, New Delhi

A Field Study Trip for 11 students of MSc Wildlife Science of TERI University, New Delhi was conducted at Periyar
Tiger Reserve from 10th to 13th December 2018. This was part of their curriculum and included visit to Iringole Kavu and other field trips within PTR. Sessions on bird watching, telemetry and camera trapping etc. also were part of the trip.

Thiruvananthapuram Bird Race

Thiruvananthapuram Bird Race, an initiative to popularize bird watching, open to people from all walks of life, irrespective of age or gender, was held in the Capital City on Sunday, 23rd December covering seven sites. The half-day event was organized by WWF-India jointly with Dept. of Museum & Zoos, Govt. of Kerala. The survey in the 7 sites were carried out with the participation of 42 Volunteers. At the end of the day, the teams came out with a list of 148 species of birds, a result better than the day-long Bird Race of the previous year which came out with a count of 147 species.

Release of the poster on Birds of Thiruvananthapuram

Under the Green Partnership Programme of Kerala Forests and Wildlife Department in which many NGOs, especially with proven track record of birding, are partnering, led by Dr P.O. Nameer, as an initial step towards the District Bird Atlas – a poster on Birds of Thiruvananthapuram was released by Adv. Raju, Hon’ble Minister for Forests in a function held at Vanasree Auditorium, Forest Headquarters, Thiruvananthapuram. Shri.V.K. Prasanth, Hon’ble Mayor of Thiruvananthapuram Corporation was expected to be present in the function and receive the poster from the Minister. But since he was absent, the WWF Birding Team received the poster from the Minister.

Invited Talk in Nature Camp at Neyyar WLS

As a collaborative action with National Green Corps (NGC) and Kerala Forests & Wildlife Department, the Senior Education Officer was invited to deliver a talk at Neyyar WLS for NGC Camp with the objective of sensitizing the participants towards biodiversity conservation for sustainable development. Around 50 NGC members of Thiruvananthapuram attended the programme.

Answer to the Quiz in Children's Corner

1. The Passenger Pigeon 2. Dhole, declining mainly due to habitat loss 3. Aurochs; it features in Asterix in Spain 4. Indonesia, the Sumatran Elephant; the two other varieties are Indian and Sri Lankan 5. Mexico City; they are also known as the Mexican Salamander 6. The Blue Whale, the largest animal ever known to have existed 7. Iran; the Touran Wildlife Refuge has one of the largest populations of Cheetah 8. The Yangtze; it was also known as the Chinese River Dolphin 9. The Black Rhinoceros. The White Rhinoceros has done comparatively better, with nearly 20,000 still around 10. Extinct in the wild. There may be breeding populations in zoos

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Published by WWF-India, Kerala State Office, Vanchiyoor P.O., Thiruvananthapuram - 695035
Phone: 0471-2302265, email: wwfklso@gmail.com, Web: wwfindia.org
Computer Graphics: Soft and Soft, Sasthamangalam, Phone: 9447451314, Printed at New Multi Offset, Tvpm