



NEWS
LETTER

KERALA

2011

Mruthika

July - August 2011

Newsletter of WWF - India, Kerala State Office

FROM THE STATE DIRECTOR'S DESK

Climate Change is one of the biggest threats that mankind faces now. The better side is that we realise that climate change is an effect of human activities and that we need to act to reverse climate change. Many international, national and local initiatives are underway in this regard. WWF-India as part of its Climate Change and Energy Programme and also with significance to 2011 being the UN International Year of Forests has launched the 'Cities For Forests' campaign. It mainly aims to engage youth to understand the values, functions and services of the forest ecosystem around them and to take initiatives to protect them. The local launch of the campaign has been organized in the Museum and Zoo Compound in Thiruvananthapuram. This event very much provided an interface to engage with the public to sensitise them on the need to protect the urban green cover. Many related activities targeting various sections of the society have also been planned and which will be executed in the days ahead. WWF-India Kerala State Office has also come up with its Annual Plan 2011-12 after much discussions and deliberations at the local level. We hope that such an Approach' will help us to be more effective and efficient in addressing the conservation needs in the State. Kerala has also been witnessing some hot debates on the recent decision of the Government of Kerala to allow controlled culling of wild boar with the supervision of the officers of the Forest Department. It is very much true that in many areas of the State, mainly along the forest fringes, there is severe human wildlife conflict resulting in the loss of life and property. Farmers are mainly at the receiving end when their crops are raided by wild boars, elephants and other such animals. There are also stray reports from Palakkad of even peacocks causing loss to agriculture and affecting normal life in some areas. Recently there was a report from suburban area of Thiruvananthapuram where groups of monkeys are raiding coconut and arecanut plantations and inflicting severe financial loss

to farmers in that area. These are instances when genuine conservation efforts loose its face. So a balanced approach is required in such cases, where detailed assessments and studies should be conducted on a case by case basis and wherever proper intervention required, the wildlife should be declared as vermin and population control measures sought. There are provisions in the Wildlife Protection Act to support this. Stakeholder workshops have been organized in various locations around Vembanad Lake to refine the findings of our field work as part of developing the sustainable livelihood security index for the lake, mini delphi analysis carried out to arrive at the weights and points for the data analysis and the work progressing. WWF-India Kerala State Office also associated with a local youth group with their programme titled 'Living Green'. It was so encouraging to see students and youth coming up with innovative ideas towards nature conservation. WWF-India was invited by CEE to participate in the 'Chennai Coastal Carnival for Children' organized in Chennai by putting up exhibition stalls and the responsibility of the same was given to the Kerala State Office. In this regard, a set of 12 exhibition panels were prepared exclusively on 'Marine and Coastal Biodiversity and its Conservation'. The event gave us a good opportunity to showcase our work on marine and coastal ecosystem and also interact with the school students of Chennai. A responsible citizen of Thiruvananthapuram shared with us some photographs of dolphin mortality along the local beach. The same along with an article on marine mammal mortality was published in The New Indian Express to sensitise the public towards such issues. Such incidents are on the rise and only when citizens rise to the situation will we be able to control them and the Constitution of India under Fundamental Duties also encourages us to do so.

Renjan Mathew Varghese,
State Director

IMPORTANT NEWS ON ENVIRONMENT AND NATURE

GLOBAL

Glaciers melting, ecosystems changing in the Arctic

Arctic scientists are working to evolve models for future sustainable management of Arctic ecosystems. The efforts

attain significance in the wake of glaring signals – melting glaciers and climate change – in the Arctic region, said Bijoy Nandan, Associate Professor (Marine Biology), Cochin University of Science and Technology (CUSAT), who was a member of a recent Indian contingent to the Arctic. Glacial levels are receding at the Zeppelin Glacier Mountain, a virgin land in the arctic region, according to the instruments of the Norwegian Polar Institute that measured annual glacial levels. Studies on the impact of climate change and its reflection

on the life have heightened worry among scientists across the world. From glaciers melting to the changed lifecycles of some organisms, the impact of climate change in the area was evident. The development and breeding cycle of sea butterflies, a mollusc variety, has undergone changes. Scientists reported that traces of metal and other residues derived from facial creams, body lotions and other sources from the main land, could be found in arctic sea animals. Snow-levels had receded, exposing ice slabs. The presence of persistent organic pollutants and an increase in the use of aerosols were also some of the worries. Studies on benthic organisms and its community composition can give insights into the structure and function of the soil ecosystem. (Source: *The Hindu*, 17 August, 2011).

Carbon capture may make economic sense

Passing carbon dioxide through slag left over from steel-making turns the waste product into a strong material that can be used for construction. Pumped into greenhouses, it provides a growing boost for crops. Put into tanks of algae, it can be used to make biofuels. Waste carbon dioxide can even be cleaned up to “food grade” and injected into fizzy drinks. But these processes are rare — instead, carbon dioxide from power generation is normally simply vented into the atmosphere, where it contributes to global warming. Peter Styring, a Professor at the University of Sheffield, believes that carbon capture and utilisation (CCU) could be one of the best ways of combating climate change, by turning carbon dioxide from waste gas into an integral part of industrial processes. Styring is confident that many of the potential uses for carbon dioxide could make economic sense, with the right investment. Many of the processes envisaged for CCU require some energy input which could be provided by renewable energy, especially when wind or solar plants are producing energy at times of low demand. In this way, producing fuels from CO₂ could effectively be a way of storing renewable energy in another form. However, the costs are still high for many of the potential applications of waste CO₂, about 10 times too expensive in the case of algae, for example. Much more investment is needed to bring down the costs, and putting a sizeable price on carbon dioxide emissions would also help. (Source: *The Hindu*, 27 July, 2011).

NATIONAL

Oil spill minor; tar balls spotted on more beaches in Maharashtra

The oil spill from the bulk carrier mv Rak that sank recently is a minor incident, but environmentalists said that its timing was a cause for concern, especially in the context of mangrove ecology. Approximately 80-100 tonnes of oil must have spilled from mv Rak into the sea. Mr. Basra, Inspector General, said that up to 700 tonnes of oil spill could be described as minor, 700-2000 tonnes as medium and above 2000 tonnes as major. But Field Ecologist Deepak Apte said that the impact of the oil spill is not measured based on just the volume. The timing is important too. The mangrove ecology is under

continuous stress since last year’s oil spill after the collision of [msc] Chitra and [mv] Khalijia. This is the seeding season for mangroves. Even a thin film is enough to kill the seeds and can have a major impact on the mangrove ecology. On the methods to mitigate the damage, Mr. Basra said that the choice was restricted. “Various methods like booming and skimming can be used. But due to the rough seas, the only options available with us right now are spraying OSD and churning the oil with propeller option.” Tar balls were spotted on the beaches of Alibag in Raigad district and at Gorai in Mumbai, they were also spotted at the city’s Juhu-Versova beach. The government had given Rs 10 lakh each to the Raigad administration and the Brihanmumbai Municipal Corporation for clean up operations. The Maharashtra Pollution Control Board have taken fish samples for examination. Apart from the National Institute of Oceanography, the Bombay Natural History Society (BNHS) too has started collecting water samples from the affected beaches (Source: *The Hindu*, 9 August, 2011).

Northern and central parts of Western Ghats most vulnerable to climate change

Before the turn of the century, no less than 56 per cent of India’s forests will be transformed under global warming, and among the most vulnerable will be the Western Ghats, says a new study published in the latest edition of *Current Science*. The northern and central portions of the Western Ghats, primarily the most deciduous and evergreen forests of Karnataka, are at the greatest risk, says the scientists at the Indian Institute of Science (IISc). Much of these forests are also fragmented, putting them at greater risk of forest fires and pest attacks. However, the southern part of the Western Ghats, dominated by tropical wet evergreen forests appears to be quite resilient to climate change. Climate change is only going to add to the multiple stresses that forests witness today, including over-extraction, pest outbreaks, livestock grazing and forest fires, caution the authors at IISc. The high-altitude mountainous forests of the Himalayas are also highly susceptible to the adverse effects of climate change. In contrast, the forests of northeast India are least vulnerable because the climate “is predicted to get hotter and wetter there, which is conducive to the existing vegetation types.” India must monitor the vegetation response to changing climate in the long term, the paper recommends. (Source: *The Hindu*, 17 August, 2011).

Western Ghats unlocks a few more biodiversity secrets

Ten new species of frogs have been discovered by a team of biodiversity researchers, during a recent exploration in the Western Ghats. The discovery, published in the latest issue of *Biosystematica*, an international journal is a joint effort of the team of voluntary researchers and naturalists, undertaken with the help of the Zoological Survey of India. The discovery shows that the Western Ghats, a biodiversity hotspot of the world, still has many secrets waiting to be discovered, especially amphibians. Nine of the discovered species belong to genus *Raorchestes* and one to *Polypedates* (family *Rhacophoridae*). They had been found from the hill

ranges of the southern Western Ghats after several expeditions in the past few years. Four species have been found from Bonacaud in Thiruvananthapuram; three from Kadalar Estate in Idukki; and one each from Gavi in Pathanamthitta district and Ooty and Naduvattam in Nilgiri district of Tamil Nadu. Six are bush frogs and one is a canopy bush frog. Two species are found in bamboo reeds. With the new discoveries in the Rhacophoridae family, the number of frog species under the genus Polypedates from the Western Ghats has gone up to four and from India to 11. The genus Raorchestes is, however, restricted to the Western Ghats, with 30 known species till 2010. (Source: The Hindu, 8 August, 2011).

STATE

Plea to stop plunder of hills

The State Government has come under pressure to check the indiscriminate plunder of the laterite hills in the Thiruvallam and Panchakari areas on the outskirts of the city. Mr. V. Sivankutty, Nemom MLA said the mechanised operations to raze the hills had pushed the entire region to the brink of an environmental catastrophe. He said the ceaseless movement of trucks ferrying soil from the hills had damaged the roads. The speeding vehicles posed a threat for other motorists, pedestrians, and children who use the route to reach school. Over the years, many of the hills at Thiruvallam have been ripped up using explosives and heavy machinery, posing a threat to the lives of the local populace, besides creating irreversible ecological imbalance. The region is in the grip of an acute scarcity of water as hundreds of acres of hills had been plundered, leading to a severe depletion of groundwater resources. Most of the wells in the area had dried up. The removal of the fertile topsoil had rendered the land barren and exposed to soil erosion and landslides. The operations also have an indirect influence on the urban areas where the soil is dumped to fill up the low-lying areas, playing havoc with the drainage system and resulting in water logging during the monsoon. The Soil Conservation Department prescribed quarrying only by the 'stepping method' wherein the hill slopes are loosened at an angle of 45 degrees. The use of explosives and mine compressors are prohibited. But all these regulations had been flouted as the contractors used heavy drills to bore into the hill and then use explosives to loosen the soil from above. The plunder of the hills for soil had also played havoc with the wetland landscape covering the Vellayani lake and its surroundings. An environment impact assessment (EIA) by the Centre for Earth Science Studies had pointed out that unauthorised quarrying and extensive land reclamation had drastically changed not only the 'wetland landscape' but also its ecology and habitat characteristics (Source: The Hindu, 14 August, 2011).

Pollution near Kureepuzha alarming claims study

A recent study has concluded that the pollution level of groundwater near the solid waste dumping site of the Kollam City Corporation at Kureepuzha has reached alarming

proportions. The study conducted by Fatima Mata National College and the Environmental Sciences Department of the University of Kerala, was published in the latest edition of the Research Journal of Chemistry and Environment. The study reports severe bacterial contamination of open wells in the vicinity of the site, caused by leachates from garbage. High physico-chemical and bacteriological contamination was recorded in the water of Ashtamudi Lake course along the waste dumping site. Since the wells in the area are the chief source of potable water, those living near the dumping site are vulnerable to water-borne diseases. Leachate reduces the oxygen content in the water, posing a threat to the aquatic life of the lake. While the Corporation estimates that 108 metric tonnes of solid waste is generated each day in the city, waste quantification and characterisation surveys conducted in the city as part of the study puts the figure at about 164 metric tonnes. A significant portion of the waste is dumped on the streets or open collection points, causing severe pollution in the city. Only about 18 per cent of the waste reaches the Kureepuzha dumping site. Since there is no waste treatment system in the city, the entire solid waste collected is dumped at this site. In fact, waste collected in the past several years lay accumulated at the site (Source: The Hindu, 13 August, 2011).

KSBB proposal for wind farms in CHR

The Cardamom Hill Reserves (CHR) in Idukki district, one of the biodiversity-rich areas in the Western Ghats, could be effectively tapped as a source of wind energy to feed the burgeoning demand for power in Kerala. The Kerala State Biodiversity Board has proposed a network of wind farms within the CHR to generate clean energy without disturbing the ecology of the region. The proposal is part of a package of measures mooted by the Board to conserve the biodiversity of CHR which is increasingly under threat from logging, poaching, encroachments, and climate change. KSBB has identified 18 locations ideal for installation of low capacity wind turbines costing less than Rs.1,00,000 each. According to R.V. Varma, chairman, KSBB, the wind energy option will be a viable alternative for Kerala in view of the need to augment power generation and the difficulties in getting clearance for hydroelectric projects. One of the advantages of the small wind turbine is that it can be erected with the least ecological damage. The Board has recommended that only a minimum space be levelled for installation of wind mills. Restoration of the site with natural grass and closure of the roads constructed for transportation of the wind mills after commissioning the project have also been proposed (Source: The Hindu, 15 August, 2011).

SPECIES OF THE ISSUE

Arogyapacha (*Trichopus zeylanicus*)

Trichopus zeylanicus is a small, rhizomatous, perennial herb distributed in Srilanka, southern India and Malaysia. It is the only species of its family, the Trichopodaceae. The plant is known as 'Arogyapacha' in Malayalam literally meaning



the green that gives strength, Bimpol in Sri Lanka. In India, it is found at an altitude of around 1,000 meters. The leaves are cordate in shape. The leaves and fruit are used for medicine. It has been in use for centuries by the Kani tribal community of the Agastyakoodam ranges in Kerala for its medicinal properties. It was found from the Kani men that they eat the fruits and leaves that made them energetic. The plant is known for its anti-fatigue properties. Phytochemical and pharmacological studies conducted have confirmed the presence of certain glycolipids and non-steroidal compounds (Polysaccharides) with profound adaptogenic immunoenhancing anti-fatigue properties. The plant is used for improving stamina, boosting the immune system, and losing weight. They also take it to treat liver disease, stomach ulcers and fatigue. The Tropical Botanical Garden and Research Institute (TBGRI) conducted detailed chemical and pharmacological investigations of the plant. TBGRI developed a scientifically validated and standardized herbal drug, based on the tribal knowledge. The drug was named as Jeevani and was released for commercial production in 1995 by Arya Vaidya Pharmacy. 'Jeevani' has been patented by TBGRI in India and the license for manufacture of the drug has been given to Coimbatore Arya Vaidya Pharmacy.

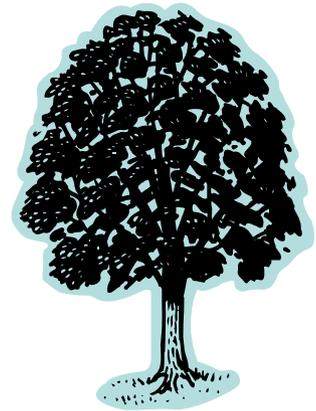
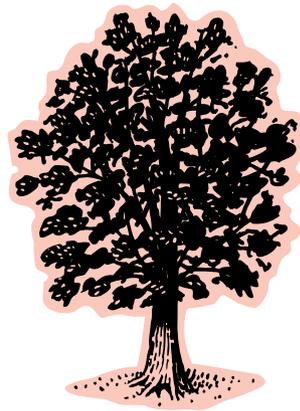
CHILDREN'S CORNER

Zodiac Birthday Trees

Which tree do you belong to? The months of the year have a corresponding tree which blooms on that special month. So find yours and your loved ones and plant it today.

Jan 01 to Jan 11	Fir Tree
Jan 12 to Jan 24	Elm Tree
Jan 25 to Feb 03	Cypress Tree
Feb 04 to Feb 08	Poplar Tree
Feb 09 to Feb 18	Cedar Tree
Feb 19 to Feb 28	Pine Tree
Mar 01 to Mar 10	Weeping Willow Tree
Mar 11 to Mar 20	Lime Tree
Mar 21 (only)	Oak Tree
Mar 22 to Mar 31	Hazelnut Tree
Apr 01 to Apr 10	Rowan Tree

Apr 11 to Apr 20	Maple Tree
Apr 21 to Apr 30	Walnut Tree
May 01 to May 14	Poplar Tree
May 15 to May 24	Chestnut Tree
May 25 to Jun 03	Ash Tree
Jun 04 to Jun 13	Hornbeam Tree
Jun 14 to Jun 23	Fig Tree
Jun 24 (only)	Birch Tree
Jun 25 to Jul 04	Apple Tree
Jul 05 to Jul 25	Elm Tree
Jul 26 to Aug 04	Cypress Tree
Aug 05 to Aug 13	Poplar Tree
Aug 14 to Aug 23	Cedar Tree
Aug 24 to Sept 02	Pine Tree
Sept 03 to Sept 12	Weeping Willow Tree
Sept 13 to Sept 22	Lime Tree
Sept 23 (only)	Olive Tree
Sept 24 to Oct 03	Hazelnut Tree
Oct 04 to Oct 13	Rowan Tree
Oct 14 to Oct 23	Maple Tree
Oct 24 to Nov 11	Walnut Tree
Nov 12 to Nov 21	Chestnut Tree
Nov 22 to Dec 01	Ash Tree
Dec 02 to Dec 11	Hornbeam Tree
Dec 12 to Dec 21	Fig Tree
Dec 22 (only)	Beech Tree
Dec 23 to Jan 01	Apple Tree



ACTIVITIES OF WWF-INDIA KERALA STATE OFFICE

Ongoing Marine Turtle Survey along the coast of India – Kerala Component

The survey has been completed and the field report preparation is ongoing. The status of turtles along the Kerala coast, their nesting sites, threats, local level conservation initiatives, other conservation issues along the coast etc have been looked into during the survey. The final report will give a comprehensive picture of the coastal ecosystem, its biodiversity and related issues and will help us to prioritise and address them in the proper way in the days ahead.



Ongoing project on Development of SLSI for Vembanad Lake

The primary data collection with regard to the project has been completed. Presently the data compilation and analysis are being carried out. Field level consultations with the various stakeholders are also being carried out to refine the data and also come out with practical solutions to the problems identified through a totally participatory bottom-top approach.



Friday Forum

The monthly interactive forum on nature and environment for school students of Thiruvananthapuram for the month of July 2011 was organized at the Museum Auditorium. The topic was 'Our Monsoons' and the session was handled by Mr. Sudhevan, Director, India Meteorological Department.



Association with 'Living Green – the environmental month' campaign

YES+ and IYCN are jointly organizing a month long campaign with various programmes and activities on nature conservation and environment protection. WWF-India Kerala State Office is also partnering with the campaign and is providing all possible support.



2011 UN International Year of Forests launched in Palakkad by WWF

The programme was kick started with a single day awareness programme in connection with the International Year of Forests on the theme of 'Forests for People' at Govt. PMG HSS, Palakkad on 13th July 2011 with the participation of more than 100 school students of the district.

Inauguration of Plantation drive (fruiting trees) at Vinobanikethan School, Thiruvananthapuram

The Senior Education Officer inaugurated the plantation of fruiting trees at Vinobanikethan School, Vithura and delivered a talk on its significance with respect to plant animal interaction on 26th July 2011.

Workshop on Responsible Wood Trade and Forest Certification



As part of the ongoing EU Switch Asia Project headed by GFTN India and funded by the European Commission, a Workshop on 'Responsible Wood Trade and Forest Certification' was organized in Hotel Avenue Regent, Kochi on 26 August 2011. About 20 SMEs attended the workshop. Dr. B.S. Corrie and Dr. T.R. Manoharan led the workshop



Chennai Coastal Carnival for Children

The Chennai Coastal Carnival for Children (C4) was organized by CEE in association with SAARC. WWF-India was requested to be part of the programme in Chennai and hence prepared a set of 12 exhibition panels, set of 2 stickers and brochure and put up exhibition stall in Chennai from 4 – 6 of August 2011.



Class on EIA

State Director took class on Environmental Impact Assessment (EIA) for Government Officers at Institute of Management in Government (IMG) on 8 August, 2011.

'Cities For Forests' campaign



The Cities For Forests (CFF) campaign is a national campaign launched by WWF-India especially in the background of 2011 being the UN International Year of Forests mainly aimed at sensitizing youth and students to visit, experience and understand the values, functions and services provided by the forests in our surroundings and share their experience and also initiate action towards their protection. CFF was launched in Thiruvananthapuram with whole day long programmes on 21 August, 2011. About 24 schools are participating in the campaign on the long run.



Nature Education Camp at Chimmony WLS

This was organized on 6th & 7th August 2011. Nineteen nature enthusiasts including wildlife experts and photographers



attended the camp with Senior Education Officer of WWF and volunteers. The team had interesting observations and experience during the camp hours. As it was raining heavily, it turned into a monsoon camp.

Friday Forum

The monthly interactive forum on nature and environment for school students of Thiruvananthapuram for the month of August 2011 was organized at the Museum Auditorium. The topic was 'Agriculture – Status, Issues & Concerns' and the session was handled by Smt. Usha from Thanal, an NGO working in the field of conservation and taking the lead in Endosulfan issues and pesticide pollution in general.

Training of Trainers in ESD

Mr. A.K. Sivakumar, Senior Education Officer attended a five day intensive Training Workshop on Education for Sustainable Development (ESD) held at BVIEER, Pune from 23rd to 27th August 2011. It was a venue to refresh the earlier training workshops attended and to update new trends and approaches in ESD.

Colloquium on Marine Mammals

State Director attended the S. Jones Colloquium on Marine Mammals organized in Kochi on 26 – 27 of August 2011 by CMFRI. WWF was co-sponsor of the colloquium.



Association/ Participation in various other programmes

State Director attended Kerala Environment Congress organized in Thiruvananthapuram from 25 – 27 August 2011 by Centre for Environment and Development on the theme 'Solid and Liquid Waste Management.'

Publications

Article titled 'Vembanad Lake – Wise Use or Misuse' published in Kerala Tourism magazine.

EDITORIAL BOARD

Mr. A.V. George
Mr. Renjan Mathew Varghese
Mr. A.K. Sivakumar

NEAT AND CLEAN PREMISES ARE ACHIEVABLE

Segregate degradable and non-degradable wastes
and store separately at source
(houses, office, shops, markets, institution, auditoria etc.)

Avoid throwing waste on roadsides, public places,
water bodies, drains etc.

Recycle/reuse plastic, rubber, glass, metal, paper etc.

Compost or make bio-gas out of degradable waste or
hand over to collection service engaged by local bodies.

The care we give to our State,
Our beautiful, bountiful State,
Will be returned to us manifold.



KERALA STATE POLLUTION CONTROL BOARD

(under the Department of Environment of the Government of Kerala) PATTOM P.O.,
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