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VANA PREMI



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Vol. 21

NOVEMBER - 2020

No. 9



Photo: Chaitanya Srinivasan, Thanks

PANTHER or LEOPARD (*Panthera pardus*) enjoying on his majestic throne.



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- Large grower of about 26,809.00 Ha. of Eucalyptus clonal / seed origin plantations. Bamboo also grown as an important crop over 6,405.00 Ha.
- The TSFDC has also taken up the challenging task of Eco-Tourism development in the State. Already made open to public – Hyderabad Botanical Garden, Pala Pitta Cycling Park near Hi-Tech City, Madhapur, which has received the ISO 9001:2015 certification on 16-10-2019. Effective SMC measures for recharging pond water and improving surface water taken up in association with Smaran NGO. Mahavir Nischal Van Eco-Tourism Centre, Vanasthalipuram, and Mrugavani National Park at Chilkur are attracting increasing number of visitors.
- TSFDC is also developing Urban Parks in Lalgadi Malakpet RF Cluster, Thumukunta RF & Gowdelli PC Kalan & PC Khurd Cluster. Sankalp Taru NGO is collaborating with TSFDC in improving greenery at Gowdelli Park.
- TSFDC has also taken up consultancy work for NTPC and RFCL and successfully raised multiple Row avenue plantation along Rajiv Rahadari highway in peddapally Dist.
- Dhanvanthari herbal garden is revived with support from Deloitte and Technical support of environment forest solutions.

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Date of Publication: 26-10-2020

/Total Pages 64

Editorial

World Tsunami Awareness Day: International days are occasions to educate the public on issues of concern and to mobilize political will. After the 2004 deadliest Tsunami in the Indian Ocean, the UN General Assembly designated 5 November as World Tsunami Awareness Day in December 2015. A tsunami is a series of waves caused by a large, sudden disturbance of the sea. Undersea earthquakes are the most common cause, but landslides, volcanic activity, certain types of weather, and meteorites can also cause tsunamis. The theme of the world tsunami awareness day 2019 was “Sendai Seven Campaign”. This theme focuses on reducing disaster damage to critical infrastructure and the disruption of basic services. The United Nations wants to increase the use of early warning systems, resilient infrastructure, educate people to save and protect their assets against tsunami risk in future. The World Tsunami Awareness Day is dedicated to promoting a global culture of tsunami awareness around the world.

The term ‘Tsunami’ is a Japanese term which means “harbour waves”. Tsunami knows no coastal borders and Coastal communities. World Tsunami Awareness Day was the brainchild of Japan, which due to its repeated, bitter experiences has over the years built up major expertise in areas such as tsunami early warning, public action and building back better after a disaster to reduce future impacts. The basic motive of this day is to increase the awareness about the Tsunami among over 700 million people live in low-lying coastal areas and Small Islands.

The date for the annual celebration was chosen in honour of the Japanese story of “Inamura-no-hi”, meaning the “burning of the rice sheaves”.

During 1854 earthquake a farmer saw the tide receding, a sign of a looming tsunami. He set fire to his entire crop harvest to warn villagers, who fled to high ground. Afterwards, he built an embankment and planted trees as a buffer against future waves. Tsunamis are rare events, but can be extremely deadly with heavy human and economic losses and the danger may last for hours or days. Tsunamis can happen any time, any season, and during any weather. They can be generated far away (across the ocean) or locally. Local tsunamis can arrive just minutes after a disturbance. In the past 100 years, 58 of them have claimed more than 260,000 lives, surpassing any other natural hazard. The highest number of deaths in that period was in the Indian Ocean tsunami of December 2004. It caused an estimated 227,000 fatalities in 14 countries, with Indonesia, Sri Lanka, India and Thailand hardest-hit. Tsunami waves can travel at the speed of 800 km/hour and its height can be maximum up to 300 feet. The speed of tsunami waves depends on depth of the ocean. The speed of tsunami is fast in deep water while slow down when reaching shallow waters. Worth to mention that around 80% of tsunamis occur in the Pacific Ocean.

On December 26, 2004, an under sea earthquake with a magnitude of 9.1 struck off the coast of the Indonesian island of Sumatra. Over the next seven hours, a tsunami — a series of immense ocean waves — triggered by the quake reached out across the Indian Ocean, devastating coastal areas as far away as East Africa. Indonesian officials estimated that the death toll there alone ultimately exceeded 200,000. The hardest-hit and most severely affected countries during 2004

tsunami, were India, Indonesia, Maldives, Sri Lanka and Thailand. Malaysia, Myanmar, Seychelles, Somalia and the United Republic of Tanzania were also affected. Total deaths recorded were around 227000 in 14 countries. The tsunami and its aftermath were responsible for immense destruction and loss on the rim of the Indian Ocean. Evidences showed that in Sumatra, 81 bridges out of 168 were washed away.

The 26 December 2004 tsunami significantly affected the coastal regions of southern peninsular India. About 8,835 human lives were lost in the tsunami in mainland India, with 86 persons reported missing. The housing stock along the coast, as well as bridges and roads, suffered extensive damage. Structures were damaged by direct pressure from tsunami waves, and scouring damage was induced by the receding waves. Many of the affected structures consisted of non-engineered, poorly constructed houses belonging to the fishing community. The tsunami severely affected the coastal regions of the eastern state of Tamil Nadu, the union territory of Pondicherry, and Kerala. In Car Nicobar, 111 Indian Air Force personnel and their family members were washed away when the tsunami severely damaged their air base. St. Thomas Cathedral was also washed away. The church, established in 1930 was one of the oldest and prominent churches in the region. A cricket stadium named after John Richardson and a statue dedicated to him were also washed away. In Andaman Island the official death toll was 1,310, with about 5,600 missing.

The Intergovernmental Oceanographic Commission (IOC) of UNESCO raises global awareness about effective actions for mitigating damage, coordinate with national and regional tsunami early warning services, make policies and practices to reduce

destruction through its Tsunami Warning System for the Pacific, Indian Ocean, Mediterranean and Connected Sea regions, Caribbean, and North-Eastern Atlantic Ocean. In addition to the above efforts, the IOC also educated Member countries about the regular tsunami communication and evacuation exercises, increase readiness for and understanding of tsunamis among citizens and communities around the world.

There are two types of tsunami warnings, official and natural. Both are important. The official warnings are broadcast through radio, television, and wireless emergency alerts. They may also come through outdoor sirens, officials, text message alerts, and telephone notifications. The natural warnings are, a strong or long earthquake, a loud roar from the ocean, unusual ocean behaviour. Public should respond immediately to whichever warning is received first. In India, the Indian Tsunami Early Warning Centre hosted at the Indian National Centre for Ocean Information Services (INCOIS) in Hyderabad, Telangana is one of three regional centres of the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS). The Ministry of Earth Sciences took up the responsibility of establishing the Indian Tsunami Early Warning System (ITEWS). The ITEWS was established in 2007 and is based at & operated by Indian National Centre for Ocean Information Services (INCOIS), Hyderabad. The Indian system will issue both national and regional alerts from its system, with colour coding to differentiate "warnings", "alerts" and "watches" at national level, and "threat" or "no threat" status to Indian Ocean nations. Messages will go out over SMS, email, global telecommunication system (GTS) and fax, with links to a web-based bulletin system, public within India and accessible via password to the 24 participating countries.

Till few decades ago all the coastal areas of our country were having mangrove forests which are a group of trees and shrubs that live in the coastal intertidal zone. There are about 80 different species of mangrove trees. For example, the coast line of Mumbai had mangrove forests. Mangrove forests stabilize the coastline, reducing erosion from storm surges, currents, waves, and tides. The intricate root system of mangroves also makes these forests attractive to fish and other organisms seeking food and shelter from predators. But all such mangrove forests are now destroyed by us and the effect and destruction due to tsunamis is felt many times higher than few decades ago.

Vana Premi wishes that we understand the importance of mangrove forests on coasts, and the role played by those mangrove forest in protection of human life and property from tsunamis. We should save all mangrove forests of coastal areas of our country for protection from tsunamis. **QMK.**

Letters to the Editor

Dear Sir,

The soft copy of October 2020 Vana Premi is received well in advance on 24th September itself, which is a Special Issue on Wildlife. Since it was a special issue on Wildlife, I expected an Editorial on some Wildlife subject. But I was surprised to see the Editorial on “International Day of Older Persons”. When I have gone through it, I felt very happy about the contents highlighted in it which are least known to majority of elder persons. I congratulate the Editor for having touched an appropriate subject in the eve of “International Older Persons Day” on 1st October.

The article “Where there is a will there is a way” written by Sri. P.K. Sharmaji is a nice narration of eviction of encroachments in a smooth manner in spite of the threats by the extremists. Mr. KarikalVallaven is a dynamic officer as I had worked with him when he was Collector, Ongole while I was the Divisional Forest Officer, Giddalur.

Sri. V.V. Hari Prasad's article “Wildlife and the Relevance of Forensic Science” unfolds a new system of investigation in Wildlife crimes. He has explained the need of involving the Forensic Science in the Wildlife crime investigations.

Sri. B.M.T. Rajeev in his article “Basics of Wildlife Management” has explicitly explained the principles of Wildlife Management which majority of the PA Managers, at present, are not aware of. The Author had very rightly pointed out that “In India, the urban population is in favour of wildlife and the rural population who are living close to wildlife habitats is antagonistic due to Man Animal Conflicts and a lot is to be worked to gain their favour.”

On the whole the October issue of Vana Premi was brought out in an excellent manner and it was a feast to the readers especially those who are the lovers of Wildlife. The Editor deserves every appreciation for having worked so strenuously to make it ready by about a week in advance of the due date.

Regards,

V.SANTHASEELA BABU.

Conserve and Protect Native Forest or Perish

by

Dr Uma Shanker Singh

The old forest ecosystem is more effective than new plantations in term of sequestering carbon; in an estimate this has been claimed that conservation of old forest is 40 times more effective than planted forest. There has been a worldwide campaign to go in for a massive plantation after COP in Paris in the year 2015. Pakistan also launched a drive popularly called as 'Plant for Pakistan' drive in 2018 in which around 10 billion trees would be planted across the country in the next five years. The Government of UK also launched a massive plantation programme in which 50 million plants are supposed to be planted in a span of 25 years. There has been a developing trend across the world that plantation forest will be capable of mitigating carbon faster than the old forest and that is how the natural forest is not looked after and on decline. A recent report released by FAO in 2018 clearly states that the world's forest area decreased from 31.6 per cent of the global land area to 30.6 per cent between 1990 and 2015 but planted forest has increased from 167.5 to 277.9 million hectare and incidentally 85% of the planted forest lie in twenty countries. China has added a little more than 1542 thousand hectares of plantation in between the year 2010 and 2015 followed by Australia, Chile, USA and others. India occupies 8th position out of the top ten countries which went to add more areas under plantation forest. Currently India is on plantation drive at the rate of 17% compared to 7% globally. In view of this and Bonn challenge signed by India in 2011 many state governments decided to launch massive tree plantation. Maharashtra Forest Department as a part of this programme has decided to plant 50 crore seedlings across

the state in two years till 2019. Uttar Pradesh is unique in the sense that it is a seasoned campaigner in massive plantation since 2007 and has many world records to its credit till to this day without understanding that what has been its mortality rate over the years and how much money has been wasted in this process wasteful design of work. In the year 2016 the UP-forest department planted 5 crores of seedlings followed by 4.53 crore saplings during 2017-18. In the rains of 2018, it planted 9 crore seedlings while planted 22 crores and 25 crores seedlings in the year 2019 and 2020 respectively. India's central state of Madhya Pradesh undertook a massive plantation drive aimed at planting 60 million saplings on a single day in 2017. This was decided by the government of UP that in order to meet the deficit of land available in the state for plantation, farmers must be roped in to meet the target of 22 crore plantation in the rainy season of 2019 but with this comes the gigantic problems of land holdings in this state. The country where 67% of India's farmland is held by the marginal farmers with holdings below one hectare, against less than 1% in large holdings of 10 hectares then how was this possible for farmers to undertake huge plantations target, only government knows. The third-party validation is yet another issue to be taken care with such a huge target. There have been multiple reasons that explains to us that why the forest department of UP or any other state forest department is not structured to carry out massive plantation for the sake of political appeasement. Some of the issues are shortage of trained and skilled front-line staff in UPFD at the implementation level, unavailability of land, lack of adequate planting

stock, inadequacy in infrastructure and above all top forest bureaucracy has been found wanting in initiative. The land is not available for the plantation therefore what happens that many states are planting and re-planting some failed plantation area over and over again. The survival percentages of the plantations undertaken in UP in the years 2006-07 and 2007-08 respectively have shown that nearly 35.06 % and 40.37% of seedlings did not survive after three years. This will be important to understand that the monitoring division of UP forest always remained under the cloud of suspicion.

LOSSES ARE IRREVERSIBLE: India has lost over 1.6 million hectare of tree cover between 2001 and 2018, about four times the geographical area of Goa, according to a new study released by the World Resources Institute in 2019. In India, five north-eastern states namely, Nagaland, Tripura, Meghalaya, Mizoram and Manipur were responsible for over 50% of all tree cover loss in the same period. The loss of tree cover contributed to 172 MT of carbon emissions in India during this period. The main reason for loss of tree cover in the north-eastern states is diversion of forest land; climate change is also impacting the quality of forests. In terms of reduction in forest cover at the national level, the biodiversity-rich northeast region (NER), which accounts for one-fourth of India's forest cover, has taken a major blow. The total forest cover in the NER is 171,306 square km which is 65.34 percent of its geographical area in comparison to the national forest cover of 21.54 percent. The ISFR report 2017 shows an actual decrease of forest cover to the extent of 630 square km in the region. A very interesting study was carried out by VK Dhadwal and others and the rate of deforestation in India between 1920-75, 1975-85, 1985-95 and 1995-2005 have been found to be 0.75%, 0.13%.12% and

0.01 % respectively. Similarly, in yet another study on the rate of deforestation in India this was found that in between 1930 and 2013 annual deforestation rate was going unabated at 0.77% which declined to the level of 0.29% and 0.14% in the years of 1975-1985 and 1985-1995 respectively. Indian state of Forest Report conducts a biennial survey of Indian forest cover and in its latest survey done till 2019 says that the total forest and tree cover of the country is 807,276 square kilometres (which is 24.56 percent of the geographical area of the country) compared to 802,088 sq. km (24.39 percent) in ISFR 2017. The report marked an increase of 5,188 sq. km. of forest and tree cover combined, at the national level, as compared to the previous assessment. But the picture is not as rosy as we see, there are many areas which shows decline. The total forest cover in the north-eastern region is 170,541 sq. km. which is 65.05 percent of its geographical area. The forest cover in the northeast marked a decline as the current assessment showed a decrease of forest cover by 765 sq. km. compared to 2017 data. Except Assam and Tripura, all the States in the region show decrease in forest cover. The decline of the forest area in the northeast region is a continuous trend and since 2009 the region has witnessed a loss of about 3,199 sq. km. of forest area. For instance, when the ISFR 2017 was released, there was a decline of 630 sq. km. of forest cover compared to the ISFR 2015. The ISFR 2015 had marked a decrease of 628 sq. km of forest cover compared to the 2013 data. The report spotlights that forest cover within the Recorded Forest Area (RFA) category has shown a decrease of 330 sq. km. The very dense forest (VDF) and moderately dense forests have also shown decline to the level of 95 and 1421.08 square kilometre respectively as shown in the table 1 and 2.

Table - 1 :
Change in Very Dense Forest
(ISFR 2019; Area in Sq Km)

S. NO.	STATE/UT	GEO. AREA	VDF 2017	VDF 2019	CHANGE
1	Assam	78438.00	2797.00	2795.00	-2.00
2	Maharashtra	307713.00	8736.00	8721.00	-15.00
3	Manipur	22327.00	908.00	905.00	-3.00
4	Nagaland	16579.00	1279.00	1273.00	-6.00
5	Tamil Nadu	130060.00	3672.00	3605.00	-67.00
6	Tripura	10486.00	656.00	654.00	-2.00
	Total	565603	18048	17953	-95

Table-2 :
Change in Moderately Dense Forest
(ISFR 2019; Area in Sq Km)

SI. NO.	STATE/UT	GEO. AREA	MDF 2017	MDF 2019	CHANGE
1	Andhra Pradesh	162968	14051	13938	-113
2	Arunachal Pradesh	83743.00	30955.00	30557.00	-398.00
3	Chhattisgarh	135192.00	32215.00	32198.00	-17.00
4	Gujarat	196244.00	5200.00	5092.00	-108.00
5	Haryana	44212.00	452.00	451.00	-1.00
6	Madhya Pradesh	308252.00	34571.00	34341.00	-230.00
7	Maharashtra	307713.00	20652.00	20572.00	-80.00
8	Manipur	22327.00	6510.00	6386.00	-124.00
9	Meghalaya	22429.00	9386.00	9267.00	-119.00
10	Mizoram	21081.00	5861.00	5801.00	-60.00
11	Nagaland	16579.00	4585.00	4534.00	-53.00
12	Punjab	50362.00	806.00	801.00	-5.00
13	Sikkim	7096.00	1575.00	1552.00	-23.00
14	Tripura	10486.00	5246.00	5236.00	-10.00
15	Uttarakhand	53483.00	12884.00	12805.00	-79.00
16	Daman & Diu	111.00	5.82	5.69	-0.13
17	Lakshadweep	30.00	17.04	16.09	-0.95
	Total	1442308	184971.9	183552.8	-1421.08

Forests are also decreasing in tribal districts. The total forest cover in the tribal districts is 422,351 sq. km. which is 37.54 percent of the geographical area of these districts. There are 218 tribal districts identified by the government of India across 27 states and union territories. The current assessment shows a decrease of forest cover within the RFA in the tribal districts and this is to be understood that forests play an important role in the socio-cultural and economic life of the tribal people. The ISFR 2019 indicates that close to 60 percent of the country's forest cover is in tribal districts. It is important to keep in mind that these are the very same places where some of the biggest conflicts around land-use changes for mines, dams or roads have been located. The 100,000 plus trees of Talabira and many others of HasdeoArand have been at the centre of grassroots movements to conserve forest and wildlife. Even the ISFR 2019 reports decrease in forest cover in these regions. Forest degradation is different from deforestation as in deforestation the forest (or patch of forest) gets converted totally into new land cover/land use class such as urban area, agriculture etc., while in case of degradation the quality and density of forest decreases. There has been a very strong pace of degradation in the Indian forests which is not visible to many but we are sitting on an explosive due to explode anytime. This has its implications on the carbon stock of the forest also. Plantations can never be a viable option to mitigate carbon emission entirely and if this is desired so then the area of plantation will be so huge that this will engulf half of the agricultural land across the world. There have been multiple studies based on the model projections and on the basis of those studies this has been found if the plantation is the sole criterion in order to keep temperature below 2 degree Celsius then possibly plantation area will replace the entire

natural ecosystems of the world. Therefore, there is a strong need to cut drastically the global emission of greenhouse gases and even keeping the target of 2 degree Celsius would need a transformational change in the economic growth of each country but unfortunately global carbon emission has shown a rise in 2018 and set to hit an all-time high of 37.1bn tons. A study has been published in Nature explaining the carbon storage in the plantation and management of old forest in order to reach a conclusion. Under the Bonn challenge process if all the 350 Mha land is subjected to following three models then what should be the carbon storage, let us understand the following models

1. If all the 350 Mha becomes a naturally grown forest then it stores 42 Peta-grams of carbon
2. If all the natural forest is protected from fire, deforestation and degradation it will add up another 16 Petagrams of carbon.
3. If the natural forest is allowed to degrade and no protection is offered then storage of carbon is decreased to the level of 3 Petagrams.
4. If all 350 Mha is allowed to be planted afresh then it will sequester 1 petagram of carbon.

FOREST LAND ON A FREE SALE IN LAST SIX YEARS: According to the official data revealed by the National Democratic Alliance government in Parliament in December 2018, a total of 20,314.12 hectares of forest land (almost the size of Kolkata) was diverted in three years 2015-2018 (till December 13, 2018). During this period, the ministry had received a total of 4,552 proposals and of those 1,280 (28.11%) got approved. According to information revealed in the Parliament, Telangana topped the list with 5,137.38 hectares of forest land diverted,

followed by Madhya Pradesh with 4,093.38 hectares and Odisha with 3,386.67 hectares of forest area diverted. The three states together account for over 62% (12,617.43 hectares) of the total forest land diverted during the said three-year period. The reasons for diversion of forest area varied from irrigation, hydropower, road and railway projects to defence, mining, transmission line, schools and wind power projects. Of the total forest area diverted during the said time, the highest amount was diverted for irrigation projects, followed by mining and thermal power plants with total disregard to the deteriorating health of Indian forest. This will be interesting to know that when the entire country was fighting against COVID-19 the Ministry of environment, Forest and climate change was busy in giving away forest land to different agencies and private sectors for mining. In protected areas 682 projects were approved out of total 687 and this was never ever considered that how fragile our protected areas have become in term of degradation. The National Board for Wildlife (NBWL) has never met during the past five years with all its 47 members in attendance. Only the standing committee of the NBWL, which the board constitutes and is authorized to exercise its powers, met 23 times between 2015-16 and 2019-20, a period during which 682 projects were granted wildlife clearance. These projects are located in protected areas or wildlife-rich areas, and the fact that such a large number of projects were cleared without the full board meeting even once raised questions whether the NBWL was carrying out its mandate of promoting conservation of wildlife and development of forests or going against the interest of wildlife. I will like to cite four examples of gross negligence almost like committing a crime while granting permission for land transfer in forest areas.

DIBANG VALLEY: The district and the people of Dibang Valley are blessed with the nature and are rich in flora and fauna. Due to high altitudinal variation the floral and the faunal diversity is very high. The faunal diversity consists of species of high mountain zones. There are as many as 156 mammal species and more than 137 bird species. The animals ranging from rodent to squirrel, red Panda, Musk Deer, Serow Leopard, Tiger, Orange Bellied Himalayan Squirrel, wild boar, Himalayan black bear, barking deer, snow leopard, Sun Bear and the famous Mishmi Takin (*Budorcas taxicolor*), find a habitat in the forest of Dibang Valley. The Bird of Pheasant species is common inside the forest and has viable population of Mishmi Monal, Red Breasted Hill Partridges, Blood Pheasants, Kalij Pheasant, Blyth's Tragopan are found in the forest of Dibang Valley but on April 23 2020, the Forest Advisory Committee (FAC) virtually reviewed the controversial 3097 MW Etalin Hydroelectric Project that seeks to divert 1150.08 hectares of land and decided to approve the forest land transfer for non-forestry purposes. This not only destroys the local ecosystem but take away many of our unknown resources for never to return and before I tell you how, I will like to tell you a brief detail of the project. The project is to be developed by Etalin Hydro Electric Power Company Limited, a joint venture between Jindal Power Limited and Arunachal Pradesh's Hydro Power Development Corporation. The Project envisages construction of concrete gravity dams on Tangon and Dri rivers and diverting the water through two separate waterway systems to utilize the available head in a common underground powerhouse located just upstream of the confluence of Dri and Tangon rivers. Heights of dams, as envisaged for diversion of Dri and Tangon rivers, are 101.5m and 80 m

respectively. The project would result in felling over more than 2.7 lakh trees in the biodiversity-rich Dibang Valley, and most of them are mature trees which are repository of maximum carbon dioxide in itself. At this point of time when the entire country is fighting COVID-19, FAC was busy finalizing its recommendation to divert big pristine forests of our country for a project which has more losses than gains, if it is finalized. There is a very strong school of thought emerging worldwide and a number of researchers today think that it is actually humanity's destruction of biodiversity that creates the conditions for new viruses and diseases like COVID-19, the viral disease that emerged in China in December 2019, to arise with profound health and economic impacts in rich and poor countries alike. In fact, a new discipline, planetary health, is emerging that focuses on the increasingly visible connections among the well-being of humans, other living things and entire ecosystems. Today, we have to see what happened in China and must learn a lesson as everyone is talking about the problem of the wet market in Wuhan, but we will have to see the effects of the nearby three Gorges Dam project. It is the world's largest hydroelectric power station, built on the Yangtze River in an area that was previously a mix of secondary forest and agricultural land. Many of the animals that used to live in that area died when their habitat was destroyed, but bats can fly. We don't know where they went and how they did adapt in the ecosystem. The land use change in forest and deforestation come from both rich and poor societies. Demand for wood, minerals and resources from the Global North leads to the degraded landscapes and ecological disruption that drives disease. We must think about global bio-security, find the weak points and bolster the provision of health care in a developing country like India. Otherwise we can expect more of the

same pandemic. The risks are greater now. They were always present and have been there for generations. It is our interactions with that risk which must have changed for more severity. We are in an era now of chronic emergency and diseases are more likely to travel further and faster than before, which means we must be faster in our responses. Scientists and independent researchers have warned that the Dibang project poses multiple risks to not only the biodiversity of the region, but also the indigenous community that has protected the forests and wildlife for generations and if the reports are correct then there are 265 Scheduled Tribe families who will be affected adversely in this project. However, many members of the local Idu Mishmi community are far from relieved. Instead, they not only fear losing the forests they have called home for centuries, but also a systematic erasure of their culture by the influx of laborers, who will be brought in to work on the project. This will not be proper to destroy all of nature in the name of development. This project is also not required on many other accounts and this will be proper to understand that this area is a tiger breeding area and the distance of the proposed site from the boundary of the notified forest area (Dibang Wildlife Sanctuary) is only around 12 km and home to some of the rare/endangered/unique species of flora and fauna. The entire country of Norway, 42 times the size of Dibang Valley district, hosts around 282 resident bird species but forest ecologists in India are of the opinion that there is strong possibility to have 300 bird species within a 10-km radius of the Etalin-Damro road and therefore, this is imperative on our part to conserve this area for the posterity. The land in which the project is proposed is in pristine forests with riverine growth that once cut cannot be replaced. There is thick vegetation in all the area except for few patches near the villages. A

factsheet prepared for the Committee's meeting in 2017 also states, "The land in which the project is proposed is in pristine forests with riverine growth that once cut cannot be replaced." The area proposed as mentioned above, is mostly in thick forests and the type of forests is predominantly Subtropical Evergreen broad-leaved forest and Subtropical rain forest. The vegetation is of multi-strata and can truly be said to be irreplaceable. There are many areas of the forest which are inaccessible due to the thick vegetation and the terrain of the area varying from gentle slope to very high slopes, and at places almost vertical. The total enumeration of the trees has not been done so we don't know accurately that how many trees are proposed to be felled and forest authorities are relying on random sampling. The exact forest stock cannot be known through random sampling enumeration unless it is enumerated completely in all strata. Therefore, this would have been more scientific if the enumeration of the top canopy, middle storey and ground cover should be carried out so that we have the entire inventory before we take a well-considered view. As per my understanding the sampling intensity adopted for the enumeration on sample check was found to be less than 4% in most of the cases which is not only very less but highly inadequate. This project will not only jeopardize the fragile ecosystem of North-Eastern states but also lead to soil erosion and siltation down the line. The Dibang Valley has also the presence of six different colour variations of the Asian golden cat, the highest colour variation of any wild cat species in the world. I was going through one of the reports where Rohit Naniwadekar a hornbill researcher and conservationist in Northeast India since 2006 recorded Rufous-necked Hornbills, a rare species, nest in cavities of large trees that are often several hundred years old. How can we justify felling such a huge number

of trees and not losing a permanent habitat for this species? In the context of the shrinking range of the Rufous-necked Hornbills globally and their local extirpations that have been documented in Arunachal Pradesh, loss of these trees is a huge setback to this species. Let us remember that habitats like those that exist in the Dibang Valley are rare outside Arunachal Pradesh. Every inch of forest in Arunachal Pradesh is precious because we do not have such forests outside the state. Outside Arunachal Pradesh, there are only a handful of sites in India where Rufous-necked Hornbill is found. Ecosystem has not been fully understood fully as yet and each and every component of this is extremely important for our survival, there are hundreds of other animal species dependent on the forests that have been proposed to be cleared for the project, which would result in "habitat fragmentation" with "cascading impacts on the ecosystem. Besides this there are many other reports which are equally disturbing. There are also some reports in public domain and endorsed by eminent geologists of the country that the proposed dam site is a seismically active zone, recording 34 earthquakes in the past century. The number of recorded earthquakes is likely a lower estimate as there are currently no operational seismic monitoring stations in Dibang Valley. Seven of these were greater than magnitude three on the Richter scale and had their epicentres in the immediate vicinity of Etalin village. Reports also suggest that a great earthquake is predicted in the Himalayas within 30 years. The glaciers which feed the above stated river are also receding very fast and the impact of climate change has also compounded it beyond any measure. The 300 glaciers and 350 glacial lakes that feed the river have thinned out, with scientists predicting a 60% loss in their volume by 2050 and therefore, the capacity of hydropower projects on Dibang River to produce

electricity is bound to fall in the coming years. The report further says that combination of glacial lake outburst and cloudburst in Kedarnath in 2013 that led to not only the loss of life and livelihood for a large number of people, but also damaged two hydropower projects and there is no evidence to suggest that this may not happen here. There are also reports in the public domain that seventy-two homes in villages of Lower Dibang Valley district were washed away in 2015 when the Dibang river changed course as a direct result of extremely high rainfall. Landslides are also common occurrences in the state. Therefore, it is not certain if the dam safety measures and design can withstand multiple glacial lake outburst floods or seismic events. Now, looking at every point into account, the decision to construct this dam is not in the interest of nation and natural security.

RAJAJI NATIONAL PARK: The decision of Uttarakhand Forest Department has requested permission from the government of India to temporarily use at least 778 hectares area of the Rajaji National Park (RNP), which is home to rich biodiversity, for Kumbh scheduled to take place in Haridwar from September 2020 till the middle of 2021 has surprised many of us. The proposal from (dated April 21, 2020) additional secretary of Uttarakhand government to MoEF, reads, "From Rajaji National Park and other forest divisions, around 778 hectares of forest land for non-forest activities from September 1, 2020 to 31st May, 2021 has been sought by Kumbh Mela Committee for around nine months and this is more painful that forest officials in Uttarakhand Forest Department defend the move stating that temporary transfer of land is a regular feature for such events but this will be proper to understand that even if a wrong practice was continued then why this can't be discontinued. We are not learning any lessons from the

coronavirus pandemic to let wildlife habitats remain undisturbed and eyeing to temporarily use 778 hectares area of the Rajaji National Park (RNP), which is home to rich biodiversity. A survey of the Rajaji National Park forest reveals some important plant associations such as the Shorea-Mallotus-Adina community, Shorea-Terminalia-Bridelia community, Dalbergia-Acacia community and Syzyguim-Phoebe-Drypetes community. The tropical forest ecosystems of the Park have many unique characteristics that have high scientific significance. Based on the physiognomy and floristic composition, the permanent vegetation of the Park has been classified broadly under the Northern Tropical Moist Deciduous Forests and can be grouped into the six types namely, Sal Forest, Mixed Forest, Riverine Forest, Scrubland, Grassland (savannah) and Subtropical Pine Forest. The national park is also home to very rare medicinal plants which are very fragile and sensitive. There are 135 medicinal flora representing 63 families, in which 45 species were trees, 58 were herbs, 24 were shrubs and 08 were climbers. The National Park has a diverse and biogeographically important mammalian assemblage. In the recent past, several studies on the herbivores, large carnivores and mega-herbivores have been carried out, but limited work has been done on the distribution of mammals in the park. Not much of the studies has been done on the faunal biodiversity in RNP but a very few studies which have been done in the park area illustrate that this area has a total of 44 mammal species, belonging to nine orders and 20 families, which included one insectivore, six chiropterans, two primates, one Pholidota, 16 carnivores, one proboscidean, six artiodactylous, one lagomorph and 10 rodents. Of these, seven are classified as endangered/vulnerable in the IUCN Red List. Therefore, the temporary use will not only damage the

vulnerable floral and faunal biodiversity of the ecosystem but any human activity in the forest area sought will lead to felling of trees, disturbing of underground water sources and irreversible pollution through human waste, plastic and other solid wastes in the otherwise pristine forest region. There is problem with the foresters that we agree with any proposal without having gone into details and about the fall out of our actions in time to come. For instance, apart from seeking permission from the MoEFCC to use the forest land for Kumbh, in the middle of the nationwide lockdown imposed to control COVID-19, the government of Uttarakhand has sought over Rs. 850 million (Rs. 85 crore) from central government's National Mission for Clean Ganga (NMCG) for 16,075 community toilets and 20,000 urinals planned for Kumbh 2021. The proposal was deferred in the April 16, 2020 meeting as NMCG decided to firm up the proposal with more information regarding waste management. Currently, most of the villages and towns don't have sewage systems therefore; making toilets in the forest areas for pilgrims will lead to dumping of untreated faecal waste in and around forest, once taken out of tanks. It then continues to flow into the river defeating the very mission of making the river basin ODF. Making toilets is the first step. But the challenge is to contain pollution from faecal waste. This would only be possible if we treat and reuse our waste safely, and avoid dumping in the river in any form. This is the one part of the problem the other part has not been studied at all as yet. We have not studied the environmental impact of faecal disposal in the forest area over vertebrates and non-vertebrates before agreeing to give away 778 hectares of forest land. If we talk techno-legal term then Section 35 of the Wildlife (Protection) Act clearly forbids any such activity in a protected area. Section 35(6) clearly reads, "No person shall destroy, exploit

or remove any Wild Life including forest produce from a National Park or destroy or damage or divert the habitat of any wild animal by any act whatsoever or divert, stop or enhance the flow of water into or outside the National Park, except under and in accordance with a permit granted by the Chief Wild Life Warden, and no such permit shall be granted unless the State Government being satisfied in consultation with the National Board that such removal of wild life from the National Park or the change in the flow of water into or outside the National Park is necessary for the improvement and better management of wild life therein, authorizes the issue of such permit: Provided that where the forest produce is removed from a National Park, the same may be used for meeting the personal bona fide needs of the people living in and around the National Park and shall not be used for any commercial purpose." The proposal, if accepted by Government of India, would also violate the January 2020 decision of the central government's ministry of environment, forest and climate change (MoEFCC) which rules that the forest land can be given for non-forest activities only for a period of 15 days, and not more.

FOREST LAND TRANSFER DEHING-PATKAI TIGER RESERVE: An RTI application filed by eastern Assam-based environmental activist revealed that the Standing Committee of the Environment Ministry's National Board of Wildlife (NBWL) had on 7th April, 2020 approved a proposal for transferring 98.59 hectares of land from the Saleki Proposed Reserve Forest (PRF) for an open-cast coal mining project by North-Eastern Coal Field (NECL), a unit of Coal India Limited. Saleki is a part of the DehingPatkai Elephant Reserve that includes the 111.19 sq. km. DehingPatkai Wildlife Sanctuary and several reserve forests in eastern Assam's Sivasagar, Dibrugarh and Tinsukia districts. The

wildlife sanctuary is a subtropical rainforest often likened to Amazon. The NBWL had granted post facto approval for 57.20 ha of forest land that NECL had already broken up and mined while marking the remaining 41.39 ha as unbroken, or untouched. But data received in RTI revealed that 16 ha or the “unbroken” forest land has already been mined and cleared of trees while the Tikok project falls within the eco-sensitive zone (10 km radius) of the 111.19 sq. km DehingPatkai Wildlife Sanctuary.

DIBRU-SAIKHOWA NATIONAL PARK: The PIL has revealed that Central government’s approval to OIL for drilling seven wells inside the Dibru-Saikhowa National Park, which is very rich in biodiversity. The Union Ministry of Environment, Forest and Climate Change had accorded environmental clearance for extension drilling and testing of hydrocarbons at seven locations under Dibru-Saikhowa National Park, North West of Baghjan in Tinsukia district. An OIL gas well at Baghjan, which is abutting the Dibru-Saikhowa National Park, in Tinsukia district of Assam was spewing gas uncontrollably for many months. It caught fire on June 9, killing two of OIL’s firefighters at the site. The blaze at the well is so massive that it was seen from a distance of more than 30 kms with thick black smoke going up several meters high, endangering the local biodiversity in the National Park following the blowout on May 27. We still fear that the gas blowout will have a long lasting and very adverse effect on the wildlife and the bio-diversity, the region is known for. The death of a Gangetic dolphin at the Maguri-MotapungBeel a wetland, which the locals have linked to the gas blowout, is hinting towards the possible threat to the aquatic animals and wildlife. If anyone goes to ground zero it will become evident how the gas and oil spill has adversely affected the wildlife, ecology and environment. The incident has

highlighted the danger such projects pose to the nature, wildlife and national park and needs to be shut down and this is for certain that we should not compromise with environment and ecology for the sake of economy. A layer of oil can be seen in the water at Maguri-MotapungBeel. The spilling of gas and oil has extended beyond an area of 3 kms damaging the trees, plants, tea bushes and down paddy fields.

STATE OF WORLD FOREST: Forests harbour most of Earth’s terrestrial biodiversity. The conservation of the world’s biodiversity is thus utterly dependent on the way in which we interact with and use the world’s forests. Forests provide habitats for 80 percent of amphibian species, 75 percent of bird species and 68 percent of mammal species. About 60 percent of all vascular plants are found in tropical forests. Mangroves provide breeding grounds and nurseries for numerous species of fish and shellfish and help trap sediments that might otherwise adversely affect sea grass beds and coral reefs, which are habitats for many more marine species. Forests cover 31 percent of the global land area but are not equally distributed around the globe. Almost half the forest area is relatively intact, and more than one-third is primary forest. More than half of the world’s forests are found in only five countries (Brazil, Canada, China, Russian Federation and United States of America). Almost half the forest area (49 percent) is relatively intact, while 9 percent is found in fragments with little or no connectivity. Tropical rainforests and boreal coniferous forests are the least fragmented, whereas subtropical dry forest and temperate oceanic forests are among the most fragmented. Roughly 80 percent of the world’s forest area is found in patches larger than 1 million hectares. The remaining 20 percent is located in more than 34 million patches across the world, the vast majority less

than 1 000 hectares in size. More than one-third (34 percent) of the world's forests are primary forests, defined as naturally regenerated forests of native tree species where there are no clearly visible indications of human activity and the ecological processes are not significantly disturbed. Deforestation and forest degradation continue to take place at alarming rates, which contributes significantly to the ongoing loss of biodiversity. Since 1990, it is estimated that some 420 million hectares of forest have been lost through conversion to other land uses, although the rate of deforestation has decreased over the past three decades. Between 2015 and 2020, the rate of deforestation was estimated at 10 million hectares per year, down from 16 million hectares per year in the 1990s. The area of primary forest worldwide has decreased by over 80 million hectares since 1990. More than 100 million hectares of forests are adversely affected by forest fires, pests, diseases, invasive species drought and adverse weather events. Agricultural expansion continues to be the main driver of deforestation and forest fragmentation and the associated loss of forest biodiversity. Largescale commercial agriculture (primarily cattle ranching and cultivation of soya bean and oil palm) accounted for 40 percent of tropical deforestation between 2000 and 2010, and local subsistence agriculture for another 33 percent. Ironically, the resilience of human food systems and their capacity to adapt to future change depends on that very biodiversity, including dry land-adapted shrub and tree species that help combat desertification, forest dwelling insects, bats and bird species that pollinate crops, trees with extensive root systems in mountain ecosystems that prevent soil erosion, and mangrove species that provide resilience against flooding in coastal areas. With climate change exacerbating the risks to food systems, the role of forests in capturing and storing carbon and

mitigating climate change is of ever-increasing importance for the agricultural sector.

CONCLUSION: Rainforests around the world still continue to fall. Does it really make a difference? Why should anyone care if some plants, animals, mushrooms, and microorganisms perish? Rainforests are often hot and humid, difficult to reach, insect-ridden, and have elusive wildlife. Actually, the concern should not be about losing a few plants and animals; mankind stands to lose much more. By destroying the tropical forests, we risk our own quality of life, gamble with the stability of climate and local weather, threaten the existence of other species, and undermine the valuable services provided by biological diversity. While in most areas environmental degradation has reached a crisis level where entire systems are collapsing, it is important to examine some of the effects of existing environmental impoverishment and to forecast some of the potential repercussions of forest loss. Continuing loss of natural systems could make human activities increasingly vulnerable to ecological surprises in the future. The most immediate impact of deforestation occurs at the local level with the loss of ecological services provided by tropical rainforests and related ecosystems. Such habitats afford humans valuable services such as erosion prevention, flood control, water filtration, fisheries protection, and pollination functions that are particularly important to the world's poorest people, who rely on natural resources for their everyday survival. Forest loss also reduces the availability of renewable resources like timber, medicinal plants, nuts and fruit, and game. Over the longer term, deforestation of tropical rainforests can have a broader impact, affecting global climate and biodiversity. These changes are more challenging to observe and forecast from local effects, since they take place over a longer time scale and can be difficult to measure.

My First Beedi Leaf Season 1983 in Karim Nagar East Division

by
P.K. Sharma

Immediately after joining the Division, major challenge was to organize the Beedi Leaf (Barg-e-Abnusin Urdu/TunikiAkuin Telugu) collection. Collection of BL had been nationalized in 1971 in the State. Trade was governed by the Abnus Leaf Trade Rules. The system consisted of conducting the sales of BL to be collected, in advance. For this purpose, the units for sale were organized area wise, well defined on the ground. There were 369 BL Units in the State & 23 in the Division. Advance Sales for the entire state used to be conducted at the State HQ and it used to commence in the month of November of previous year (wrt BL Season, which used to commence in March/April) and used to go on up to February. Pruning of BL bushes or ShakhTarashiwork used to commence in the month of February. It was a peculiar system in the sense that the Forest Department's responsibility was confined to organizing the collection of green BL at the designated Khallas or BL Collection Centres & handing over the same to the Purchasers for further handling. Handling of green leaf till curing and bagging was labour intensive and cumbersome procedure. The Purchaser was required to organize all the activities starting from Pruning to selection of Khalla sites and post collection handling of green leaf at khalla site, which included sun curing, bagging, transport and storing in the godown. DFOs used to give final approval on the Khalla sites and godowns for storage. Once the cured and bagged BL used to reach the Godowns, it used to be placed under the joint control of the FD and the Purchaser with twin Locks of the Dept. & Purchaser. The final

produce used to be released to the Purchaser by the DFO on payment of due Royalty/Sale Value; generally, in 3 instalments. Another peculiar feature of the system was huge incentive to the Purchasers in the shape of 75% rebate in the payable Royalty on the BL collected over and above the "Target" for the BL Unit fixed by the Department.

All the above had been briefed to us during our attachment to the CCF's Office, Hyderabad by the Addl. CCF (STC). He had also narrated about the various kinds of mischiefs and malpractices the BL Purchasers had used in the past in order to gain unlawfully and cause loss to the exchequer. He had also told that in many of the places, the staff in collusion with Purchasers had under reported the figures of BL collection; and also gave practical tips to prevent and curb the malpractices.

In this backdrop I had joined the KE Division. AS BL collection used to commence by 25th of April, I had very little time at my disposal. Hence without wasting any time, I jumped into the field to oversee all the arrangements. There were 23 BL Units & 123 BL collection centres in the Division spread over 4 territorial Ranges. I was assisted by a Sub-DFO, Mahadevpur, 4 FROs about. 25 FSOs and 80 Forest Guards.

In order to prevent possible mischiefs/acts of cheating I decided to inspect all the Khallas (Collection Centres) at least once during the season. It amounted to visiting 10 to

12 khallas a day, specially between 1st and 25th of May. I had also gone into the past history of BL collection in the Division. BL Trade was nationalized in the State in 1971. Targets for collection of BL were fixed based on the figures of BL collection reported by the Purchasers prior to nationalization. The target of BL collection for KE Division was fixed at 14000 Standard Bags, One SB of BL meant One Lakh number of leaves, which used to be collected in bundles of 100 leaf each; thus 1000 bundles making 1 SB of BL. However, I observed that the target was never achieved since inception of Scheme in 1971 till 1979 BL season. It could be achieved and surpassed in 1980 to 1982. Based on the average collection of past 3 years, the target for 1983 season had been fixed at 17000 SBs. My enquiries with the field staff and Khalladars revealed that the potential was much higher. Hence, I decided to tap the full potential of the BL production and maximise the revenue to the Govt. from the Division from BL.

I came to know that one of the potential causes, of mischief was not submitting the Daily Collection reports (Form IA & Form IB) by the Khalladars, so that they could manipulate the figures (by under reporting). If there was no inspection of the Khalla for 3-4 days after the collection by the Senior Officers, it was impossible to check the quality and quantity of the BL collected on a day, as after partial drying / sun-curing the same would have been heaped. I had meeting with all the Officers and staff and instructed them to inspect Khallas, as per assignment of Khallas and ensure quantity as well as quality of leaf being delivered at Khalla sites. They were also instructed to

ensure no irregularity of any kind takes place. DFO Logging Division was also assigned BL inspection duty by the CF as Nodal Officer.

I started inspecting BL Khallas like a hurricane. I was told that the Officers used to inspect Khallas after breakfast and used to return to camp HQ by 11 am; and again, inspect Khallas between 4 & 6 pm, due to severe heat conditions during the season. This way, I thought I would not be in a position to cover a dozen Khallas every day. Hence, I decided to leave early in the morning carrying pack lunch with me and not to return to camp HQ for lunch. Instead, I used to have lunch below a tree by keeping tiffin box over the bonnet of the Jeep or in the subordinate officer's quarter, if it was available. This saved lots of time in unnecessary travel and I could inspect more, number of Khallas every day. As the temperature used to shoot above 45 degree Celsius in the AN, and many of the Khallas were located on the bank of river Godavari bank full of sand; I had been advised by my staff and driver to take adequate precautions during tours against desiccating heat. I used Hat/Cap to cover Head, a white scarf to cover neck & part of the face besides putting a cut Onion in my shirt pocket; consumed Butter Milk, plenty of water and Toddy Palm fruits. With these measures I and my staff were protected against the wrath of heat. In the absence of these measures I was told many of the Officers and staff had suffered from Sun stroke.

I had streamlined the system of inspection of BL Khallas also. The BL Collectors used to collect the BL from adjoining fields and forest area early in the morning from 5 am to 7 am or so. Then they used to sort the leaves by size, remove other than BL and tender/torn/

over mature Beedi leaf and make bundles of 100 leaves & bring these to Khalla sites by 8.30 or 9.00 am. The Khalladar (Collection Centre in-charge-appointed by BL Purchaser with the approval of DFO) used to receive the green leaf bundles and record the same in I A or I B Form Book, collector wise. Collection charges used to be paid on weekly basis, on Saturdays. Khalladar used to arrange the BL bundles, so brought, in beds of 1000 each, generally 40 rows of 25 bundles each (40x25) or 50 rows of 20 bundles each (50x20). Every inspecting Officer was required to select/pick up 10 bundles at random from each bed, examine it from quality point as well as count the number of leaves in each picked up bundle and record his observations in the Daily Collection Book. If the average number of leaves was between 95 & 105, it was taken as normal. However, for major deviation, the per cent deviation used to be applied to the entire collection of the day. I myself, our Nodal Officers (DFO LD & Sub-DFO and Flying Squad) did the job meticulously and tirelessly. Addl. CCF (STC) from Hyderabad and Conservator of Forest, Warangal had also visited the BL Khallas during the season and were highly satisfied with the arrangements and prompt accounting of BL Collection figures. We were required to submit 5th day Collection reports to CF and CCF telegraphically. They used to issue the reviews as well. I also ensured that the BL Collection Reports from all the Khallas reach DFO's Camp Office at Kataram by evening daily. All these steps eliminated any scope for mischief/irregularity in BL Collection.

I also ensured that the Purchasers pay the collection charges to the BL Collectors every week promptly. If there was any

delay, Purchaser or his Agent used to be admonished. The interior BL units of Chintakhani Range were supposed to be the best, specially Panmalla & Pankena, in terms of size as well as quality. Potential was also huge for collection. Hence BL Purchasers used to mobilize and bring labour from neighbouring States of MP (now Chhattisgarh) and Maharashtra for a month or so. These labours used to be accommodated in the temporary sheds (Labour Camps). On one day at Ethunaram Khalla on the local stream bank the maximum collection was a staggering 100 SBs. Inspection of this Khalla took half a day. Migrant as well as local labour used to eagerly wait for the BL season as they used to earn handsome income on account of collection and handling charges. With this money they used to perform weddings and pending festivities. On interaction with them I found that they were happy on the whole with income from BL operations.

On the flip side I learnt that the extremists belonging to various Naxal factions used to run their writ in these regions. BL Purchasers were forced to shell down hefty amounts towards Party fund and also pay extra money to labour towards collection charges. Without this "illegal" arrangement the BL Purchasers could not operate. The Naxalites used to extort money from all other contractors; otherwise they could not have operated in the area. I learnt that the BL Purchasers were forced to pay 2 Paise over and above the Officially Notified Collection Rate, to the labour during 1983 season. This was the mode of earning the loyalty/sympathy of the local people. Some of the unscrupulous Forest Officers across the hierarchy, also used to demand and get "mamool" from

the BL Purchasers. Purchasers used to cite these reasons for indulging into irregularities, like under accounting or operation of illegal khallas. At some places local people out of greed or in order not to travel too far in search BL bushes, used to fell huge trees of Abnus/ Beedi Leaf. Of course, the Purchasers used to be imposed with penalties, but the fact remains that due to decrease in the number of BL trees, the productivity was bound to suffer in future. My frequent inspections and by the team had not left any scope for under accounting. As a result of these steps, many of the Purchasers got frustrated and at the end of the season refused to pay "mamools" to the subordinate staff.

Everything appeared to be moving on smoothly. One fine morning, when I reached one of the Range HQ, Azam Nagar (actually located in Warangal District, very close to district border), a person came to me with information that an "illegal Khalla" (locally called ChorKhalla) was under operation in nearby village. I immediately proceeded to inspect the village. The information was correct. BL was found collected at this illegal khalla. All the BL was accounted for and brought to book. In all about 149 SB of illegally collected BL was found here. On an average the cost of BL was Rs. 500 per SB. Had this not been discovered, Govt. would have sustained a loss of gross revenue of about Rs. 74,500 on account of this illegal collection. At another place another quantity of 45 SB of illegal BL collection was unearthed. It was also brought on record. ShowCause Notices were issued to the Purchasers for these irregularities.

As per the Act, BL Purchasers were required to pay full Sale Value for the illicitly collected

BL even it was over and above the notified target. Otherwise, they were required to pay only 25% of the Sale Value, as a measure of incentive. Despite this, in most of the BL Units even the notified targets were not achieved and mischiefs of under accounting &/or Chorkhallas were in vogue in past.

I along with the CF uncovered another ChorKhalla in the adjoining Division, not far from Range HQ. 105 SB of illicit collection was unearthed here. Penal action was initiated against him. As the sanctioned Godown of this Unit was located in Peddapalli town (about 45 km from Karim Nagar) where most of the BL of KE Division was also stored; I decided to inspect the BL Godowns. On inspection I found that cured BL of 2 Units, one pertaining to Warangal North Division & the other pertaining to KE Division, were stored in it. As per record the quantity was tallying. However, on random physical check, huge variation was found. In a Trade Bag (Gunny bag) the quantity exhibited was almost half of the actual quantity of BL bagged. Hence, I ordered for complete count of the BL bagged in all the TBs in the presence of the nominee/agent of the Purchaser under proper Panchnama and arrived at the excess quantity bagged. Godown was seized and made a report to the CF & CCF for taking further requisite action.

These two actions sent alert bells among all concerned and there were no further reports of any kind of mischief. The BL season went off very well. My tours and inspections continued as before. Some of the BL Purchasers advised me not to take so much of trouble and went on to extent of offering recording of "full target achieved" in advance; and advised me to stop touring

and inspecting the Khallas tirelessly in the hot summer season. I did not heed to their advice and continued with my work. As I was spending most of the time in the field; to ensure attending to paper work of the DFO's office, I started getting currents (Tappal) and files through Office attender by bus to my camping places, where ever I was making night halts. I used to attend to the paper work in the nights and send the papers and files back to my office. This way I ensured that the Office work did not suffer.

My and my team's hard work paid rich dividends. Achievement was more than 24000 SBs against the target of 17000 SBs, a record high, highest ever since Nationalization of the BL Trade, for the Division. Some of my colleagues warned me saying that I had raised the bar too high and it may not be possible to achieve the same feat next year. And that, I may have to explain the reasons for shortfall in achievement in the coming season/s! But I was confident that now the true potential of BL production has been assessed & harvested and brought to record, the same level of achievement can be ensured in future as well; unless climatic conditions or other external factors (like interference from Naxalites) come in the way. I proved myself right when in 1984, 1985 &

1986 BL seasons also the achievements were more than 24000 SBs of the 1983 season. It gave me immense satisfaction that I could enhance the revenue of the Govt. substantially on account of better planning and team work. There were no incidents of any kind of mischief in the Division in next 3 seasons.

At the end of season all the DFOs in Telangana Region were required to prepare and submit an analytical report to the Office. In my report I had mentioned about the influence of Naxalites in enhancement of the collection charges & extortion of party fund from BL Purchasers. My Head Clerk & subject Senior Assistant advised not to mention the word "Naxalite"; instead use "anti-social elements" for security reasons. They informed that no DFO in the past had made such a report and once again tried to "put sense" in me and be prudent and change the wording. But I was convinced that change of words will not bring the ground reality on record. I was convinced that calling "a spade a spade" was the right thing to bring the issue of Naxalite's interference on record; which possibly could lead to improving the situation in future! (The author is former PCCF & Head of Forest Force of Telangana State, He can be reached at +91 63000 30519 & pureshvyas22@gmail.com.)

*May the supreme light illumine your
minds, enlighten your hearts and
strengthen the human bonds in your
homes and communities.*

Gandhian Way of Farming: Its Relevance Today

by

Dr. K. Tirupataiah

“To forget how to dig the Earth and tend to the Soil is to forget ourselves”

- Mohandas Karamchand Gandhi

Second October 2020 marked the 150th Birth Anniversary of the Father of Nation Mahatma Gandhi. The Covid19 Pandemic wreaked havoc with almost all the sectors of economy including Agriculture. However, Agriculture sector has been one of the first to show sort of recovery and post positive growth rate. Mahatma Gandhi said, “India Lives in its Villages”. Gandhi thought that Independent India would be driven by village economy and Agriculture would be its main driver. Gandhi jayanthi also happens to be the Birthday of another Indian Icon Lal Bahadur Shastri who gave a slogan, “Jai Jawan JaiKisan”. But, even over seven decades after Independence, the reality in Agriculture sector looks something different.

Gandhi's concept was quite simple, Gram Swaraj or Village Republic. He envisioned complete independence and self-rule to villages and Agriculture as a key to all activities like employment, industry, economy and Development. He prepared himself and the Nation towards this through his experiments almost four decades ahead of independence. His “Champaran Satyagraha”, probably the first such action, in 1917 was the first show towards protection of farmers. Champaran was growing and supplying Indigo to the East India Company. Lands were mostly owned by the Zamindars and Peasant tenants cultivated the land. When the company started importing/using chemical in place of natural Indigo, Zamindars ordered drastic reduction in area cultivated. This directly

impacted the Peasants. Gandhi's satyagraha and following agreement settled the matter in favor of the Peasants. “The Kheda movement” in Gujarat (1917-18) was the second experiment that Gandhi took up along with Sardar Patel. The Bombay Presidency government insisted on payment of land Tax in spite of Famine. The rate of tax was also increased. Gandhi, Patel and others set up “Gujarat Sabha” with contributions of Peasants and signed a petition to the Presidency to scrap the tax in view of the famine. However, the Bombay government rejected it and threatened the farmers that if they don't pay the tax, their lands would be confiscated and their property seized in addition to arresting them. The movement stood out for its “discipline and unity” in surrendering to the authorities in a non-violent way. Later, Gandhi and Patel succeeded in getting orders from the government suspending the land tax for that year and the next and also reducing the rate of tax. All seized property was returned to the actual owners. This movement enhanced Gandhi's image as protector of farmers once again. “Bardoli Satyagraha” in 1928 was another incident that served as an experiment of Gandhi's concern for farmers. Though Gandhi himself didn't participate in this he blessed Patel to lead the movement. This movement also involved forcible collection of land revenue in spite of famine and raise in rates of tax by about 30%. Patel who had the experience of Kheda under Gandhi, executed his plans well and the result was the same as in case of Kheda. For his leadership in this movement the women of Bardoli gave the title of “Sardar” (meaning Chief or Leader) to Patel.

All the above three movements strongly indicate the importance that Gandhi gave to farmers with a realization that India's growth is possible only through Agriculture. Gandhi's idea of a village Republic was a radical idea not only for that time but even today. He seemed to be quite clear on the resources available at village level and how they need to be managed. His ideas on resources were:

Land: As per Krishnaswarup Anandi, Gandhi was of strong opinion that land shouldn't be owned by individuals but by a village collective. Gandhi seemed to have been influenced by the iron like grip on land by Zamindar system and the East India company approaches and also the way land was controlled by various Kings earlier. He opined that land should be given to families based on what they need and could cultivate for a decent living. Gandhi also felt that agriculture should be labor intensive, appropriate and environment friendly. He wanted not centralized mass production but production by Masses. Envisaged village level small industries that are need based and don't require too much land acquisition. The industries were to be decided by the village and employed locals.

Agriculture Economy: Agriculture Economy is generally classified in to three types i.e.: a) subsistence agriculture economy- provides just enough to meet requirements and no market surplus, b) Commercial Agriculture Economy- here some food is produced for market while the food system is intact by growing their own inputs, and c) Marketized Agriculture economy- in this every input is externally borrowed, debt based system. Gandhi was a staunch supporter of the first type of economy probably because he felt that food security was his main priority. He was not totally averse to the second type of agriculture economy basically because of crops

like Cotton and Castor which had Industrial and employment potential. However, he was totally against the marketized economy for obvious reasons. He foresaw interdependence of Agriculture and industries and at the same time desired self-reliance at village level. Gandhi envisaged Village economy based on equitable distribution of resources. His thoughts were influenced by ideas of John Ruskin.

What factors disturbed the Gram Swaraj idea? Independent India inherited the British legacy of taxation and levy which at their worst exploited the vulnerable farmers. Corruption in administration, another legacy of the British, also corrupted the gullible village folk to get their work done by bribing authorities. Modernity and Modernization and a perception that village life is not attractive all lead to 'evacuation' of rural villages to towns and cities. The first Prime Minister of Independent India had his own priorities and by the time it was realized agriculture was in total disarray. Lack of focus on Agriculture in the initial Five-Year Plans only proved this. Then again, Green Revolution in the 1960s brought in new technology that was investment oriented and led to further inequities. It also brought "wet technology" to a predominantly "dry agriculture" nation. Public Distribution System (PDS) which predominantly serves Rice, Wheat and Sugarcane farmers further marginalized the native, often nutritious, coarse grain crops. Agriculture became externally aided input oriented and debt oriented, exactly the third model that Gandhi didn't want.

The increase in yields in Green Revolution came at a very significant cost. About 70% of fresh water went for irrigation with drastic fall in groundwater levels, use of chemical fertilizers went up by 6(Nitrogen), 4 (Phosphorus) and 5 (Potash) times, respectively. Consequently,

agriculture contributed 1/3rd of all Green House Gases. Soil erosion increased by 10-100 times.

The long Haul back: As it always happens, change starts from individuals and probably that's the reason Gandhi said, "Be the change that you want to see". Bhaskar Save (Father of Natural Farming in India), a Gandhian and Subhash Palekar and others started what has now become popularly known as "Natural Farming". They follow Gandhian Principles which are: Harmonious co-existence of all living beings, b) Nothing born on Earth is a waste (reuse), c) Farming is moral duty not business, d) Extract only as per your need and e) Don't hurry. Converse with land (living being).

In the undivided AndhraPradesh, the Society for Elimination of Rural Poverty (SERP) initiated Non-Pesticide Management (NPM) which was upscaled to Community Managed Sustainable Agriculture (CMSA) through the Self-Help Groups of women. Present Andhra Pradesh now embarked up on upscaling the approach to the entire state. Government of India also brought out a scheme called 'Paramparagat Krishi Vikas Yojana' (PKVY) to encourage and support sustainable Agriculture One of the objectives of the scheme is "Protect environment from inorganic chemicals".

Green Revolution was "Intensification of Agriculture" that came about at the cost of lot of diversification of Forest land, the new concept emerging is "Sustainable Intensification & Agri-systems Redesign" that has focus on Gandhian principles of farming. It has three major elements: Efficiency (producing more with efficient means), Substitution (of harmful methods, inputs, etc. with ecofriendly ones) and Redesign-approach that recognizes existence of natural, ecological and Psycho-social laws...& takes in to account in all designs & mgmt. practices (Hill, 1985).

This new approach anchored by Food and Agricultural Organization (FAO) is termed as "Agro-Ecological approaches"

Agro-Ecological Approach and relevance to Forestry: The elements of Agro-ecological approach are: a) Diversification- security, nutrition, conservation, b) Creation & Sharing Knowledge- local innovations through participatory process, c) Synergy-support multiple ecosystem services, d) Efficiency-produce more with less external inputs, e) Recycling-less economic & environmental costs, f) Resilience- people, community, ecosystems, g) Human & Social values-Livelihoods, equity, wellbeing, h) Culture & Food traditions-security & nutrition, i) Responsible Governance-local and National, Global, and j) Cultural & Solidarity economy-reconnect producers & consumers, inclusive & sustainable Development.

Conclusions: Gandhian way of Farming is based on sustainability and is environment friendly and it is very much relevant even today. It can be interpreted that the new agro-ecological approach to Agriculture provides opportunity for "Mosaic" approach of agriculture combining/phasing in to Forest/Tree cultivation. Government policies in procurement for PDS including coarse grains and millets for public distribution need to be adopted at state and national level. While land reforms in the initial years of Independence would have gone a long way towards Gandhian view of resource sharing, SHGs have shown that cooperative cultivation is possible at scale. This needs to be fostered and strengthened further.

(Dr.K.Tirupataiah is a former PCCF in TSFD and article is based on Zoom Conference session taken by him for Scientists and staff of ICAR-CRIDA on 2nd Oct)

Letter addressed to Hon'ble Minister MoEF&CC

By
R.S. Bhadauria

Dated: 30-8-2020

To,
Hon'ble Minister
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhawan, Jorbag Road, New Delhi, 110003

Sub. Status of Elephant in India

Sir

A news item published in AmarUjala, (a Hindi Daily) dated 11-8-2020, prompted me to write this letter and put before you some facts about this subject, which may kindly be gone through sparing few minutes from your busy time schedule

For your information, Sir! I am giving my brief introduction in the field of wild life conservation. Though during your first stint, I have met you twice, but very briefly and you may not recollect.

I belong to a generation of Forest officers who fought against rampant poaching during sixties and laid the foundation of Protection (not Preservation and Conservation) of wild life in the country, (I hold highest record of getting surrendered in one catch a gang of 36 habitual poachers, with 32 guns, in Dehradun forests in 1968), and thereafter implementing ruthlessly the provisions of Wild Life (P) Act 1972, followed by setting up chain of Protected Areas (I set up 3 NPs, 20 Sanctuaries and 1 Biosphere reserve in undivided U.P.) across the country, during seventies and eighties of last century, initiating the pace of combined first and second stage of management viz, Protection and Preservation respectively. The results of work done by my generation of Foresters, started appearing in the field since mid-nineties-- the time of our retirements. However, I personally remained active in this field, even after retirement in 1996, as member in various committees in State as well as GOI., particularly in CZA, and kept close watch on subsequent outcomes. At times I have been writing my views through print media and to the Ministry on various wild life issues.

The news of Elephant Census announced recently by you, gave feeling of elation and achievement, but next day the enclosed newspaper cutting carried a different story, which forced me to think seriously whether with this population, we should keep on marching further ahead following 50 years old model of mere Preservation (complete closure- a static approach) or switch over to Sustainable Conservation (dynamic or flexible approach) of this unique creation of Nature which is most useful/helpful and trusted old time friend of humans in tamed state but valiant foe in wild state, destroying human life, property, hearth & home, and being inimical even to forests- its own home. Wild life management is dynamic process, therefore marching ahead and turning back as and when required, are inherent characteristics of proper management process.

Coming to the topic and purpose of this letter, I honestly feel that we are still practising mere protection cum preservation policy and not sustainable conservation policy, albeit we keep harping on wrongly calling it as "Conservation Movement", and this is why serious problems like Man and Animal Conflicts have started arising, occupying centre stage, not only in case of elephants, but in case of several other species. Since recurrent straying out of wild animals, in human dominated landscapes, is Litmus test of abundance of wild population, I have no hesitation in saying that elephant population has become problem all over its range, with the result that most of the time the staff of state Forest depts. remain engaged in mitigating and solving conflict problems, relegating other important forestry works, and even then receiving brick bats from public, politicians, press and self-proclaimed wild life enthusiasts.

As a matter of fact, wild elephant population in the country has crossed the threshold limit or carrying capacity limit of our forests to hold this massive wild population (>30,000), achieved already. It is well known, Sir! that every inch of forest area is not Elephant habitat, instead suitable habitats are limited to only green, well stocked wood lands of high forests, having middle storey and undergrowth of forage trees, with abundant availability of green leaf fodder and water (not merely for drinking but also for wallowing and bathing) throughout the year. Main fodder of elephants is derived from trees because it cannot graze ground grasses except few tall grasses like elephant grass (*Cenchrus purpureus*). which too is uncommon and grows only along water courses. Also, elephant habitats, should be large enough and contiguous extending over hundreds of kms., because elephant herds, move around daily far and wide, also with changing seasons, searching fodder and water. Even long but narrow strips (15-25 kms width) of very good forests are unsuitable sites and not enough to hold back, elephants inside forests as they unknowingly cross and wander out of such thin strips and land in adjoining farm crops, inviting trouble.

Therefore for fixing today's Sustainable Elephant Population target, any past unsubstantiated figure (supposedly 100,000 or even more) when India was covered with vast dense forests, having human population countable on fingers, should not form the basis. The present population level (>.30,000) increasing every day, has already been writing warning signals on the walls for the last few years, heralding field and media reports of elephant depredation in fringe human landscapes, and forest personnel running after them, leaving aside all other forestry works, for which they were primarily recruited and trained. I was aghast to watch this kind of situation in North Bengal forests, when I was touring those forests along with Chief Wild Warden of the state in the year 2014. Almost entire field staff, used to take positions at various vulnerable points, every evening, on vehicles fitted with radio communication system, having smart phones in hands, possessing fire arms, crackers and beating drums etc and would keep awake whole night, ready to respond to the news of elephant attack and rush to the affected village site, only to manage somehow to drive the elephants, after they had already done indescribable damage to human property and quite often life also.

The CWLW, quite in agonizing tone, admitted that there was no escape from this kind of mismanagement of elephant population, unless the policy is changed at the top. North Bengal forests, though lush green high Sal forests, quite suitable habitat, yet being fragmented in smaller lots and surrounded by thick human population could not support such large elephant population even during those years, causing numerable human deaths and destroying farm crops and dwelling houses, which needed

to be assessed and compensated, emptying Forest dept's, coffers, leaving hardly any money for other forestry works. In nutshell he expressed helplessness, and rightly so, at this sorry state of affairs. Concept of corridors is mostly for academic discussion but it hardly works on the ground due to several reasons and mainly because of ever rising human population, control of which is not in Foresters' hands. I worked on this concept during 1988-1992, to revive age old corridor connecting two wings of Raja Ji N.P. across river Ganga above Hardwar, but as of now, permanent settlements/premises have sprung up in that area and sometimes back an elephant was shown (TV) roaming on Hardwar city roads.

Therefore, the need of the hour is to identify and map out actual conducive elephant habitats which can hold within it comfortably, a population without, being compelled to stray out of forest bounds and assess the carrying capacity of such areas to arrive at sustainable optimum population of elephants, area or zone wise. Easiest method of finding out carrying capacity of any forest area is to find out from old records, the period when elephants did not or rarely stray outside forests and their corresponding population level at that time, gives approximately, carrying capacity of that area. This exercise will help determine the optimum population which can be safely held over a given forest area, without causing adverse effect on forests (over- foraged/ trampled) as well as surrounding human population. This is well known that overpopulation of any species is bad and undesirable while overpopulation of elephants besides being inimical for surrounding human population is also bad particularly for the health of forests, because this jumbo sized herbivore devours about 3-4 quintals leaf fodder every day and while doing so, destroys forests also, by breaking, bending, trampling smaller trees and stripping bark of bigger trees which if not checked in time, will lead to Zimbabwe like situation where elephants had to be shot by deploying Air Force, in order to save ravaged Forests, thereby ensuring safety of forests/ ecosystem as well as optimum no of elephants. Such ghastly situations arise due to mismanagement, likely to happen in India.

Whatever I am going to suggest is based on my field experience of managing forests and wild life for over 35 years in U.P. Forest dept. (out if this 20 years exclusively in Wild life Wing, as Wild Life Warden to Chief Wild Life Warden U.P. and then retiring as HOD), and about 24 years after retirement in 1996 till date as volunteer forester in various capacities/committees in state and central Govt. During service period I have managed successfully wild elephants for 12 years (without conflict) and tame elephants for 20 yrs. This letter is about my concern for wild life, which with the sweat and blood flown by many forest personnel including me. could not only be saved from the brink but helped attain present status, where many species have attained safe and viable status, while some have become even abundant. Now this abundance needs to be controlled by taking bold and timely corrective measures and switching over to policy of Sustainable Conservation rather than continuing Protection/preservation otherwise after some time the consequences would be devastating.

I need not recount here usefulness, utilities and services rendered by tame elephants to humans, as you are well aware of but I am only trying to attract your kind attention not to forget and allow them to slip in to oblivion only to remain as tales for future generations. Elephant connection with Man should remain intact.

For managing the sustainable population in wild, Elephants because of their extraordinary qualities, capabilities, and religious angle, cannot and should not be shot as a measure of culling. But there already exists safe and time-tested method of utilizing the surplus of this useful species by reverting back to former system of capture, training, taming and reopening private ownership, allowing riding in zoos, and also allowing its export abroad for zoos where there is great demand for Asian elephant, because it trains better and quicker than African elephant. Besides, it will always remain indispensable for forest and wild life management in general and particularly for National Parks and Sanctuaries. By doing so not only the ethics of Sustainable Conservation management will be fulfilled but also the surplus population will be utilized respectfully, at the same time preserving for posterity, as National Heritage, the hard-earned, age-old Art & Science of its capture, training and keeping, evolved through ages by our ancestors, which if lost, cannot be revived.

Therefore, in the interest of sustainable conservation of wild life management, some stark realities need to be brought before you and serious out of box, thinking and decision making are required for future management of this mega species.

Wrong classification of Tamed Elephants: The genesis of the problem in question lies in wrong concept of treating tame elephants as Wild Animal listed in Schedule I of WL(P) Act 1972. This irrational concept was initiated and popularized during late eighties (after about 15-16 years of enacting the Act) by the then MOS in the Ministry of Env. and Forest GOI but at that time it was opposed by all Chief Wild Life Wardens of states in a meeting, foreseeing very rightly, various problems arising out of it, like Schedule- I animal could not be allowed in private hands and therefore capturing, keeping & feeding about one thousand tame elephants, to be retrieved from private ownership was neither possible nor desirable. Thus, the proposal was shot down. even on merit. How the words "tame" and "wild", just opposite to each other, can mean the same thing is not understood. Therefore, a wild animal once tamed does not remain wild and cannot be categorized as wild animal by any logic. Can anybody even dare approach a wild elephant, let alone fondle with him or mount on him and make him obey commands given to him? But this wrong concept and wrong agenda later on perhaps during late nineties somehow was pushed again and got rooted in management of tame elephants' population, breaking age old relationship between humans and elephants and also shutting doors of surplus population of Wild Elephants for human use, resulting in to present day problem of Conflict which if not solved, will surely pave the way for its mass massacre of this species some times in future (to save forests first then humans), as there is no natural predator to control its population. This wrong classification of tame elephant, can be corrected by an executive order.

Why application of this irrational decision later on, was not opposed by Forest officers, posted in GOI and in states can well be understood by going through enclosed letter which I wrote to defend your action for declaring Blue bull as Vermin (encl-2). (to avoid such confrontations).


In the concluding para, in larger interest of wild life conservation, Sir I would like to make another suggestion: As per WL(P) Act 1972, the GOI, the State Govts. and Chief Wild Life Wardens (CWLWs) of states, are wholly and legally responsible for managing forests and wild life, while dwellers of fringe villages near forest boundaries, are real and only stakeholders and whenever necessary, only their views/ sufferings should, be taken note of. But the reality now is that real stakeholders are nowhere to reckon with, instead outsiders, mostly self-interest seekers, urban elites having no stakes, posing as wild life lovers/ wild life enthusiasts/ animal activists/ wild life rescue operators and self-proclaimed

scholars of forestry & wild life sciences, under the guise of either some NGO or some other form, have entered corridors of power, disguised as actual stakeholders and become virtual wild life managers, acquiring somehow memberships in committees, calling the shots as wild life snobs,. even side-lining CWLWs in states and not allowing them to function freely as per law. To prove my point, I am citing only recent two examples viz, 1) GOI's decision notifying Blue bull as Vermin in Bihar state to solve long standing farmers' problem, which was unconstitutionally and wrongly resented tooth and nail by such snob activists and you had to rightly defend your (GIO's) action in Parliament, but still the wrong doers succeeded in stalling similar action needed in some other states. How I reacted in support of your decision. Further instance no 2) Case of Avani- the man eating tigress in Maharashtra, where CWLW and even the Hon'ble Minister of Forests of Maharashtra, were flayed and castigated in filthiest manner and there also, I reacted against such wrong doers, supporting CWLW.

Sir! if you can manage to meet some fringe dwellers of some problem areas (conflict areas) and meet some CWLWs taking them in confidence, you will know the real situation which I am trying to bring home to you. One CWLW of a state (now retired), in the side line of a meeting (about 5-6 years back) in Delhi, expressed his desperation so clearly and said, "NGOs are harassing and troubling me so much that I have handed over my files to them ". Though it seemed exaggeration but it reflected his predicament and indicated under what circumstances he was working. Similar resentments against such pseudo wild lifers, I have heard from Zoo Directors, while inspecting Zoological Parks, working as Expert in CZA.

In the end my sincere request to you is that, please take feedback from Forest officers/ subordinates (up to the lowest level) posted in the field and experienced senior officers posted in the Ministry, (or ascertain views from still alive fossils like the undersigned) to take appropriate decisions on ticklish issues regarding Wild Life Management and for the moment on utilization of surplus wild elephant population, to optimize and stabilize it.

Encs- as above



(R.S. Bhaduria) IFS (Retd)

Former PCCF, U.P. & Former CWLW U.P.

ANSWERS OF NOVEMBER QUIZ

	1. b	2. 24 th Dec 2004	3. d
4. b	5. b	6. d	7. c
8. b	9. c	10. b	11. c
12. a	13. Presence Across India	14. d	15. c

We produce black - But our views are Green



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Colonies surrounded by greenery



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Please see page No. 41 for details



Please see page No. 41 for details



Please see page No. 58 for details



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Perils of Transliteration

by
S.B. Singh

About fifty years back I met Mr. M. Dinakaran for the first time at the then Indian Forest College Dehradun who like me had joined the College for the forestry course. He had come from the then Madras State. He used to write his name as 'M. Dinakaran' which for us was 'दनिकरन' and we used to address him as such to which he never protested and always responded with a grin. After completing the two years' training, we left for our respective states and had no occasion to inter act with each other till about a couple of years back when our batch organized its first reunion at Bhopal. There the organizers circulated a list of participants which included a strange entry 'M. Thinagarar'. Puzzled at this unfamiliar epithet since there was none in our batch with such a name, I asked one of the organizers as to who that 'Thinagarar' was. In response, he promptly took me to my old friend 'दनिकरन' who greeted me with a broad smile. I closely observed him but did not notice any sign of thinning in him which could have perhaps explained the change in the spelling of his name. On the contrary there was some usual sign of age-related incremental growth of girth though that was also not very appreciable as in most of the other cases of the remnants of the batch. I therefore could not resist the temptation of asking him why he had changed his name. He smiled again and told me that he had only changed the spelling and not the name and that 'Thinagarar' was more accurate transliteration of his name written in Tamil than Dinakaran which sounded more like 'डनिकरन'. I took this explanation of the name-change at its face value though there was a lurking chance that the same might have

been influenced by 'Tanit Tamil Lyakkam' the language cleansing movement which had swept Tamil language during the latter half of the last century which aimed at replacing Sanskrit words with the ones of pure Tamil origin.

It was around the same time that we started hearing of the new name of 'Odisha' which we earlier had known as 'Orissa' but which to most of us, that is who were less anglicized, it was always 'उड़ीसा'. Then we started noticing more of our old 'मोदी जी' who though in English print media was always 'Mr. Modi' but still we thought he was 'मोदी जी' till we started hearing heated discussions about him on English News Channels where certain speakers would always call him 'Mr. मोडी' and not 'Mr. मोदी' whilst others persisted with the latter name. This forced me to ponder over the matter a little more seriously which gave me some interesting insight into the peril of transliteration.

Every language has its own peculiarity of pronunciation of certain sounds. Such sounds or words are often difficult to pronounce and transliterate in another language. Writers specially translators who do not take recourse to specialised transcribing tools are faced with often insurmountable problems when transliterating these peculiar sounds. The difficulty gets compounded if the language happens to be a written Indian language on the one hand and English on the other. This is because of total absence of certain sounds in English which has to make do with mere 26 characters in its alphabet against many times that number in most of the Indian languages. While Sanskrit and languages evolved therefrom like Assamese, Bengali,

Gujrati, Hindi, Kashmiri, Konkani, Marathi etc. have each 43 to around 50 characters Tamil has as many as 247! In contrast other south Indian languages are more economical and manage with only 51 to 57 characters like their northern counterparts. It is of course a different matter that quite a few of the speakers whose mother tongue is one of these Indian languages like Hindi, find it hard to pronounce all these characters of their alphabet correctly and there is no unanimity amongst them about the total number of characters in their respective mother tongues. The problem of the north Indian languages on this score can perhaps be laid at the doors of our great grammarian Panini (6th Century B.C.) and his 'Astaadhyayee' wherein through his 3959 sutras, he tied the rules of phonology, morphology and syntax of the language in such tight knots that it stopped further evolution of not only Sanskrit then but also indirectly of all these derivative languages on that score to some extent. The result is that the speakers of these languages have often to carry unnecessary burden of many a corpse of such characters which they do not use any more. The confusion on this account is so widespread that few Hindi speakers can agree on the total number of characters in their alphabet. Most of them can easily pull on without a ऋ by writing रि instead. And ऌ is definitely never used now. Though ॐ is a much-used character, it is seldom included in the list of alphabets of any of these languages! The presence of as many as three 's' in Sanskrit and other derivative languages is an illustrative example. Most of the Hindi speakers have special preference for the dental 's' the hissing sound that comes out from the base of the teeth and all our efforts to pronounce श' and 'ष' in this regard i.e. all our कोशशि ends up in कोससि only ! We will dutifully write वर्षा for rains but faithfully pronounce it as वर्सा only. Even most ardent lover of his 'मातृ भाषा' with added advantage of

Sanskrit पान्डित्य would in all probability ends up with मातृ भासा! That is how we pronounce our other two s. While quite a few conscientious speakers do pronounce 'श' correctly, few if any stalwart of Hindi pronunciation would sound 'ष' as ordained.

But in contrast to this fondness of Hindi wallas for 'दन्तयि स' our Bengali friends including those from Bangladesh have special preference for the hissing sound that emanates from the hard palate on the roof of the mouth i.e. what we call 'तालब्य श'. These friends have little use for the other two types of 's' i.e. for 'स' and 'ष'. They do not have any use for the Sanskrit consonant 'व' either which sound they avoid using but when unavoidable, produce the same by combining 'उ+य' and have therefore removed 'व' from their alphabet. Do not suggest use of v for व to them as the former English consonant is 'bh' for them that is why you may often find them sound 'Bhictory' for victory!

Then come our specialists for the other 's' i.e. 'ष' from Assam. They have a knack for pronouncing this consonant so accurately that this is set up as a test for judging the native i.e. the indigenous Assamese from the alien and the imposters! Most likely this test is going to be extensively used for implementation of Mr. Modi's election rhetoric for deportation of illegal migrants from Assam which was to start from 16th of May 2014! I am a witness to the use of this test during hey days of Assam agitation in 1980s. The first 's' in Asamese is 'ष' and not 's' or 'sh' as we usually pronounce. In fact, people from Assam call themselves 'अषमयि' where 'ष' is pronounced by producing the hissing sound from the behind the hard palate on the top of the mouth! And naturally they call their state as 'अषम' and not 'आसाम' or 'असम'. But these specialists of 'ष' have their soft belly elsewhere! They have to wage a real struggle to

pronounce the first two character of 'च वर्ग' i.e. 'च' 'ch' and 'छ' or 'chh'. In Assamese these two characters are called the first 's' and the second 's'. Thus, the word for the most popular brew of the country and of which the Assamese are the biggest producers and also the largest gulpers per capita is called by them 'saah' i.e. 'साह'! An umbrella is called 'saatee' and written in Assamese characters, Hindi equivalent of which is 'छाती' and therefore when asked to hold one, a Hindi wala may confuse it with a part of human anatomy! But strangely the Assamese can easily pronounce 'ch' if its half form occurs between two other consonants.

Given this back ground if one was to transliterate 'पेड़' in English, one may struggle with 'per' or 'ped' and both these attempts are far off the mark as our friends from former 'Orissa' or the present day 'Odisha' can testify and speakers calling ' Mr. मोदी' as 'Mr. मोडी' may have to offer their own excuses for doing so.!

But strange are the ways of Doordarshan and All India Radio. While they are careful in pronouncing words of Persian/Arabic origin in Hindi broad/tele casts keeping them as near to the original sound as possible even devising special characters like क़, ख़, ग़, ज़ and फ़, they seldom show the same regard for the originals when pronouncing words from the other Indian languages/regions. This may only show their inferiority complex on the one hand and contempt for the natives on the other. But had the Nation's capital been located at a more central place say at Nagpur, the situation might have been quite different and the national-broad casters may have learnt the nuances of pronunciation of a few indigenous languages as well and thus they would not have transliterated words from Indian languages via English. In such a scenario, perhaps they would not have found it difficult to pronounce 'ओड़ीसा'. In that case we would have quite a few other

benefits too. With levers of power a little away from the hereditary brokers and fixers, may be then the magnitude of some of the reported scams of UPA II would not have been of the astronomical proportions. This is because of the possibility of beginners to the game, in such new locations of power, being unable to swallow cuts of elephantine proportions. Taking the argument, a little further may we suggest to Mr. मोदी to disperse the headquarters of his Ministries to at least one location of each of our 29 states say one for each state leaving behind only the Ministries dealing with functions of 'state' and presently housed in the North Block and South Block in Lutyen's Delhi. This opens up vast scope for conjectures and speculations! Think about the vast scope for real-estate business it opens up. The surplus generated in leasing out /selling the sprawling bungalows and numerous Bhawans may be many times more than the yield of the budgeted target of disinvestments. The resultant development of at least one new city in each of state and the real integration of the Union would be the bonus. My choice for new location for mandarins of Mandi House would be Imphal in Manipur, Raj Bhasa department can go to Madurai in Tamil Nadu, the Department of Atomic Energy can profitably be located nearer to the indigenous source of uranium at Nongstein in Meghalaya or Chaibasha in Jharkhand, Rail Bhawan could be shifted to Kondagaon in Bastar of Chhattisgarh (the last choice is crucial for development of rail network in the area because the Railway Ministers being ordained to come only from the few selected states may not have any idea of the density of Railway network per square kilometer of geographical area in this region of Bastar) and so on. Let our dear Mr. मोदी ponder over some of these numerous opportunities the proposal opens up. (The author may be contacted on e-mail I.D.Singhsb39@gmail.com)

Green Quiz Championship- November 2020

Quiz Master: Dr K Tirupataiah

This month's quiz is more focussed on "General Environment matters and Current Affairs"

1. Which natural disaster boasts of largest number of deaths per event? a) Earth Quake, b) Tsunami, c) Fires, d) Gas leakages	2. There were over 58 incidents of Tsunami in the last 100 years. Which was the deadliest of them all? -----
3. World Tsunami Awareness Day is observed on 5 th Nov. It's a brainchild of which Country? a) Indonesia, b) Philippines, c) India, d) Japan	4. International Day for Preventing Exploitation of Environment in War & Armed conflict is observed on 6 th Nov. What per cent of internal conflict exploit Natural Resources including Forests? a) 30-40%, b) 40-50%, c) 50-60%, d) 60-70%
5. World Diabetes (including pet diabetes) Day is celebrated on: a) 13 Nov, b) 14 Nov, c) 15 Nov, d) 16 Nov	6. Every Year over 1.35 Million deaths occur due to road accidents and 50% of them are Vulnerable road users. Who are vulnerable road users? a) Street vendors, b) Pavement sleepers, c) Farmers, d) Pedestrians, cyclists, 2-3-wheeler riders,
7. Nov 16 is observed as International Day of Tolerance. UN Awards which prize for promotion of tolerance and non-violence since 1996: a) Mahatma Gandhi prize, b) UN prize, c) UNESCO-Madanjeet Singh prize, d) Mandela prize	8) World toilet day is observed on 19 th Nov. When dedicated household uses toilet, it has a pit or is connected to safe disposal system and in hygienic condition, it is called: a) Hygienic sanitation, b) Safely managed sanitation, c) Household sanitation, d) Total sanitation
9. Oceans and Fishes form the largest natural aquatic ecosystem. When is World Fisheries Day observed? a) 19 Nov, b) 20 Nov, c) 21 Nov, d) 22 Nov	10. Most popular chemical weapon a) VX, b) Mustard Gas, c) Sarin, d) Red agent
11. The Ministry of Housing & Urban Affairs signed an MoU with which company for Street Vendors' Atmanirbhar Nidhi? a) Zomato, b) Big Basket, c) Swiggy, d) Amazon	12. Which organisation signed MoU with Prasar Bharti to broadcast and promote agricultural technology and innovations? a) IFFCO, b) RCFL, c) FCI, d) ICAR
13. What does PAN in PAN-India stand for? -----	14. Which bank recently launched India's first online business mentoring for S,M,M&E? a) SBI, b) ICICI, c) PNB, d) Indian Bank
15. The Delhi-Mumbai E-Way will have India's first "Animal Bridges". How many of them? a) three, b) four, c) five, d) six	

Please see page number 30 for Answers.

You claim you love the Ramayana?

by

Dr B Raghotham Rao Desai

Preamble: Then you should be made to ‘tarry a little’ (to quote Shakespeare and his comedy ‘The Merchant of Venice’) and be acquainted with the first sloka which the Aadikavi sage Valmiki inadvertently uttered to his own consternation to rediscover that he had been able to express his thoughts in verse or a poetic form for the first time ever, in the ancient Sanskrit literature, which set the trend for the great immortal epic ‘Valmiki Ramayana’:

“Maa nishaadapratishthamtvama-
gamahashaashvateehsamaah:
Yat-krauncha-mithunaa-daeka-mavadheekaama-
mohitham”

In Sanskrit this came out as a rhythmic sequence of 32 syllables, which proved to have a deeper metaphysical meaning, praising Vishnu, when closely examined. But, on the face of it, it means “O hunter! May you never be respected for killing that unsuspecting crane when it was happily dancing with its mate”.

Fact File: The background is stated to be as:

Valmiki was on the way back to his ashram, accompanied by Sage Bharadwaj, after an early morning swim in the crystal-clear waters of the nearby river Tamasa, when his eyes caught a pair of kraunchabirds — demoiselle cranes (Anthropoidesvirgo: small cranes with long white necks & striking plumage, breeding in Central Asia and SE Europe). They were found dancing a graceful love-duet, very beautiful to behold, and the sages were enchanted. Suddenly an arrow whizzes in from nowhere, piercing the blissful environ, and wounds the male bird which falls down in agonizing throes of death. The female bird flutters around him, sounding

pitiful cries. The startled sages discover to their dismay that a hunter (nishaada) stealthily creeping (i.e., moving slowly & carefully, avoiding to be heard or noticed) into the scene, triumphantly advancing to the dead demoiselle crane.

Valmiki’s state of mind could only be imagined than described — the day had begun on a great high as he was inspired and excited after coming to know that there was in reality someone by the name of Rama who embodied all the 16 good qualities of a hero; and with his mind in an exalted state he had imagined and hoped to find him someday. His refreshing plunge into the pure waters of the river earlier was like a metaphor for the purity that the human soul could aspire to achieve when cleansed of negativity. As if such a state of mind needed a boost, he saw and felt the grace of the Creator and the beauty of His creation in that love-dance of the demoiselle cranes. An abrupt end of such a magnitude to the woodland-idyll (in the afforested manner) was an indescribable rude shock to the Maharshi and his heart had burst its bounds as a result, with a great rush of kaarunya or compassion.

On being angrily asked what made him to kill that lovely bird, the archer squarely replied in his stentorian voice that being a hunter it was his legitimate occupation to hunt. The brazen reply was not to his taste and he did not relish it. Further, not finding the nishaada’s explanation justified, the agitated sage, once a hunter himself, uttered the above curse-like sloka. Following that, it was then his turn to feel very strange how those words rolled out spontaneously that way from him. It was prodigious. Shaken by his own words which formed a verse of unparalleled beauty, Valmiki hurried home to take up

to writing in that rediscovered form (24,000 slokas and 7 cantos) on well-seasoned & treated palmyra leaves (since the writing paper had not yet been invented) with the same spontaneity of the Indic poetry (i.e., the poetry of Indo-European languages comprising Sanskrit & the modern Indian languages) as conjured, the propensity & trigger of which was compassion. It is that way something profound, to steer our moral compass, in case we claim we love the Ramayana!

Conclusion: The 'harsh' hunter, in an effort to ensure the efficacy of his bow and sharpness of the arrows in his quiver, had that day made at last minute the head of that particular arrow "very 'keen', ... 'not on his sole but on his soul', ... his desires being 'wolfish, bloody, starv'd, ravenous" (to quote Bard-of-Avon again in the very comic drama) to be cursed by the sage after not missing his target of that ill-fated bird. Brahmarishi Valmiki, his full name being Ratnakkardah, born to Charshini&Sumali, is celebrated as the harbinger

poet in Sanskrit literature. The epic Ramayana (dated variously from 5th century to 1st century BCE) is attributed to him, based on the reference in text itself, while his Ashram (or hermitage) has been located at a spot adjacent to an ancient (small) temple inside the present day Chitvan National Park of Nepal. He is also credited to have authored another monumental work by name 'Yoga Vaasishta'. Another Brahmarishi just following the Ramayana period, BudhaKaushika, pays handsome tribute to Valmiki in the famous 'Ramaraksha-stotram' through the following Sloka:

"KoojanthamRaamaRaamethi,
madhurammadhuraanthakam
Aaruyakavithaashaakhaam,
vande Valmiki kokilam"

which means "I salute sage Valmiki, the nightingale, who sings in sweet voice, the sweet name of 'Raama, Raama' from the 'tree' of poetry".

*Let's celebrate the festival in the true sense
by spreading joy and light up the world
of others. Have a happy, safe and blessed
Diwali!! May the beauty of the festival of
lights fill your home with happiness and
may the new year bring joy, peace, and
prosperity in your life.*

Wish you and family a very Happy Diwali!!

Jim Corbett National Park

by
V. Santhaseela Babu

Jim Corbett National Park is located in Nainital district and Pauri Garhwal district of Uttarakhand and was named after Jim Corbett, a well-known hunter and Naturalist. The Park was originally established in the year 1936 as 'Hailey National Park' and initially named after Lord Malcolm Hailey, the then Governor of United Provinces mainly to protect the endangered Bengal Tiger and this became the first National Park in Asia. This was renamed in 1954–55 as Ramganga National Park and was again renamed in 1957 as Corbett National Park. The new name honours the well-known author and Naturalist, Jim Corbett.

Edward James Corbett (25 July 1875 –19 April 1955) was a British hunter, tracker, Naturalist, and author who hunted a number of man-eating Tigers and Leopards in India. He held the rank of a Colonel in the British Indian Army and was frequently called upon by the Government of the United Provinces of Agra and Oudh, now the Indian states of Uttar Pradesh and Uttarakhand, to kill man-eating Tigers and Leopards that were preying on people

in the nearby villages of the Kumaon-Garhwal Regions. During his life, Corbett tracked and shot a number of Leopards and Tigers; about a dozen were well documented Man-eaters. Corbett provided estimates of human casualties in his books, including Man-Eaters of Kumaon, The Man-Eating Leopard of Rudraprayag, and The Temple Tiger and More Man-Eaters of Kumaon. Calculating the totals from these accounts, these big cats had killed more than 1,200 men, women, and children, according to Corbett. The Jim Corbett National Park in Uttarakhand, India was renamed in his honor in 1957. He had played a key role in establishing this protected area in the 1930s along with Mr. Champion. In 1968, one of the

five remaining subspecies of tigers was named after him: *Panthera tigris corbetti*, the Indo-Chinese Tiger, also called Corbett's Tiger.

The following are some of the books written by Mr. Jim Corbett.:

1. Man Eaters of Kumaon;
2. The Man-Eating Leopard of Rudraprayag;
3. The Temple Tiger and more Man Eaters of Kumaon;
4. Mera Hindusthan;
5. Jungle Lore;
6. Tree Tops.

Jim Corbett National Park has the glory of being India's oldest and most prestigious National Park. It is also being honored as the place where Project Tiger was first launched in 1973. This Park spans over an extent of 521 sq.km, and its whole area comprises of hills, marshy depressions, riverine belts, grasslands and large lake. It is among the few Tiger Reserves in India that allows overnight stays in the lap of the National Park. Nature watch and Wildlife viewing in the Park is done in an open four-wheeler Jeep and on Elephant back. Sheltering a healthy population of Tigers and rare species like Otters and the endemic Fish-eating Crocodiles, the National Park is one of the most sought-after destinations for the Wildlife buffs. Today after addition of areas into the originally declared National Park, the total area of Tiger Reserve extends to 1288.31 sq. kms spreading over three districts of Uttarakhand viz., Pauri, Nainital and Almora. Corbett National Park covers an area of 521 sq. km. and together with the neighboring 'Sonanadi' Wildlife Sanctuary and Reserve Forest areas, forms the 'Corbett Tiger Reserve'. Geographically it is located between the Shivalik Himalayas and the Terai. The streams, rivers and ridges crisscrossing the terrain, present Corbett National Park with a remarkable variety of landscapes. This vivid mosaic

of habitats wet and dry, plain and mountainous, gentle and rugged, forests and grasslands support numerous plant and animal species, representing Himalayan as well as plains ecosystem. The most famous of Corbett's wild residents are the Royal Bengal Tiger and the Asiatic Elephant. In addition to that with over 600 species of Avifauna, Corbett is one of the richest bird regions of the Country and has been declared as an 'Important Bird Area' (IBA) by Bird-life International.

Climate: The weather in the park is temperate compared to most other protected areas of India. The temperature may vary from 5 °C to 30°C during the winter and some mornings are foggy. Summer temperatures normally do not rise above 40 °C. Rainfall ranges from light during the winter to heavy during the monsoonal summer.

Flora: Corbett National Park has diverse flora. The different habitat types of Corbett i.e. Mountains, Sal Forests, Chauris, Khair-Sissoo Forests, and Rivers have their distinct assemblage of plants. More than 600 species of trees, shrubs, herbs, bamboos, grasses, climbers and ferns have been identified in the Park.

Tree species, found in Corbett are Sal, Khair and Sissoo. Many other species, that contribute to the diversity, are found scattered throughout the Park. Chir pine (*Pinus roxburghii*) is the only conifer of the Park and is found on ridge-tops. The upper reaches have Banj Oak (*Quercus leucotrichophora*) which is essentially a Himalayan species. Palms include Khajur or Date-palm (*Phoenix* sp.). *Wallachia densiflorais* a rare palm characteristic of Eastern Himalayas but is found in Corbett National Park. *Kanju* (*Holoptelia integrifolia*), *Jamun* (*Syzygium cumini*) and *Amla* (*Emblica officinalis*) are found scattered throughout the lower areas while *Tendu* (*Diospyros tomentosa*) occurs in moist areas. Other major tree species are *Bel* (*Aegle marmalos*), *Kusum* (*Schleicheraleosa*),

Mahua (*Madhuca indica*) and *Bakli* (*Anogeissus latifolia*). Among the flowering trees, the main ones are *Kachnaar* (*Bauhinia variegata*), *Semal* (*Bombax ceiba*), *Dhak* or *Flame-of-the-forest* (*Butea monosperma*), *Madaar* or *Indian Coral* (*Erythrina indica*) and *Amaltas* (*Cassia fistula*). Some species that have been artificially planted in and around habitation are *Teak* (*Tectona grandis*), *Eucalyptus*, *Jacaranda* (*Jacaranda mimosifolia*), *Silver Oak* (*Gravillearobusta*) and *Bottlebrush* (*Callistemon viminalis*), and can be seen in and around forest rest houses.

The Shrubs that occur in the Park are *Helicteris* shrubs, several species of *Ber* (*Zizyphus* sp.) which provide food and habitat to many birds and animals. *Karaunda* (*Carissa* sp.), *Hisar* (*Rubus ellipticus*) *Jhau* (*Tamarix dioica*) *Colebrookia oppositifolia* and *Adhatodavasica*.

Bamboo Forest dominates in some parts of Corbett National Park, the main species is *Male Bamboo* (*Dendrocalamus strictus*).

Herbs include many species of windflowers belonging mostly to *Pea* and *Aster* families.

Drymariadiandra occurs in moist shady places. *Bhilmora* (*Rumex hastatus*) Other species encountered in the Park are *Euphorbia hirta*, a hairy herb, *Indigofera liniofolia*, *Clover* (*Oxalis* sp.), *Solanum* sp. and *Leonotis nepatafolia*.

Regarding grass species In Corbett National Park there are over 70 grass species recorded which form the largest group of plant species. They include *Kansi* (*Saccharum* sp.), *Themeda arundinacea*, *Baib* or *Bhabar* (*Eulaliopsis binata*), *Narkul* (*Arundo donax*), *Tiger Grass* (*Thysanolaena maxima*), *KhusKhus* (*Vetiveria zizanioides*), *Cymbopogon flexuosus*, *Aristida cyanantha*, *Neyraudia arundinacea* and *Heteropogon contortus*.

Woody climbers found in the park are *Millettia auriculata*, *Cryptopterisbuchanani*, *Poranapaniculata*, *Clematis gouriana* and *Bauhinia vahlii* etc.

Epiphytes are plants that grow above the ground on other plants, and derive nutrients and water from rain, the air, dust, etc. They are found on Sal and other trees in the Park. They include *Dendrophthoe falcata*, *Scurrula cordifolia*, *Vanda testacea*, *Cuscutareflexa*.

Among the Wetland vegetation, the semi aquatic species which inhabit marshy areas of Corbett National Park, include *Polygonum*, *Veronica*, *Hypericum* and *Ranunculus* etc.

Non-flowering plants include Ferns, Mosses and Lichens. They include *Adiantum*, *Pteris*, *Ophioglossumreticulatum*, *Equisetum*. Many kinds of fungi are found on rotting trunks and accumulating debris. These include Mushrooms, brilliantly patterned Toadstools, and Puffballs. The presence of lichens symbolizes good air and environment and many kinds of colorful lichens grow on mature tree trunks and boulders all over the Park. Liverworts and Mosses are found on moist trunks.

Fauna: The area is also home of about 600 species of resident and migratory birds. This amazingly rich avifaunal diversity represents nearly 6% of the total bird species represented in the world and is more than the total bird diversity of Europe. The 49 species of diurnal Raptors found here are characteristic elements of this Avifauna. The Avifaunal diversity is at its peak during winters including the Crested Serpent Eagle, Blossom-headed Parakeet and the Red Junglefowl. 33 species of Reptiles, 7 species of Amphibians, 7 species of Fish and 36 species of Dragonflies have also been recorded. Bengal Tigers, although plentiful, are not easily spotted due to the abundance of foliage- camouflage - in the reserve. Thick jungle, the Ramganga River and plentiful prey make this reserve an ideal habitat

for Tigers who prey upon a range of animals. The Tigers in the Park have been known to kill much larger animals such as Buffalo and even Elephant for food. Tigers prey upon the larger animals in rare cases of food shortage. There have been incidents of Tigers attacking domestic animals when there is shortage of prey. Corbett Tiger Reserve today holds probably the second largest population of free-living Tigers in the world. The reserve is thus one of the last remaining strongholds, which holds a potentially viable population of this majestic and critically endangered felid. Nearly 600 Asian Elephants (*Elephas maximus*) also have a home in this Tiger Reserve and can be seen wandering leisurely along its length and breadth. Corbett Tiger Reserve, along with the Rajaji National Park also represents the North -Western most limits of Tiger and Elephant distribution in the Indian subcontinent.

Tigers and Leopards, Asian Elephants and small cats like the Jungle Cat, Fishing Cat and Leopard Cat occur in the Park. Other mammals include Deer like Barking Deer, Sambar, Hog Deer and Chital, Sloth and Himalayan Black Bears, Indian Grey Mongoose, Otters, Yellow-throated martens, Himalayan Goral, Indian Pangolins, and Primates like Langur and Rhesus Macaques.

Owls and Nightjars can be heard during the night. In the summer, Indian Elephants can be seen in herds of several hundreds. The Indian Python found in the reserve is a dangerous species, capable of killing a Chital. Local Crocodiles and Gharials were saved from extinction by captive breeding programs that subsequently released crocodiles into the Ramganga river.

The Tourist Zones: In order to promote tourism in the region, Corbett National Park has been divided into five different zones. These are the marked buffer

or core areas of the Park where visitors can be part of Wildlife Safaris and can enjoy the intriguing behaviour of the animals with bare eyes at proximity.

Bijrani Safari Zone: Bijrani Zone is very popular Tourist's hub because of its abundant natural beauty and open grasslands. Bijrani Tourist Zone in Corbett National Park is the first choice among the day tourists. Its entrance is at Aamdanda which is about 1 km. away from Ramnagar. After entering through Aamdanda gate, one has to cross about 5 km. of buffer zone before reaching Bijrani and the Jungle Safari starts from this point. Bijrani is a beautiful spot and is known for its Vast Grass Lands, Deep Forest, Stormy Drains and Wildlife. To visit this area, permission is granted by the Director, Corbett Tiger Reserve. Maximum 30 vehicles are allowed to travel into Bijrani during morning time and same number of vehicles is allowed in the evening hours. For morning Safaris, advance booking is required and for evening Safaris, permits are given on first come first serve basis. Bijrani has a Forest Lodge which has six rooms and a Dormitory consisting of four beds. One can also take an Elephant Safari here. Visitor Season: 15th October to 30 June.

Jhirna Safari Zone: Jhirna is another important tourist zone in the Jim Corbett National park that is open for tourist round the year. Jhirna Gate is located at 16 km from Ramnagar city. The visitors have to obtain the permit issued by the Corbett Tiger Reserve before proceeding to Jhirna. This area is full of natural beauty and specially known for its Wild Bear which suddenly appears from nowhere near your vehicle. 25 vehicles are allowed to get into this area in the morning and same number is allowed in the evening. For morning trips, day visit permit is released in advance which comes into effect for six days before the actual day of the trip. For evening trips, first come first serve system is followed. This is

the only tourist zone in Corbett National Park which is open for all 12 months. It's compulsory to take a guide along with. Jhirna has a forest lodge which has two rooms. The visitors can stay the night here and go for an Elephant Safari in the morning. Visitor Season: Round the year.

Dhikala Zone: Being the largest and most varied zone in Corbett, Dhikala is famous for its abundant natural beauty as well as offering the best sight for exotic fauna. The entry gate is 18 km away from Ramnagar city. Night stay inside the Dhikala Tourism Zone is highly recommended for the hardcore Wildlife enthusiasts. Dhikala, situated at the border of the extensive Patil Dun valley, is the most popular destination in Corbett because of its superb location and sheer abundance of Wildlife present. Dhikala is most loved tourist accommodation in Jim Corbett National Park area, The Dhikala Complex is most sought-after place to stay at as herds of Chitals, Elephants are seen from the complex itself, which attracts Park visitors enormously. Dhikala stay is once in lifetime experience. Dhikala is accessible via Ramnagar. Dhangari gate is main entrance for Dhikala Forest Lodge. Dhangari gate is located 18 kms away from Ramnagar and Dhikala Tourist Complex is 32 Kms away from Dhangari Gate. Dhikala is inaccessible in monsoon period. As we all know Dhikala is most popular part of Jim Corbett National Park. Dhikala Forest is known as core area of Jim Corbett National Park. Dhikala is located right in the middle of Corbett National Park, Dhikala Forest Lodge overlooks Ramganga Reservoir. Dhikala Forest Lodge is situated 43 Kms away from Ram Nagar town. Visitor Season: 15 October to 30 June.

Durga Devi Zone: Located on the north-eastern boundary of the Jim Corbett National Park, Durga Devi zone is the heaven on planet earth for those who are fond of Bird watching. Entry gate is located at an approximate distance of 36 km from Ramnagar city. Durga Devi Tourist Zone in Corbett National

Park is farthest from Ramnagar. This zone is a hilly area and is situated along the banks of Ramganga River. Besides looking at Wildlife, one can also look at popular Mahasheer Fish in the river waters. On the way one can halt at Dhangarhi Museum. For the day visit, same rules are applicable here as those for Bijrani and Jhirna. Visitor Season: 15 October to 30 June.

Sitabani Buffer Zone: Sitabani Zone doesn't fall under the Corbett Tiger Reserve area. If you are fond of serene ambiance of the natural beauty, must visit Sitabani area. Sitabani Tourist Zone is not under the control of Corbett Tiger Reserve. In Sitabani, there is no limitation of vehicles. It's a famous zone for bird watching. This is the only Forest in Corbett National Park where one can walk inside the Forest. Sitabani is known for a Temple and River. One can take some rest in river bank and see the Reptiles. Morning and evening are the timing of Safaris. When all the zones of Corbett Tiger Reserve are full then one can choose this Zone for Safaris. Corbett National Park Authority will not issue Permit for this. Sitabani Forest Department issues the slip for this Safari. Scenic view of this part of the Forest makes many tourists to visit this place again and again. Visitor Season: Round the year.

The management of Corbett National Park is arranging Jeep Safaris, Canter Safaris, and Elephant Safaris for the Tourists visiting the Park. Night Accommodation is also provided for those who want to stay in the Park overnight. They are maintaining a website with the name and style www.corbettnationalpark.in/ wherein all the details of the Park are available and there is a provision to book Safaris, Accommodation etc.

Tour Packages offered:

1. Corbett Dhikala Tour (02 Days/3 Nights).
2. Corbett Weekend Tour (02 Days/3 Nights).
3. Corbett Adventure Tour (02 Days/3 Nights).

Dhikala Forest Lodge: Jim Corbett National Park is the sole National Park in India that offers night stay inside its Jungle. Dhikala Forest Lodge is a historic structure, have been built over a hundred of year ago by Britishers. This old rest house is very much popular among tourists. It offers snug accommodation option with breath taking vistas of flora and fauna. Though it is not very much luxurious but the staying experience amidst jungle is something simply unforgettable. The tourism inside the park is run and managed by Forest Department of Uttarakhand.

Dhikala Booking Procedure:

- Name, Age, Gender, ID Proof (Passport No., PAN No., Voter ID, Adhar No.) of Tourists needs to be provided along with the confirmatory amount to carry out the further booking process
- Availability of the dormitory/rooms shall be confirmed 90 days prior to the date of actual arrival

Major facilities available in Forest Lodges of Dhikala:

- Rooms are well appointed and gracefully designed.
- Pure vegetarian buffet course is served at the on-site restaurant located in Dhikala.
- Jim Corbett Library

Staying in one of the major Forest Lodge (Dhikala) in Jim Corbett National Park brings an apex form of Wildlife Tourism and peaceful moments are unforgettable.

The following are the contact details for visiting the Park and to get further information:

Mobile: +91-8826678883 (Mr. Neeraj), +91-9958811994 (Mr. Rawat)

Email: contact@corbettnationalpark.in

Website: <http://www.corbettnationalpark.in/>

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Criminal Justice System and Deterrent Punishments in India

by
V.V. Hariprasad

Every crime in any society has a unique set of causes, consequences and participants such as offenders, victims, police officers, bystanders etc. Every crime generally provokes reaction from the individuals who are the victims, from citizens from criminal justice system and from society as a whole. The society manifests its concern by creation of social policy.

The causes of criminal behavior for the offenders for victims and for agents of criminal justice system may vary from one another. A plethora of social interest groups such as prosecutors, lawyers, prisoner rights organizations all interpret the law-breaking behavior from different angles and each may arrive at different conclusions.

In brief criminal justice system, anywhere is a collective responsibility of the agencies running the relay race. But the respective individual's excellence or expertise which could have been shared together have pitched them one against another in the field. The purpose of studying sociology in this context is to understand the various meanings associated with the pattern's procedure growth, structure social order and other vital issues which are related to society.

without understanding the meaning and knowledge of sociology it is impossible to understand the purpose of criminal justice system in any society which has something vital to do with the issue of what this given society expects to accomplish through categorizing a conduct as criminal

In India neither the legislature nor the judiciary has issued structured sentencing guidelines. Several governmental committees have pointed the need

to adopt such guidelines in order to minimize uncertainty in awarding sentences. The higher courts, recognizing the absence of such guidelines, have provided judicial guidance in the form of principles and factors that courts must take into account while exercising discretion in sentencing.

I. Absence of Structured Sentencing Guidelines:

India hitherto does not have structured sentencing guidelines that have been issued either by the legislature or the judiciary. In March 2003, the Committee on Reforms of Criminal Justice system, issued a report that emphasized the need to introduce sentencing guidelines in order to minimize uncertainty in awarding sentences, stating, the Indian Penal Code prescribed offences and punishments for the same. For many offences only the maximum punishment is prescribed and for some offences the minimum may be prescribed. The Judge has wide discretion in awarding the sentence within the statutory limits. There is no guidance to the Judge in regard to selecting the most appropriate sentence given the circumstances of the case. Therefore, each Judge exercises discretion accordingly to his own judgment. There is therefore no uniformity. Some Judges are lenient and some Judges are harsh. Exercise of unguided discretion is not good even if it is the Judge that exercises the discretion. In some countries guidance regarding sentencing option[s] is given in the penal code and sentencing guideline laws. There is need for such law in our country to minimize uncertainty to the matter of awarding sentence. There are several factors which are relevant in prescribing the alternative sentences. This requires a thorough examination by an expert statutory body.

1. The Committee advised further that, in order to bring “predictability in the matter of sentencing,” a statutory committee should be established “to lay guidelines on sentencing guidelines under the Chairmanship of a former Judge of Supreme Court or a former Chief Justice of a High Court experienced in criminal law with other members representing the prosecution, legal profession, police, social scientist and women representative.”
2. In 2008, the Committee on Draft National Policy on Criminal Justice (the Madhava Menon Committee), reasserted the need for statutory sentencing guidelines
3. In an October 2010 news report, the Law Minister is quoted as having stated that the government is looking into establishing a “uniform sentencing policy” in line with the United States and the United Kingdom in order to ensure that judges do not issue varied sentences.
4. In 2008, the Supreme Court of India, in *State of Punjab v. Prem Sagar & Ors.*, also noted the absence of judiciary-driven guidelines in India’s criminal justice system, stating, “In our judicial system, we have not been able to develop legal principles as regards sentencing. The superior courts except making observations with regard to the purport and object for which punishment is imposed upon an offender, had not issued any guidelines.”
5. The Court stated that the superior courts have come across a large number of cases that “show anomalies as regards the policy of sentencing,”
6. Adding, “Whereas the quantum of punishment for commission of a similar type of offence varies from minimum to maximum, even where the same sentence is imposed, the principles applied are found to be different. Similar discrepancies have been noticed in regard to imposition of fines.”
7. In 2013 the Supreme Court, in the case of *Soman v. State of Kerala*, also observed the absence of structured guidelines:

Giving punishment to the wrongdoer is at the heart of the criminal justice delivery, but in our country, it is the weakest part of the administration of criminal justice. There are no legislative or judicially laid down guidelines to assist the trial court in meting out the just punishment to the accused facing trial before it after he is held guilty of the charges.
8. However, in describing India’s sentencing approach the Court has also asserted that “The impossibility of laying down standards is at the very core of the Criminal law as administered in India, which invests the Judges with a very wide discretion in the matter of fixing the degree of punishment.”
9. Sentencing procedure is established under the Code of Criminal Procedure, which provides broad discretionary sentencing powers to judges.
10. In a 2007 paper on the need for sentencing policy in India, R. Nirupama being the author asserted that, in the absence of an adequate sentencing policy or guidelines, it comes down to the judges to decide which factors to take into account and which to ignore. Moreover, he considered that broad discretion opens the sentencing process to abuse and allows personal prejudices of the judges to influence decisions.

II. Crimes and Judicial Sentencing Guidance

11. In the Supreme Court’s judgment in *Soman v. Kerala*, the Court cited a number of

principles that it has taken into account “while exercising discretion in sentencing,” such as proportionality, deterrence, and rehabilitation.

12. As part of the proportionality analysis, mitigating and aggravating factors should also be considered, the Court noted.
13. In *State of M.P. v. Bablu Natt*, the Supreme Court stated that “the principle governing imposition of punishment would depend upon the facts and circumstances of each case. An offence which affects the morale of the society should be severely dealt with.”
14. Moreover, in *Alister Anthony Pareira v. State of Maharashtra*, the Court held that sentencing is an important task in the matters of crime. One of the prime objectives of the criminal law is imposition of an appropriate, adequate, just and proportionate sentence commensurate with the nature and gravity of the crime and the manner in which the crime is done. There is no strait jacket formula for sentencing an accused on proof of crime. The courts have evolved certain principles: the twin objective of the sentencing policy is deterrence and correction. What sentence would meet the ends of justice depends on the facts and circumstances of each case and the court must keep in mind the gravity of the crime, motive for the crime, nature of the offence and all other attendant circumstances.

A. Murder

15. The punishment for murder under India’s Penal Code is life imprisonment or death and the person is also liable to a fine.
16. Guidance on the application of the death sentence was provided by the Supreme Court of India in *Jagmohan Singh v. State of Uttar Pradesh*, where the Court enunciated

an approach of balancing mitigating and aggravating factors of the crime when deciding on the imposition of capital punishment.

17. However, this approach was called into question first in *Bachan Singh v. State of Punjab* where the Court emphasized that since an amendment was made to India’s Code of Criminal Procedure, the rule has changed so that “the offence of murder shall be punished with the sentence of life imprisonment. The court can depart from that rule and impose the sentence of death only if there are special reasons for doing so.”
18. The Court also emphasized that due consideration should not only be given to the circumstances of the crime but to the criminal also
19. However, more recently the Court in *Sangeet & Anr. v. State of Haryana*, noted that the approach in *Bachan* has not been fully adopted subsequently
20. That “primacy still seems to be given to the nature of the crime,” and that the “circumstances of the criminal, referred to in *Bachan Singh* appear to have taken a bit of a back seat in the sentencing process.”

21. The Court in *Sangeet* concluded as follows:

This Court has not endorsed the approach of aggravating and mitigating circumstances in the 1971 case of *Bachan Singh*. However, this approach has been adopted in several decisions. This needs a fresh look. In any event, there is little or no uniformity in the application of this approach.

Aggravating circumstances relate to the crime while mitigating circumstances relate to the criminal. A balance sheet cannot be drawn up for comparing the two. The considerations for both are distinct and

unrelated. The use of the mantra of aggravating and mitigating circumstances needs a review.

In the sentencing process, both the crime and the criminal are equally important. We have, unfortunately, not taken the sentencing process as seriously as it should be with the result that in capital offences, it has become judge-centric sentencing rather than principled sentencing.

The Constitution Bench of this Court has not encouraged standardization and categorization of crimes and even otherwise it is not possible to standardize and categorize all crimes.

The grant of remissions is statutory. However, to prevent its arbitrary exercise, the legislature has built in some procedural and substantive checks in the statute. These need to be faithfully enforced.

B. Theft

22. The punishment for theft is up to three years' imprisonment, a fine, or both.
23. No judicial guidance was found regarding sentencing for theft.

C. Manslaughter

Causing death by negligence is punishable by imprisonment of up to two years, a fine, or both

24. Other crimes similar to manslaughter include punishment for culpable homicide not amounting to murder, addressed in section 304 of the Penal Code:

Whoever commits culpable homicide not amounting to murder shall be punished with imprisonment for life, or imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine, if the act by which the death is caused is done with the intention of causing death, or of causing such bodily injury as is likely to cause death, or with imprisonment of either description for a term

which may extend to ten years, or with fine, or with both, if the act is done with the knowledge that it is likely to cause death, but without any intention to cause death, or to cause such bodily injury as is likely to cause death.

25. The Supreme Court looked at the question of sentencing involving sections 304 and 304A in a drunken driving case and found that punishment must be commensurate with the crime and that deterrence was a primary consideration when deciding on the severity of the sentence where rash or negligent driving was involved.

D. Rape

26. Recent changes have been made to the crime of rape in India's Penal Code. Absent any aggravating factors, the section stipulates a minimum punishment of imprisonment for seven years up to a maximum of life, and a mandatory fine. In situations where certain aggravated situations occur, punishment is for a minimum term of ten years up to a maximum of life imprisonment, and a mandatory fine. The new amended section on rape reads as follows:

Criminal Law Amendment, 2018:

The Criminal law amendment 2018 was the result of two unfortunate rape cases, one in 2017 at Unnao, Uttar Pradesh and one in 2018 at Kathua, Jammu and Kashmir.

Unnao Rape case is an incident of gang rape of a 17-year-old girl in June 2017 at Unnao, U.P. The main accused in this case was a politician who is now convicted for the rape and is sentenced to life imprisonment. In 2018, this incident caught the attention of media when the victim tried to immolate herself in front of the accused politician's residence.

Kathua Rape case is the tragic rape and murder of 8-year-old girl at Kathua in the then state of Jammu and Kashmir in 2018. It is believed that the girl was abducted and kept inside a shrine and was

repeatedly raped and murdered. This incident came to light when the trial began.

Both the incidents drew the attention of media and public which protested for amendments in criminal law for rapes. These two incidents led to Criminal law amendment, 2018.

The amendments that were made are:

Indian Penal Code, 1860

Sec.376 - (a) in sub-section (1), for the words shall not be less than seven years, but which may extend to imprisonment for life, and shall also be liable to fine, the words shall not be less than ten years, but which may extend to imprisonment for life, and shall also be liable to fine shall be substituted:

(b) in sub-section (2), clause (i) shall be omitted;

(c) after sub-section (2), the following sub-section shall be inserted, namely:

(3) Whoever, commits rape on a woman under sixteen years of age shall be punished with rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and shall also be liable to fine

Sec.376AB - Whoever, commits rape on a woman under twelve years of age shall be punished with

rigorous imprisonment for a term which shall not be less than twenty years, but which may extend to imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine or with death

Sec.376DA - Where a woman under sixteen years of age is raped by one or more persons constituting a group or acting in furtherance of a common intention, each of those persons shall be deemed to have committed the offence of rape and shall be punished with imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine

Sec.376DB - Where a woman under twelve years of age is raped by one or more persons constituting a group or acting in furtherance of a common intention, each of those persons shall be deemed to have committed the offence of rape and shall be punished with imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine, or with death.

(Ref. University of Hyderabad library and internet. The is a retired Dy.C.F, an advocate and is a P.G.Diploma holder in Criminal justice system and Forensic science. He is a guest faculty in the Central university of Hyderabad and worked as consultant in Institute of Forest Biodiversity Govt.of India)

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Distance from Major Cities:

- Delhi: Delhi - Moradabad - Kashipur - Ramnagar (260 Kms)
- Nainital: Via Kaladhungi to Ramnagar (62 Kms)
- Lucknow: Lucknow - Bareilly - Kicha - Rudrapur - Kashipur - Ramnagar (436 km)
- Dehradun : Dehradun - Ramnagar (232 km)

Ramnagar is perhaps the best approach to the Corbett National Park which forms the headquarters of Corbett Tiger Reserve. This small city is well connected by road and rail network with major cities of India like Delhi, Moradabad, Nainital and Bareilly. Once you reach Ramnagar, then it takes only half an hour to reach Corbett National Park. The park is around 15 Kms from Ramnagar railway station.

— **Source: Internet and Park website.**

Waste & Wealth – The Human Wisdom

by

Madhukar Swayambhu

On this planet the biggest and the most sustainable human invention is the concept of Waste & Wealth. Otherwise in nature, except for human beings, no other organism or any other life form, has never ever generated anything called waste or accumulated any wealth.

Because waste of one organism is wealth for another, and none of them wishes to accumulate either waste or wealth, because they all live in the moment. Moreover, all of them live in co-operative, complimentary and symbiotic harmony that is why the cycle goes on. This is the key to sustainability.

Nature has a mechanism for reuse & recycle of everything, for example poultry waste is very good to be used in aquaculture, because that was a natural linkage of avian & aquatic systems. If you have a good population of aquatic being in a lake, you will find flocks and flocks of birds around the same. There's no need for any announcement for the bird community, it happens naturally. Because aquatic ecology provides the natural feed for the avian population and the bird droppings enhances the production of planktons in aqua-ecology, which is the food for the fishes, shrimps, prawns and host of aquatic beings.

Similarly, like poultry is to aquaculture, aquaculture in turn is to farming & horticulture.

The water in aquaculture will have fish excreta, which is natural biological ammonia that can directly be fed to plants. Thus, taking out water from a natural aquaculture point which is a natural earthen pond or a lake or a river, wherein the aqua-ecology is in alive condition, for using into agriculture or horticulture purposes will obviously be giving a lot of natural nutrition to the plants which will help

plants grow better and will help plant too much more photosynthesis.

Thus, it will result in a much better, healthy and immune plants. Naturally it will also increase the rate of photosynthesis resulting in a higher rate of carbon sequestration by the plants as well.

Nature has designed everything so perfectly with everything is intertwined and everything is built in such a beautiful and perfect manner that the life has become possible on this planet. Just imagine, out of our entire solar system, we are the only living planet. This is only because there is a beautiful architecture, a beautiful & flawless engineering has been done naturally, by nature.

In nature, the natural cycle exists. Anything that is created, is reared for some time and is finally returned to where it came from, and then regenerated. This cycle is the reason behind the consistent changes and sustainability of this planet for last billions of years. Every natural phenomenon is cyclic, thus there's no place for either waste or wealth.

In recent history, we've seen many things for which a value was attached and were considered wealth, eventually became normal things and even got transformed to waste eventually. Specially during this recent IT revolution, like we have seen a type writer getting obsolete, the dot matrix printer, the 1st generation iPhone or iPod, a cordless phone – all of them were wealthy possessions at some point in time, but today they all would be lying in some e-waste dump yards. A little earlier in history, wealth was attached to metals and minerals, spices, silk and so on. Remember the era of British or Dutch East India Company? They all started their voyage in search of these valuables only, all the way from

Europe to Africa to America to India. Today, all these are normal usage material, found in almost every home.

So primarily we attach a value to something and call it wealth, but when the same value is detached, it becomes a waste. Therefore, a waste or a wealth – is just a matter of perception.

But in this quest of these perceptions, the amount of harm that we do to our environment is damaging the ecosystems, claiming lives of various plants and animal species. There's a huge list of endangered and extinct species today, all due to Global Warming, Climate Change, melting glaciers, melting polar ice, polluted Water, polluted Soil, polluted Air. We are making this planet inhabitable, primarily we are making our lives unsustainable.

Time to restore has come

Nature has a cure for all the problems on the planet, that's why it has been surviving for over 4.2 billion years. Nature does have a solution for this human created problem as well. But drastic problem needs drastic solutions. If we let nature resolve it, it could be a drastic step too.

So, the better way is to realign our strategies in absolute harmony with nature with resuscitation of the native ecology in Soil, Water and Air. If we can do it successfully, it would like undoing the harm caused over the years of destructive development.

Like single celled organism never go dead, either they are active or dormant. And they can live in dormancy for thousands of years, yet they come back to life when favourable conditions are provided by nature. Similarly, native ecology can be disturbed and get

into dormancy, and can come back to life when favourable conditions get created. The moment that comes to life, everything is settled back to normal by nature itself.

Cownomics Technology is one such successful attempt of resuscitation of the native ecology by harnessing the forces of nature and channelizing the free energy for undoing the harm caused by pollution. This is a Vedic Science based technology through which the living ecology in Soil, Water and Air is resuscitated and the pollution gets consumed & digested in the ecosystem instead of being physically removed to continue to exit as waste. There have been many success stories with this technology for Rejuvenation of Lakes & ponds, for rivers, for farm & waste lands, for agriculture and even livestock farms & animal husbandry.

A project done for the State Forest Development Corporation of the State of Chhattisgarh was the Pond Rejuvenation in Oxy Zone Park spread over 19 acres green belt within the heart of Raipur city.

The Park had a man-made Waterbody spanning over 10,000 square feet, just for the sake of ambience, in middle of the green belt with a lot of trees and landscaping done. But the Water was decaying and was literally spoiling the ambience with –

- Fast spreading algal bloom.
- Fast increasing smell of decay.
- And the ever-increasing mosquito population.

The one-month restoration project was done with Cownomics Technology from 11th October, 2019 till 10th November, 2019 and all the problem were eradicated successfully.

*May prosperity and happiness fill your life, with
the shine of diyas and the echoes of chants.*

News and Notes

Two-fifths of plants at risk of extinction, says report:- One of the main drivers of plant extinction is clearance of natural habitats. Scientists say they are racing against time to name and describe new plants, before species go extinct. Plants and fungi hold promise as future medicines, fuels and foods, according to the Royal Botanic Gardens, Kew. But opportunities are being lost to use this “treasure chest of incredible diversity” as species vanish due to habitat destruction and climate change. New estimates suggest two-fifths of the world’s plants are at risk of extinction.

The assessment of the State of the World’s Plants and Fungi is based on research from more than 200 scientists in 42 countries. The report was released on the day of a United Nations summit, which will press for action from world leaders to address biodiversity loss. We are living in an age of extinction, said director of science at Kew, Prof Alexandre Antonelli. “It’s a very worrying picture of risk and urgent need for action,” he said.

“We’re losing the race against time because species are disappearing faster than we can find and name them. Many of them could hold important clues for solving some of the most pressing challenges of medicine and even perhaps of the emerging and current pandemics we are seeing today.” The report revealed that only a small proportion of existing plant species are used as foods and biofuels.

More than 7,000 edible plants hold potential for future crops, yet only a handful are used to feed a growing world population. And some 2,500 plants exist that could provide energy for millions worldwide, while only six crops - maize, sugarcane, soybean, palm oil, rapeseed and wheat - generate the vast majority of biofuels. Dr Colin Clubbe,

head of conservation science at Kew, told BBC News: “We’re currently utilising such a small proportion of the world’s plant and fungi, be it for food or medicines or for fuel, ignoring the potential treasure chest of wild species which we now have increasing knowledge of and the techniques to investigate for the good of humanity.”

The scientists estimate that the extinction risk may be much higher than previously thought, with an estimated 140,000, or 39.4%, of vascular plants estimated to be threatened with extinction, compared with 21% in 2016.

They say the increased estimates are partly down to more sophisticated and accurate conservation assessments. They are calling for risk assessments to be fast tracked, using technology such as artificial intelligence, and for more funding for plant conservation.

The research found 723 plants used for medicine are at risk of extinction, with over-harvesting a problem in some parts of the world. And 1,942 plants and 1,886 fungi were named as new to science in 2019, including species that might be valuable as foods, drinks, medicines or fibres.

The report contains a chapter on UK flora, which is better studied than in most parts of the world.

However, there is no single agreed list of the UK’s flowering plants and even more uncertainty over fungi, with estimates ranging from 12,000 to 20,000.

Global Warming is Revealing ‘Mummies’ of Adelie Penguins Preserved in Antarctica Snow:- Scientists exploring Cape Irizar, Antarctica, came across a puzzling new discovery.

The area around Drygalski Ice Tongue on the Scott Coast, Ross Sea, revealed fresh remains of Adelie Penguins. It shouldn't have been surprising as it's normal for the birds to be buried in ice when they die.

However, the puzzling part is the species. There have been no active penguin colony at this site since the first explorers (Robert Falcon Scott) in 1901-1903 came to the Ross Sea. Researcher Steven Emslie discovered these remains. There were abundant bones (penguin chicks) on the surface along with guano stains (defecation marks). Primary observation suggested that this area must have been recently used, owing to the guano stains. But Emslie knew it wasn't possible.

Some of the remains were chicks with feathers, the carcasses almost falling apart from years of decay. But they seemed intact, like mummies. The team collected some of these surface remains carefully for further research. The remains are to be analysed and radiocarbon dated off-site, in a proper lab.

There were also old pebble mounds scattered about the cape. The most probable explanation is that these mounds must be former nesting sites of Adélie penguins. The penguins use pebbles as nesting material. Once the nest has been used and abandoned, the pebbles get scattered and stand out in the landscape. This happens because they are all about the same size.

"We excavated into three of these mounds, using methods similar to archaeologists, to recover preserved tissues of penguin bone, feather, and eggshell, as well as hard parts of prey from the guano (fish bones, otoliths)," said Emslie. He further explained that the soil had been dry and dusty like most other sites around Ross Sea. He suggested that there was a mixture of old and seemingly recent penguin remains, which implied

multiple periods of occupation and abandonment, possibly for thousands of years. He said in all of his years, he has never seen anything like this.

As reported in ScienceDaily, Ross Sea has seen an increase in temperature of 1.5-2.0 degrees since the 1980s, owing to Global Warming. In satellite images, the cape can be seen gradually emerging from the snow. Emslie explained that the recent snowmelt is responsible for revealing these long-preserved remains, or at least his best guess to explain why the remains seem to be a jumble from so many different ages.

Elderly farmer killed by tiger in Dudhwa buffer zone: Lakhimpur Kheri (UP) Oct 9 (PTI) A 65-year-old farmer was attacked and killed by a tiger in ManjharaPurab forests under the north Nighasan forest area of Dudhwa buffer zone, officials said on Friday.

The partially eaten-up body of Pyare Lal was recovered on Friday from inside the dense jungles. This is the second successive attack by a big cat in ManjharaPurab forests.

On Sunday, farmer Gyan Singh, 65, was killed by a tiger in similar circumstances when he ventured into the forests to bring back his cattle.

Deputy Director (Dudhwa buffer zone) Anil Kumar Patel confirmed the attacks by the big cats.

'The circumstances indicated killings by some tiger whose movement had been frequently reported in the area,' he said.

'The villagers of neighbouring villages had been warned not to graze their cattle or venture into the forests as it may lead to the tiger becoming habitual of attacks on humans,' Patel added.

He said forest department teams were rushed to patrol the area and to persuade villagers not to visit the area for next the few weeks.

People, not carbon emissions, should be at the heart of the west's climate action: The dissonance is enough to make me uninstall Twitter from my phone. Maybe it's compassion fatigue, maybe it's 2020. But if I'm honest with myself, it's a world-sized rift in how we perceive the climate emergency on the different timelines I doom-scroll. On one feed, everyone – American or not – is forced to tune in to each candidate's climate policy because the US's electoral fate is inextricably linked to the future of the planet. On another feed from back home in India, 40 new coalmines in the last great sal forests are being served up to any bidder who'll take them, while civil rights activists from a different era of environmental organising languish in jail, their health deteriorating.

We're at an inflection point in climate politics, where some governments are readying 30- and 40-year carbon-neutral plans and others are looking to coast into the next decade with pledges that are already five years old. Meanwhile people who have always suffered are contending with the fallout of inaction in the here and now. We need to align these two timelines and to broaden our definition of climate justice, if we are to achieve any measure of justice for the most vulnerable. But in order to do this, we must accept that climate politics are not so black and white any more.

As I walk past quaint Oxford houses with Extinction Rebellion flags in their windows, I worry that many of us with the loudest voices, comfortable activists in the rich world, are trying to extract hope from climate pledges that have no teeth. It might push others to pledge higher, but we know in our bones that these governments have missed all previous targets, manipulated the metrics, and shown little respect for rule of law. To paraphrase XR's famous demand of governments: what "truth" is it, then, that we expect them to tell?

The western climate movement's rallying call to "trust the science" is vital, but I wonder if the overwhelming emphasis on it is making our solidarity more misanthropic and apolitical. Most days, it seems easier to take refuge in graphs that detail the shelf-life of methane as a greenhouse gas in the next two centuries than address the messiness of human relationships or urgent human rights violations. I stare at the fractions in the Kaya identity, a formula that expresses carbon emissions as a product of four factors: GDP per capita, energy intensity, carbon intensity and population. I wonder if there's a fraction I can throw in to compute how to turn the world on its head for the better, as the stomping jackboots of anti-science, far-right governments ring to my east and west. But there's no easy formula for that.

When XR was tainted with an "extremism" tag, or when Priti Patel described its activists as "criminals" after they blocked denialist publications through direct action, there was uproar in sections of the UK press. To me, there was that dissonant *deja vu* again. As someone witness to how environmental movements in the global south, arguably the birthplace of non-violent direct action, have been vilified as extremist groups over recent years, I felt like saying: welcome to the rest of the world. The EU may have announced even more ambitious targets, but in many parts of the world that it exports its emissions to, the pandemic is giving way to a last-ditch fossil fuel-led recovery plan.

Meanwhile, many of us unquestioningly applaud climate promises made by countries such as China, partly because of the large-scale change they promise, partly because they appear as geopolitical challenges to western power that we don't like, all the while ignoring the fact that local voices will hardly be allowed to hold them to account. Some of us might even privately

nurse assumptions that the lack of democratic opposition might make these climate plans easier to implement.

Then there is a dominant tendency to reduce all life to carbon, see all carbon as equal, and hope that with enough juggling, investor pressure and as-yet-undeveloped technology, we will eventually cancel each other out. To me, this approach eliminates diversity, complexity, lived experiences and actual system change. Black Lives Matter and Dalit Lives Matter should be pushing us to address the cracks in the foundation of capitalism as we know it: to admit to ourselves that we live in a global extraction economy built on abuse of power along lines of caste and class, race and religion, north and south. If it's a new world we want, we must look beyond token diversity and admit that there will be no economic recovery or green deal without a plan for workers of colour whose oppression and displacement we all benefit

from, that addresses historical issues of land, access to commons and justice.

The climate crisis may not be what keeps the majority of us up at night, but it blows up everything that was flawed to start with. There are no easy answers and many difficult questions. Everything is up for rebuilding, and therein lies the need for us to be at our most human, most creative and to cast the widest net. There's a need for long-term thinking, just as there's a need to pass the mic and stand up for inconvenient truths that don't fit within our existing politics. The emergencies are already here and multiplying, if we can take off our glasses that filter people into little boxes of faceless climate victims and the rest of us. Will we engage with these grey areas and centre climate justice around rights and life, in all its messiness? It's time to put humanity and life, not just carbon, at the centre of the climate crisis and our solidarity.

May this Diwali be full of wonderful moments and surprises, may your house be full of diyas and lights and your heart be full of joy. Have a wonderful Diwali!

May the supreme light illumine your minds, enlighten your hearts and strengthen the human bonds in your homes and communities.

LEGAL NOTES

Narasimha Reddy and another. Vs. State of Assam and two others.

This case is filed before the High Court of Guwahati seeking bail in an alleged wildlife offence. The offence was booked by the Range Forest Officer Hawaitang Range for the offence in case number 111/2020 under sections 44, 48A and 51 of Wildlife Protection Act 1972. The Range Officer seized on 29/7/2020 one live kangaroo, three live exotic tortoises, six live blue macaws. The seizure was made while the animals were being transported by a truck driven by the petitioner and another person was accompanying the driver. It is submitted that the animals are exotic and they do not come under the purview of Wildlife Protection Act 1972 as these are not prohibited animals for possession or transportation.

It was submitted by the counsel for the petitioners that the seized animals do not come under the purview of the Wildlife Protection Act and it is admitted by the Range Forest Officer. The prosecution was of the view that though the animals are exotic they fall under the category of CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna). Charge-sheet was laid before the Chief Judicial Magistrate, Cachar. The Forest Officer requested the Chief Judicial Magistrate, Cachar to handover investigation of this case to the customs department if deemed fit and proper.

The petitioners failed to get bail from the Chief Judicial Magistrate for the reason that the case was under investigation in the early stages and there are incriminating materials against the petitioners. The petitioners urged before the High Court that if any person has to be detained, it can only be done for committing any offence. Therefore, the counsel argued that the detention was illegal. It was requested to allow the petition and grant bail to the petitioners.

The public prosecutor did not disagree with the argument of the petitioners' counsel as the facts are mentioned in the letter number DH/13/OR/416-417 dated 29/07/2020 while forwarding the accused persons before the Magistrate. Copy of the letter was marked to DFO Cachar. The High Court felt that prima facie, the arrest was not permissible. The court was of the view that detention of the petitioners under Wildlife Protection Act was not proper as the petitioners cannot be said to have committed any offence under the Wildlife Protection Act. If there was any violation of the Customs Act, 1962, the Forest Officer could have requested the Magistrate for handing over the investigation to the Customs Department. Nothing prevented the forest authorities from handing over the investigation of the case to customs authorities. According to a judgment by the Allahabad High Court, the exotic animals which are set to fall under the CITES are not notified under Section 123 of the Customs Act 1962, so as to render possession of these animals to be unlawful.

The High Court was satisfied that the seized animals do not come within the purview of Wildlife Protection Act, 1972, the detention of the petitioners would not be permissible. The petitioners are entitled to go on bail. Therefore, the bail petition is allowed and they are required to furnish bail- bond for rupees fifty thousand with two sureties to the satisfaction of the Chief Judicial Magistrate, Cachar. It was further directed that the aforesaid seized animals be kept in safe custody of the Assam State Zoo, Guwahati. The petition is allowed with directions by The Hon'ble Justice N. Kotiswar Singh on August 20, 2020.

Source: Internet

- K.B.R

Human and Wild Life Conflict

by

Manohar A. Saindane

Human and wild life conflict is not a new issue. It is going on from few decades. With the proper management and some remedies this conflict can be minimized. The subjected situation occurring wherever abundant of wildlife and expanding human population overlaps.

With large predators such as Tigers, Lions, wolves, crocodiles and some dangerous herbivorous such as Elephant, Bison and even in aggressive deer man is having conflict. Due to these conflicts livelihood and life essential things are destroyed. Local people are starting killing wild animals. This conflict can be minimized by doing following activities so that safe and midway of the solution can be given. These proactive are mainly essential at hot spot where National Parks, sanctuaries and huge urban areas occurred.

- 1). Low voltage current: Solar power of low voltage current is supplied in the fence of local area. Crop or farm is protected by solar power of low voltage fences. Thus, elephants are kept out of the fields in the foreign countries, mainly African countries. Same method is used to wild bears and other herbivores too, to keep away from local area. Ringing human shaped dummies with electricity is placed to keep away the Tigers. The above methods are quite effective and highly preferable to control on over wild attacking animals and human beings.
- 2). Flash lights: For this purpose, the solar lights may be preferred. These lights can drive away the nocturnal wild animals. Mainly farmers are depending for this purpose on lighting machines. For this purpose, the flash lights may be used as police patrolling van/Jeep is having colorized lights shown sparking in different colours so that animals can run from the spot in nights.
- 3). Bridges for Corridors at Crossing point: This is good alternative way to minimize conflict between human and wild animals at crossing point at hot spot. A natural route can be prepared to cross wild animals over the National high ways/state high ways. The bridges are playing good roll in crossing wild life of preserved native habitat in human dominated region. Safe and sure pathway is provided. Wild life can wander between larger areas of intact habitat. Wild animals can be driven naturally without harm and without any accident. By this method conflict between human and wild animals can be proactively kept away.
- 4). Man Made remedies: By these activities of farmers can keep away wild animals like elephants from their farm or home. Bees and hot peppers are kept around the farm. Due capsaicin chemical found in chili pepper which is disliked by elephants. In the African countries the farmers are using and applying mixture of oil and chili peppers at their fences. Elephants are afraid of bees. Therefore, artificial construction of bee culture box/boxes are kept along fencing is done to keep terror of Elephants outside of farms.
- 5). Change in Appearance: Tigers are generally attacking their prey from back side of living once. This weak point is taken under consideration of big cat. This is main reason villagers of Bengal have recent success to prevent Tiger attacks. The forest workers of the area were going inside areas, with tying mask at back side of their head. The van mazdoors wearing mask are survived from the attack by Sundarbans tigers (Bengal Tiger). Such attacks are not reported since last 3 years.

6). Eco-tourism: Local community should be given the work of eco-tourism by that they can earn some income. Some animals destroy farmers' crop, and it is not surprising that such conflicts can happen. Villagers should keep away the wild life by doing noise of drums and should make loud sounds. Local community can help tourist about roads and can give the information to tourist about local flora and fauna so that they can get additional job opportunities and boost their economy. One can arrange some extension programs to the farmers.

By following few simple guidelines, you can minimize your risk, protect your property and live safely along with wildlife. There be. Since the most animals are naturally afraid of humans, conflicts often arise when animal become habituated to humans or associate them with food. Avoid feeding wild animals. Securely store animal food, and feed pets indoor to avoid attracting unwanted wild visitors. Fence your garden, and plant unpalatable vegetation to discourage browsing.

HOW TO TACKLE WILD ANIMALS WHEN IT COMES TO THE URBAN AREAS: Crowd of public may be kept away with help of Police. Suppose wild animal has fallen in the well. Whether well is with water. Then we have to leave the wood slowly in the water. With the help of wood small wild life will not sink. If the motor pump is fixed then power should be disconnected. Long ladder may be left in the well, so that small animal can climb up and can run in to forest or in open place. If above things are not possible then wild animal can be tranquilized. After all the process wild life may be examined by local veterinary officer and may be released in nearest habitat.

B). Incidence that happened in the Pune wild life division. One Panther entered in Kothrud area. Forest staff and Police reached in the evening to the spot. The veterinary Doctor of Peshave zoo also came. The forest officer examined the situation.

They made everything ready to tranquilize the panther with (2ml. Ketamine+1ml Zylomine). Dart was prepared. Twice aim was missed. Next full day panther was running here and. In night Police authority asked permission to shoot out panther. But our people refused to do so. Panther was hiding himself in the leaves of tree. With the help of local municipal corporation, Markel ladder was brought. Our officer went top of the building and succeeded to shoot the dart and finally panther was tranquilized. Next day panther was released in sanctuary.

C). In another incidence one Indian gaur entered in the premises of Bharati Vidyapeeth area on dated 4th Jan 2000. Normally Indian gaur habitat is Koyana basin or in Mahabaleshwar forest. He was very huge animal seeming like "YAMAHA". Very heavy animal with black in colour. Indian gaur started running in the city area. After some time, he came in the vicinity of herbs and shrubs. To maintain law and order police was deployed. When he was hiding in grass two darts were tried. Unfortunately, it was unsuccessful. After some time, he was looking angrily towards staff. Divisional forest officer was aiming to shoot dart, at the same time Indian gaur attacked the team. The employee of the forest department was thrown 10-15 feet from his position. Everybody was shouting. The employee who was attacked by the Indian gaur was hospitalized with many fractures.

After sometime and some efforts one dart was successful. But it was observed that he needs larger dose. Again, one dart was given 9-10ml then he became unconscious. Then with the help of corporation employees the heavy body of Bison was loaded in van and horns were tied up. Then bison was released in the deep forest.

While tackling such operations lot of problems arise. The daily newspapers published wrong news. Therefore, need to tackle such task in proper way. Special Team should be prepared of trained officers at every division level. Those persons may be given refresher training to update their skills.

OBITUARY

V. BHASKARA RAMANA MURTHY

24.08.1961 – 02.10.2020



Dr. Vadrevu Bhaskara Ramana Murthy, a very senior officer of the Indian Forest Service borne on A.P. cadre, passed away at 01.30 a.m. on October 1, 2020 at his residence in Rajiv Swagruha Apartments in Bandlaguda area of Greater Hyderabad Municipal Corporation. The death was sudden. He was 59.

Dr Ramana Murthy was born to Prof. Srirama Murthy and Smt. Alivelu Mangathayaru at Kakinada. After early education at Bapatla, he did B.Sc. (Agri) at Agriculture University in Rajendra Nagar, Hyderabad. He did M.Sc. and Ph.D. (Agri.) in Agronomy from IARI, Delhi and joined Indian Forest Service in 1987.

He got senior time scale of pay of IFS in 1991. Afterwards he got promotions to super time scale and finally rose to the rank of Principal CCF. As PCCF he was in charge of Coastal Zone Management and was performing his duties from Aranya Bhavan in Guntur. He was on leave since July 2020.

Ramana Murthy was married to Smt. Jyothi and the couple had two daughters, Mohita and Manvita. The older daughter is married and settled down in Bengaluru. Ramana Murthy was jovial, social and sociable. He never hesitated to help people who approached him. His death has caused a vacuum in the Forest Department of Andhra Pradesh which is irreplaceable. It was a shock to friends and colleagues when they came to know of his sad demise. Many of his colleagues and friends attended the funeral at Hyderabad. He is fondly remembered by the survivors, wife two daughters and many friends and colleagues.

We convey our condolences to the family of the late Bhaskara Ramana Murthy and express our deep sympathy and sorrow to the family. We pray to the Lord to give courage and confidence to the family to bear the loss and rest his noble soul in peace. - **K.B.R**

OBITUARY

B. BHOOMARAJAM

07.12.1929 - 03.10.2020



Sri Baalay Bhoomarajam, Rtd. CCF of combined state of Andhra Pradesh, passed away due to cardiac arrest in KIMS hospital at Hyderabad on 3rd Oct 2020 during the early hours when he was getting treatment for respiratory related problems. He was 91.

Sri Bhoomarajam was born on December 7, 1929 in Allipur village of Raikal (M) of former Jagtial taluk of Karimnagar district to Sri Baalay Ramaiah and Smt. Lakshminarsamma. He had his early education in Jagtial and then moved to Hyderabad city for higher education. He was a post graduate (M.Sc., Botany) from Osmania University. He also obtained LL.B from OU. Then, he joined as research scholar, in Hydrobiology in Botany Dept. of Osmania University for Ph.D during 1954-'57.

He worked as part-time lecturer during 1954-'55 for a short period. While doing research he was selected for appointment to the State Forest Service and was deputed to the Indian Forest College, Dehra Dun for training in forestry during 1957-'60, where he obtained the diploma AIFC. He was appointed to the Indian Forest Service in 1966 under the Initial Recruitment Regulations with 1963 as the year of allotment. He worked in various places viz Warangal, Adilabad, Ananthapur, Kurnool etc of combined Andhra Pradesh as DFO; and CF in Working Plan, Territorial, Social Forestry and Research & Development wings. As Chief Conservator of Forest he worked from 21.05.1987 until his superannuation on 31.12.1987.

During his tenure he worked as consultant to various projects, viz.

- (i). National Council of Applied Economics Research, New Delhi & conducted evaluation of Rural Fuel Wood Plantations Raised during VI Five Year Plan in Madhya Pradesh for National Waste Land Development Board, Delhi.
- (ii). A.P State Govt. Undertaking M/s, Hyderabad Allwyn Ltd., Hyderabad formulated Bio-aesthetic plan and executed during 1988-89 at their 300 acre New Refrigerator Projector site at Nandalur in Kadapa Dist., A.P.
- (iii). National Wasteland Development Board, Delhi for evaluating Project works executed in Andhra Pradesh from funds related Non-conventional Voluntary Organizations.

Other important activities: He was a freedom fighter and political sufferer in the erstwhile state of HEH the Nizam and participated in Quit University Movement for integration of the Hyderabad State with the Indian Union. He was arrested and detained for 60 days in the Central Jail of Chanchalguda, Hyderabad. He was Founder and its Managing Editor of O.U Campus Magazine, "QUEST" for the 1953-'54. During his service he was noted as honest, hard working, courageous and very strict officer.

The demise of Bhoomarajam is a great loss to his friends, colleagues, relatives and those of different ranks who worked with him. We express our sense of sorrow and deep sympathy to the bereaved family. Sri Bhoomarajam is survived by wife Sujatha, daughter Neetu, son Nithin and two grandchildren (granddaughter and grandson).

May his Soul Rest In Peace. — **D.N.B**

OBITUARY

B. JANARDHAN

02.01.1950 - 06.09.2020



Sri Boddula Janardhan was born on 02.01.1950 at Domakonda village of combined Nazamabad Dist. to late Sri B.Vithal and Amba Bai. He did his graduation and post-graduation.

Before selection in the Forest Service, he worked as teacher and tuitions for his livelihood. He was selected by the Government of Erstwhile Andhra Pradesh for appointment as Forest Range Officer in 1977 and was sent to Southern Forest Rangers College, Coimbatore for undergoing training in Forestry from November 1977 to October 1979. He was very good at studies, secured higher standard. After successful completion of the training at Coimbatore he underwent practical training as Asst. Range Officer at Banswada Range of Nizamabad Division. after successful completion of practical training he worked as Forest Rangel Officer, Nizamabad, Yhellareddy ranges. Subsequently he worked as Forest Range Officer in various wings such as Flying Squad, Working Plan, Social Forestry etc. Because of his clean record

in the year 2000 he promoted to the Rank of Assistant Conservator of Forests and retired from service on superannuation while working as Vigilance Officer in Office of the PCCF, Hyderabad.

He is blessed with one son who is a Mechanical Engineer and working in Indian Airlines. the only daughter is swell educated and settled in UK after her marriage. He is blessed with four grandchildren.

May his noble soul rest in peace.

S.No. Name of the Member D.O.B.		S.No. Name of Serving Officers D.O.B.	
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2.	P.S. Sankar Reddy 09-11-1936	2.	Elusing Meru 11-11-1965
3.	C. Sivasankara Reddy 10-11-1951	3.	P. Ram Mohan Rao 15-11-1962
4.	G. K. Reddy 12-11-1931	4.	Anand Kumar Sha 25-11-1969
5.	C. Madukar Reddy 19-11-1951	5.	P. Raghuveer 30-11-1960
6.	D.Nagagopala Rao 23-11-1942	6.	Anoop Singh 01-12-1965
7.	K. Venkat Ramudu 23-11-1948	7.	D. Bheema 15-11-1962
8.	K. Murali Krishna Rao 29-11-1940	8.	D.V. Reddy 15-11-1964
9.	Solleti Chandra Mouli 30-11-1954	9.	G. Mukund Reddy 16-11-1978
10.	P.K. Sharma 01-12-1956	10.	V. Prabhakar Rao 26-11-1964
		11.	K. Damodar Reddy 28-11-1967

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2004 Tsunami devastating scene.

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Postal Regn. No.HD/1154/2018-20**

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**If Undelivered, Please return to : Editor : VANA PREMI, Office of the Principal Chief
Conservator of Forests, Aranya Bhavan, 5th Floor, Room No. 514, Saifabad, Hyd - 500 004, T.S.**

Date of Publication: 26-10-2020 Total Pages: 64 Date of Despatch: 4th or 5th of Every Month.

Printed & Published by **Qamar Mohd. Khan** on behalf of **Association of Retired Forest Officers**,
Printed at **Venu Graphics**, D.No.2-1-392/1/6, Fever Hospital Signal, Nallakunta, Hyderabad-500044 and
Published from Room No. 514, 5th Floor, Aranya Bhavan, Hyderabad-500004. Editor: **Qamar Mohd. Khan**.
RNI Regd. No. Teleng/2000/2185. | Email ID: qamar_asima@yahoo.com. | Phone No. 9849233624
