

Vana Premi Wishes Very Happy Independence Day

VANA PREMI



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**'I am on the verge of extinction'
will you please save & protect me. (*Panthera tigris tigris*)**

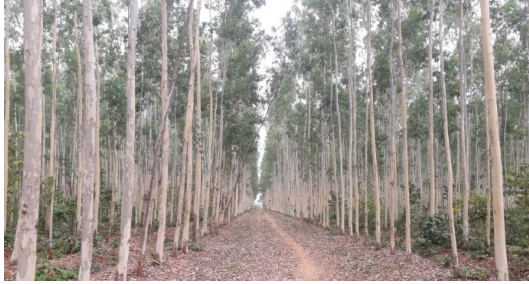
JOURNAL OF THE ASSOCIATION OF RETIRED FOREST OFFICERS, TELANGANA & ANDHRA PRADESH

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- ✓ The TSFDC has also taken up the challenging task of Eco-Tourism development in the State. Already open to public – Botanical Garden and Pala Pitta Cycling Park at Kondapur, MahavirNischal Van Eco-Tourism Centre, Vanasthalipuram, Shameerpet Deer Park and Mrugavani National Park at Chilkur are attracting increasing number of visitors.
- ✓ TSFDC is also developing Urban Parks in LGM Pet (KondaGorreRewilderness), Thumukunta RF & Gowdelli PC Kalan & PC Khurd cluster.
- ✓ TSFDC has also taken up consultancy works for NTPC & RFCL and successfully raised multiple row avenue plantation along with Rajiv Rahadari Highway in Peddapalli District. Presently it is developing Miyawaki Plantations in Ramagundam Municipal Corporation area.

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Editorial

World Senior Citizen's Day: World Senior Citizen's Day is observed on 21 August each year throughout the globe. The history of the World Senior Citizen's Day dates back to 1988. The celebration took place for the first time in 1991. The day was proclaimed by the General Assembly of the United Nations on December 14, 1990, while the first celebration was marked on October 1, 1991. The World Senior Citizen's Day was officially founded by the former President of the United States of America, Ronald Reagan. In his Presidential Proclamation Ronald Reagan said "For all that, they have achieved throughout their lives and for all that they continue to do, we owe our gratitude and sincere greetings to our senior citizens". We can show our gratitude and appreciation better by making sure our communities are good places. Age and maturity, places where older people can participate as much as possible and find the encouragement, acceptance, support and services they need to continue living a life of independence and dignity. The day is intended to increase awareness of the factors and issues that affect older people, such as health deterioration and elder abuse. It is also a day to recognize and acknowledge the contributions of older people to society. The World Senior Citizens' Day is an important moment to remind the government of its commitment to work for the welfare of older persons., to help them, end hunger and poverty for the elderly and people of all ages.

According to the law of our country, senior citizen is a person who is citizen of India, and who has attained the age of sixty years or above, and a super senior citizen is a person who has completed eighty years of age. In general terms a senior citizen is an elderly person especially one who has retired. Just like children and adults, senior citizens also constitute an important part of the society. However, a lot of elders, face abuse and discrimination in the society as they grow older. Senior citizens also are concerned about crime. Because of their physical vul-

nerability and personal isolation, they are robbed more often than are the members of other age groups of society. Seniors are also the most likely group in society to be swindled. To attract the attention of the globe towards the well-being of the elderly, the World Senior Citizen's Day is celebrated to create awareness about these issues and promote factors to improve their well-being, several organisations and institutions arrange meetings and programmes. These also recognize the contribution of senior citizens towards the society.

In the current times, when COVID-19 has affected the livelihood of many people, several senior citizens and artists are also struggling to make their ends meet and live a comfortable life. In order to show some love and respect for them, we should promote and encourage these people in their activities to create a better world. Actress Shagufta Ali who is nearing the age of senior citizen, revealed she has been struggling to make ends meet due to lack of work, for the past four years.

According to Population Census 2011 in our country there are nearly 104 million elderly persons aged 60 years or above; 53 million females and 51 million males. A report released by the United Nations Population Fund and HelpAge India suggests that the number of elderly persons is expected to grow to 173 million by 2026. Both the share and size of elderly population is increasing over time. From 5.6% in 1961 the proportion has increased to 8.6% in 2011. As regards rural and urban areas, 71% of elderly population resides in rural areas while 29% is in urban areas. The old - age dependency ratio climbed from 10.9% in 1961 to 14.2% in 2011 for India as a whole. For females and males, the value of the ratio was 14.9% and 13.6% in 2011. In rural areas, 66% of elderly men and 28% of elderly women were working, while in urban areas only 46% of elderly men and about 11% of elderly women were working. The percent of literates among elderly persons increased

from 27% in 1991 to 44% in 2011. The literacy rates among elderly females (28%) is less than half of the literacy rate among elderly males (59%). Prevalence of heart diseases among elderly population was much higher in urban areas than in rural parts. Most common disability among the aged persons was locomotor disability and visual disability as per Census 2011. State - wise data on elderly population divulge that Kerala has maximum proportion of elderly people in its population (12.6 per cent) followed by Goa (11.2 per cent) and Tamil Nadu (10.4 per cent) as per Population Census 2011. The least proportion is in Dadra & Nagar Haveli (4.0 per cent) followed by Arunachal Pradesh (4.6 per cent) and Daman & Diu and Meghalaya (both 4.7 per cent). According to the United Nations, by 2050, 2 billion people, over 20 per cent of the world's population, will be 60 or older with Asia having the largest number of older persons.

The older generation of our population is a valuable part of our society. Our senior parents and grandparents are living memories of history, imparting will-earned wisdom and advice, and providing support and guidance to their children and grandchildren as they navigate the many different aspects of life. Thus, we celebrate them every year, marking August 21 as Senior Citizens Day! We have an entire day dedicated to our wonderful senior members of society.

World Senior Citizen Day is dedicated to the lives, achievements, and issues of the elders of our society. They have been leaders of government, business, science, medicine, and entertainment, and as retirees, face new facets and challenges of senior life. While some of them have the opportunity to keep being lights of guidance and wisdom, others either live quietly with their children, or in care homes. Some live happy and peaceful lives, while some may fall victim to elder abuse.

The following concessions and facilities are provided to the senior citizens in our country.

1. Concessions on income tax
2. Concessions in air. Train and bus travel

3. Concessions on investments (Higher rate of interest)
4. Facilities in the banks
5. Concession and facilities on telephone service.
6. Priority in court hearings.
7. Senior Citizens are issued a passport on post police verification basis.
8. Varishtha Pension Bima Yojana for senior citizens

All Governments of our country are giving monthly pension to senior citizens under social security scheme for their survival. Under Social Security Pensions, Govt. of Telangana is sanctioning an amount of Rs.2016/- per month as old age pension to the older persons. Recently Government of Telangana Under the Aasra Pension Scheme, the age limit of senior citizens has been fixed at 57 years. The main objective of the Aasara pension scheme is to provide financial assistance to meet the daily minimum requirement of the needy of the economically weaker section of the state, aged, widowed, destitute, AIDS patients, weavers and tribal sections. Government of Telangana have created a separate department for Senior citizens. These are some of the welfare measures our governments have taken up for the welfare of senior citizens.

Every year a theme is selected and the theme for International Day of Older Persons 2021 is not selected till this editorial was written. The theme of the 2020 was "Pandemics: Do They Change How We Address Age and Ageing?". 2019 theme was "The journey to age equality", a promising theme for the older generation and 2018 theme was "Celebrating older human rights champions".

Vana Premi wishes that our Central and States Governments extend further facilities and concessions for senior citizens of our country and make their and their family members life happy and easy for all that, they have achieved throughout their lives and for all that they continue to do. **QMK**

Letters to Editor

Dear Sir,

Read the article on Pench National Park/TR in the VP of July,2021 authored by Sri V.S.S. Babu.A very interesting exploration of one of the NPs/TRs of India...the Pench the darling of the wild tourism explorers in MP and MH in the Central India.Happy to learn about its faunal splendour in vast forest areas nursed by the perennial river inbetween the PA Pench.

I am happy to note that it has facilities for leisurely exploration of wilderness by tourists for weeks with all facilities.The stories on individual tigers are very interesting.The write up has come beautifully interesting.Congratulations to Sri V.S.Babu ji.

- **BMT Rajeev,**
Bengaluru.

Dear Sir,

Vana Premi issue of Oct 2020 reached in time for Diwali, adding to the joy of celebration. There was plenty of read with articles of interest and information, I particularly liked following.

Editorial, Articles by B.K. Singh, Dr U. S. Singh, B M T Rajeev Nayantara Siruguri, and noted loss of Harika the lioness. I also share my experience with Life Certificate.

Editorial; it has touched a very important aspect of present life of Senior Citizens. It explains Laws, Acts and Rules and obligations of their children towards parents. Not many couples take care of old parents, which was possible in the older Joint family system. New generation is after money and in a hurry to achieve expectations. Older Parents are a burden or baggage. The situation in 'live-in'-is less said the better. I suggest the copies of this Editorial or extracts be attached to the PPOs of pensioners, in local language of the concerned. Nominees also be made aware of it.

B K Singh explains phenomenon of Biotic pump of atmospheric moisture as driver of hydrological Cycle on land and role of deforestation. This is important and must be brought to the notice of MOEF & CC. and the PM. Presently MOEF & CC deals with forest lands rather profligately. ex: Revised Costal Zone regulations, opening FERA cases of rejected claims, Mining cases relaxation, where forests are being cut and degraded daily the FSI claims increase in country's forest cover. And to mislead people they coined the word Tree Cover.

Dr. Singh fears of loss of tigers due to inbreeding, loss of corridors, poaching, climate change, curtailment of habitat and diminishing food, etc. The recent figures of Tiger Census showed "abnormal" increase in tiger numbers in India. I Could not believe my ears. but Hon. Minister was shouting to the world in Media as if he bred all those "extra" tigers. Recent denotification of The Elephant Sanctuary in Uttara Khand, curtailment of Nanaj Great Indian Bustard Sanctuary area from original couple of lakhs to under 30,000 acres, to quote a few, speaks for Govt's mind in wild life management. Rajeev gives handy tips /basics for WL Management.

Sirguri explains indigenous people and their attachment to forests and their culture. This subject should form part of training at Academy and Forest Colleges.

Finally, my experience in getting my LIFE CERTIFICATE- Like all pensioners I was getting eager to get my LC in time. Reading ads in print and other media I tried to get LC on line. What I got was an advice to register with "authorized Agents" approved by BANKS ASSN.I did that and hit my head on biometrics. That Agent will approach me and create LC at Cost RS 70/-. I gave up and approached my Bank. They were reminded of RBI circulars and expected their door-to-door service to Senior Citizens. I also told my Age (85yrs+), And also that I am now a paralytic and cannot walk, (even in house I need walker) They were sympathetic. But could not help. I discussed matter with my son (Retired from IAF as Air Commodore and settled in Pune recently.)

He met the Manager of the Bank, (200 meters from my house) took me in his car, (me and my walker). There I could not climb 7 steps, So the Manager sent concerned person to the car, completed formalities, took my photo, and thumb impression (biometrics)and declared me alive for one year! This is called as "ease of working".

Dr A. R. Maslekar
Maharashtra 9422320548

CLIMATE CHANGE IS LEADING TO HUNGER IN MANY AFRICAN COUNTRIES

By
UMA SHANKER SINGH. DSc

INTRODUCTION: In light of recent events, such as the mass kidnapping of the 343 schoolboys in Nigeria, the war in Tigray in the northernmost region of Ethiopia, as well as decades-long issues such as the Darfur war, the accumulating news headlines seems unequivocal: there is a growing link between climate change and conflict, and that link is seen right across the African continent. Climate change is widely recognised as a “threat multiplier” due to its role of exacerbating the traditional cause of conflict. The most egregious form is the way changes in climate alter competition over increasingly scarce resources. Research on the so-called ‘heat-aggression relationship’ suggests there is a 10- 20% increase in the risk of armed conflict associated with each 0.5°C increase in the local temperatures. This hypothesis has been recently expanded upon, with research indicating that from 1970 to 2015 local temperature increase in 159 countries also saw an increased number of terrorist attacks and subsequent deaths. There are many reports which conclude that when temperature increases, the number of terrorist attacks and deaths due to terrorist attacks tend to increase. The results are also consistent with a large body of research on the effect of climate on conflict and are of practical concern given increasing average global temperatures.

EXAMPLE OF NIGERIA: To take one specific instance, northern Nigeria has experienced large declines in the length of the rainy season and an increase in desert or semi-desert conditions over

recent decades. These changes have dried up many natural water sources, diminishing pastures and farmland. In the northern states most directly impacted, they have exacerbated long-running contests between herders and farmers sharing the same resources. They are also forcing large numbers of herders in search of productive land to migrate south, resulting in increasing conflicts between them and central Nigeria’s growing populations of sedentary crop farmers. This violence has increased Nigeria’s security challenges and stretched the military from a much-needed focus on Boko Haram. When states fail to address these inter communal tensions, then a variety of armed groups including criminals and jihadists are able to fill that vacuum and violently exploit the distrust of governments among marginalised rural communities. But while military measures against such groups are necessary, an effective response cannot only be security based: there needs to be a political component, such as the promotion of inclusive dialogues to reduce inter communal tensions and engage armed groups; an economic dimension, including ways to formalise the grey economy and to reform the livestock sector; and a climate dimension, including prioritising humanitarian assistance to those most affected by environmental changes. The climate change has exerted a very heavy pressure on water resources of Ethiopia. Since 2010, Ethiopia has been building the dam on the Blue Nile River as its highest development priority. Given the Blue Nile is the main tributary of the Nile River, Egypt fears the dam threatens its

water supply. A tough negotiation has been made even harder as rising temperatures and falling precipitation trends are likely to lead to increased water scarcity across the Nile Basin. Over the last few years, technical experts from both countries and Sudan, which is also impacted, had neared a consensus about how fast Ethiopia could fill the dam's reservoir to minimise downstream impacts. Those talks have since run into new obstacles, but what is most striking about this example is not only how a resource scarcity issue around water rights has been intensified by climate change conditions, but also how the resulting diplomatic negotiations could strengthen regional institutions that can address both climate change and conflict issues in the future. So while these negotiations are far from complete, there is at least some reason to be hopeful that climate-induced urgency will prompt action. This is extremely important to discuss the current Ethiopia crisis on account of climate change and the present political dispensation is finding it very difficult to cope up with them.

ETHIOPIA: Since the beginning of the industrial revolution, the global climate has been changing due to the carbon-intensive paths of development pursued by high-resource countries. This has been found that the size of the human population and its impacts on the environment have increased dramatically over the last decades in Ethiopia. In the month of June, 202 Oxfam has published its report which depicts dangerous levels of hunger in Ethiopia and it is really extremely worrying. According to the latest findings, there are right now over 350,000 people in a hunger catastrophe, the largest number of people to reach that classification since Somalia in 2011. This number is expected to climb to 401,000 in July, 2021. Over 60% of people in Tigray and neighbouring areas are currently facing very

high levels of food insecurity, which will continue to worsen in the coming months. Some parts of Tigray remain largely inaccessible to humanitarian groups due to conflict and insecurity. These figures must spark an urgent increase in funding, an immediate scale up of food assistance, and action toward peace efforts and immediate and safe humanitarian access. Many people who have fled Tigray speak harrowing stories of losing their property, cattle, and food stocks, and of spending days hiding out in difficult terrain without any food or shelter. Now let us look at the climate change scenario in Ethiopia. Mainly due to changes in the climate, Ethiopia has faced recurrent droughts across its different parts. This has been more observable particularly since the 1970s. The population size of Ethiopia and the impact of the activities of the growing population have increased dramatically over the last decades. There are frequent changes in the climate. These changes are often followed by droughts. Not only Ethiopia but many other African countries have also often fallen victim to these changes. Facing challenges associated with climate change has since recently become global trends. The mean annual temperature has, for example, increased by 1.3°C between the years 1960 and 2006. This is estimated to be an average rate of 0.28°C increase in temperature per decade. Human-induced climate change is feared to lead to unprecedented level of global warming in the next few decades. Climate models suggest that Ethiopia will see a further warming of 0.7°C and 2.3°C by the 2020s and between 1.4°C and 2.9°C by the 2050s. The current population (over 87 million) is growing annually by 2.6% and is expected to be more than double by 2050. The country is extremely vulnerable to the impacts of climate change. The impact may potentially hold back economic progress or reverse

the gains made in development, and thus exacerbates social and economic challenges. The country's vulnerability to climate change is further increased by high levels of poverty, rapid population growth, and reliance on rain-fed agriculture. In addition, high levels of environmental degradation, chronic food insecurity, frequent natural drought cycles, etc. may also be other factors that can contribute to the country's vulnerability to climate change. Now they are fighting for a regime change.

CASE STUDY OF SUDAN:

During the 1980s, the Darfur region of Sudan experienced two major events that would shape the region in the coming decades. The first was a devastating drought and subsequent famine between 1980 and 1985. As a result of increasingly arid conditions in Darfur's pastures, the region's ethnically Arab pastoral groups were forced to migrate their herds south to find food and water. These nomadic groups encroached on cropland owned by settled



African agriculturalists who were also suffering from the drought. In order to protect their land, crops, and water supplies, the settled agriculturalists took up arms against the nomads. The second event was a military coup led by a Sudanese officer, Omar al-Bashir in 1989. Al-Bashir would assume the title of President of Sudan until he himself was ousted in a coup in 2019. Al Bashir's regime heavily favoured ethnic Arabs in Darfur and supported Arab nomadic groups in their conflicts over land with the African agriculturalists. In 2003, rebel groups in Darfur organized in protest of Al-Bashir's support of the Arabs. By this time, other environmental pressures again forced Arab nomadic groups to compete with settled African agriculturists for land, food, and water. The nomadic "Arabs" and the settled "Africans" would weaponize their differences, learning to see each other as competitors for life's most basic necessities namely food and water. To counter the African rebel groups, many Arabs from nomadic tribes organized themselves into hostile bands. In addition to combatting the rebels, Arab militias have committed atrocities on African settlements. The most notorious of such militias, is the Janjiweed, a paramilitary group that was supported in part by the sympathetic al-Bashir regime.

DECLINING RAINFALL AND INCREASING TEMPERATURES: The evidence for the presence of climate change in Sudan, and Darfur specifically, is robust, being a subject of study since at least the late 1970s. This was found that Sudan has experienced a statistically significant reduction in rainfall since 1966 in the important growing months of July, August, and September. While these are older findings, they are corroborated by a report published in 2011 by the United States Geological Service (USGS) in cooperation with USAID. The report finds that rainfall during summer months in

Sudan's western and southern regions have declined by 20%. The United Nations Environmental Programme (UNEP) finds that this decline is irregular and most prominent in the regions of Kordofan and Darfur. In the province of North Darfur alone, precipitation has decreased by 30% over 80 years. UNEP also finds that air temperatures in Sudan have risen by more than 1 °C on average. The decline in precipitation has in turn led to deforestation. Although much of Sudan's deforestation can be attributed to human activity, the UNEP report finds that precipitation decline has pushed the outer limit of many tree species 50 to 200km southward. Combined, reduced precipitation and deforestation have contributed to another problem, desertification. The report finds that the border between the semi desert and the desert in Sudan has moved between 50 to 200 kilometres southward since the 1930s. All three of these factors, reduced deforestation, and desertification, have limited agricultural productivity, grazing potential for pastoral animals, and the water supply. As such, the factors outlined in these studies prove worrisome for Sudan's food security.

CONCLUSION: In conclusion, climate change is already affecting people across Africa and will wipe out efforts to tackle poverty unless urgent actions are taken now in terms of adaptation, mitigation and compensation. Failure to reach an equitable agreement on climate change negotiations may have dire consequences for Africa in particular and the world in general. Furthermore, climate change is a serious global challenge that demands urgent, cooperative, fair and shared responsibility to act. To achieve effective cooperation in terms of climate change issues, it will be important to involve key stakeholders from the climate change community where they are not yet involved. Without urgent

Contd.. on page No.22

IMPLEMENTING FRA 2006: THE INTERFACE WITH OTHER STATUTORY INSTRUMENTS

By

Dr Arvind Kumar Jha

Introduction: The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (Forest Rights Act or FRA in short) and its Rules 2008 (amended in 2012) provide for the recognition of forest rights in favour of two specifically defined honour categories of people. They are individuals and/or communities belonging to Forest Dwelling Scheduled Tribes (FDSTs) and Other Traditional Forest Dwellers (OTFDs). The preamble of the Act also expresses the objectives to make the right holders responsible and empowered for sustainable use, conservation of biodiversity, and maintenance of ecological balance; apart from strengthening the conservation regime of forests, ensure livelihood and food security.

The sections 2(c) and 2(o) define the claimants and their eligibility. Thirteen types of Forest Rights are defined under section 3 which says that “For the purposes of this Act, the following rights, which secure individual or community tenure or both, shall be the forest rights of forest dwelling Scheduled Tribes and other traditional forest dwellers on all forest lands”. Yet another forest right is defined under section 4(8). It is pertinent to note that each type of forest right [including the facilities mentioned in Section 3(2)] has specifically indicated conditions associated with the resource to which it is related. One often overlooks the fact that fulfilment of the indicated condition is essential for the recognition of that particular forest right.

Forest Rights are of two major categories. They are essentially Individual Forest Rights (IFRs) and

Community Forest Rights (CFRs), while a type of CFR coined through amendment to FR Rules in 2012 is named as Right to Community Forest Resources i.e. RCFR which refers to the forest right defined under section 3(1)(i). The FRA also mandates that the recognized forest rights must be specified in terms of their ‘nature’ as well as ‘extent’. This is crucial not just for regulating of exercise of forest rights but also for securing sustainability of the resource base through appropriate management practices.

In essence, the recognition of Forest Rights requires compulsorily the fulfilment of essential criteria that makes the claimants (FDSTs and OTFDs, and their communities) eligible as claimants under FRA and also a simultaneous fulfilment of conditions related to each type of forest right being claimed.

The Interface:Section 13 of the Forest Rights Act 2006 reads as: “Save as otherwise provided in this Act and the Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996, the provisions of this Act shall be in addition to and not in derogation of the provisions of any other law for the time being in force”. Thus, all Acts and rules are operational in the domain where FRA is being implemented save the specially indicated provisions contained in the Act.

There is a widespread belief that various Acts including Forest Conservation Act 1980 are completely superseded by the FRA. It is worth noting that FRA provides for exemption from the FC Act’s

requirements as indicated in Section 4(7) which reads as: "The forest rights shall be conferred free of all encumbrances and procedural requirements, including clearance under the Forest (Conservation) Act, 1980, requirement of paying the 'net present value' and 'compensatory afforestation' for diversion of forest land, except those specified in this Act." The Section 4(2) puts conditions for the purpose of creating inviolate areas for wildlife while 4(5) prohibits the operation of provisions of Indian Forest Act related to removal of occupants from forest land so far as genuine claimants i.e. those who fulfil the criteria under the Act are concerned. This is applicable till the recognition and verification process of their claimed rights is complete. One has to realize that even when a forest right is recognized in favour of an individual/community, the other Acts applicable to that right holder/land/resource have to be complied with. This point is grossly neglected generally by one and all under the widespread confusion that once a forest right is recognized on a piece of forest land, other Acts and legal instruments do not need to be applied to that land or for operations on that land or on activities related to the exercise of that particular forest right.

The crucial fact that also needs to be understood is that not just the rejected cases but also the cases decided by the District Level Committee in violation of the provisions of FRA are cases of violation of various Acts and Rules applicable to the forests and wildlife of the country which need to be properly understood and suitably taken cognizance of by the implementers. The violation of FC Act taking place due to forest rights granted despite their inadmissibility under FRA is elaborated below:

Violation of FC Act 1980 on account of illegality in recognition of IFRs:The Section

2(ii) of Forest Conservation Act 1980 reads as follows: "Restriction on the de-reservation of forests or use of forest land for nonforest purpose: Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the Central Government, any order directing- that any forest land or any portion thereof may be used for any non-forest purposes."

The conditions for granting of IFRs covered by Section 3(1)(a) of FRA 2006 to eligible claimants pertain to those mentioned under Sections 3(1) (a), 4(3), and 4(6) of the FRA Act which clearly require that the claimant must have been self-cultivating the forest land claimed for the right of cultivation and had occupied the same prior to 13-12-2005. Further, it is also required that the forest land under cultivation must have been under his occupation on the date of commencement of the Act i.e. on 1-1-2008. The Section 4(6) further provides that the forest land on which such 'self-cultivation' right is recognized shall be restricted to the area under actual occupation and shall in no case exceed four hectares.

Any case that is decided without the fulfilment of criteria and conditions mentioned in FRA is not eligible for exemption under its section 4(7) and amounts to violation of Forest Conservation Act 1980 since it relates to permitting in writing the use of forest land for cultivation or habitation (which clearly is a non-forestry purpose as defined under explanation b of Section 2 of FC Act 1980).

Violation of FC Act 1980 on account of illegality in recognition of CFRs: TheSection

2(iii) of Forest Conservation Act 1980 reads as :
“Restriction on the de-reservation of forests or use of forest land for nonforest purpose: Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the Central Government, any order directing- that any forest land or any portion thereof may be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other Organisation not owned, managed or controlled by Government.”

The violations being considered here relate to misusing the provisions of FRA 2006 and Rules made there under to secure community tenure for protection, regeneration, conservation or management of forest land to private person/ community of private persons. This, if done in the garb of granting CFRs including RCFR covered by Section 3(1)(i) to ineligible claimants is a violation of the FC Act 1980. It may not be out of place to mention here that although the Act talks of recognizing forest rights to the communities of FDSTs and OTFDs only, the Form C inserted in the annexure to the Forest Right Rules 2012 indicates “Presence of few Scheduled Tribes/Other Traditional Forest Dwellers is sufficient to make a claim”.

Further, it is worth noting that the section 3(1)(i) itself touches an extremely vital point when it qualifies the term “community forest resource” used in this sub-section by saying that the right to protect, regenerate or conserve or manage is to be recognized in the favour of claimants only if they have been traditionally protecting and conserving that specific resource for sustainable

use. It is clear that the law makers wanted to give the forest right under 3(1)(i) to only such ‘communities’ who have proven experience in conservation and management for sustainable use. One also cannot ignore the fact that the communities that are to be considered for recognition of forest rights must qualify the test of being constituted of FDSTs and/or OTFDs only.

In addition to fulfilling the condition mentioned under Section 3(1)(i) elaborated above, the section 4(3) prescribes the requirement of specificity of the ‘extent’ of this right in terms of area when it says “The recognition and vesting of forest rights under this Act to the forest dwelling Scheduled Tribes and to other traditional forest dwellers in relation to any State or Union territory in respect of forest land and their habitat shall be subject to the condition that such Scheduled Tribes or tribal communities or other traditional forest dwellers had occupied forest land before the 13th day of December, 2005”.

In short, the titles granted in cases in which the essential criteria and conditions are not fulfilled are clear cut cases of violation of Forest Conservation Act 1980.

Following the Laws of the Land: While handling the issues related to FRA, it is necessary to ensure that all the laws of the land are strictly followed and while justice is given to the rightful claimants, forest resources are simultaneously conserved to ensure the sustainability of exercise of forest rights by the right holders. The District Level Committees (DLCs) have a greater responsibility in this regard specially because of the noticeable

confidence shown on them by the Ministry of Tribal affairs, Government of India in respect of 'granted cases. This is evident from the fact that none of the circulars issued by them pertain to examination/ auditing, even on sample basis,

of cases finally approved and granted by the DLCs. Rather all communications till today require them to re-open/review/examine only the rejected claims. This is clear from the table below:

MoTA's Communication dated	Instructions given for review/ examination of Rejected claims only (The underlying presumption appears to be that all the claims that have been accepted are correct, perfectly processed and correctly decided)
12-9-2014	Appropriate steps be taken to review the wrongly rejected claims.... And... Claimants should be given a chance of appeal.
10-4-2015	There is a need to have a relook into the cases of doubtful rejection ...
15-6-2015	Steps taken for verification of rejecting claims and disposal of pending claims may be intimated to the ministry urgently
27-7-2015	Guidelines with regard to use of geo referencing for assessment of potential areas and re-examination of rejected claims has been given. GPS surveys of all plots of lands of the wrongly rejected (including partially rejected)/ pending claims may be done...
5-2-2016	Information related to the rejection of claims may be submitted...
16-6-2017	Suo Motto review of rejected claims may be taken up in all LWE affected districts
29-6-2018	Issues highlighted for early resolution include high rate of rejection of claims including claims for Community Rights and CFR Rights, early review of rejected claims including suo motto reviews. As discussed during review cum consultation meeting, States are to undertake suo motto review of rejected claims.
20-2-2019	Furnish the details of number of claims of forest rights finally rejected.....

Even while submitting the affidavit before the Hon. Supreme Court in the Writ Petition 109/2008, the MoTA highlighted the rejected cases and mentioned "it is uncertain whether the data furnished by the state governments accurately indicates whether the rejection orders were passed after observance of due process of law; compliance with principles of natural justice and whether appeal mechanisms have been properly exhausted". The Hon. Supreme Court, apparently considering this submission, kept on hold on 28th February 2019 its own order dated 19th February 2019 regarding eviction of rejected cases, though no

cognizance was taken by the Hon. Supreme Court of the open admission by the MoTA regarding handling of claims in defiance of FRA provisions and for using the same for seeking stay orders. They however asked the Chief Secretaries to submit details whether in the guise of and Other Traditional Forest Dwellers (OTFDs), the land is occupied by mighty people, industrialists and other persons who are not belonging to the aforesaid category. The order directed the State Governments to point out the category wise details of such incumbents who have been occupying these areas belonging to

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VIOLATIONS OF COASTAL REGULATIONS

**By
B. K. Singh**

For the first time in February 1991, Central Government declared coastal stretches of Seas and water bodies influenced by tidal action up to 500 meters from high tide line and the land between low tide line and high tide line as Coastal Regulation Zone (CRZ). However, the distance is restricted to 100 meters or width of the creek, whichever is less in case of tidal influenced water bodies connected to sea. Prior approval of Coastal Zone Management Authority (CZMA) was made mandatory for any construction in CRZ. Scientific reason behind the move was livelihood security for the communities in coastal areas, and to address the dangers of natural hazards and sea level rise due to global warming.

CRZ areas were reclassified vide revised notification in 2011. Further some new classes were added in yet another revision in 2019, which entails formulation of Coastal Zone Management Plan (CZMP). Till CZMP is approved, the coastal states have obligation to follow 1991 notification.

There have been several instances when Courts ordered for the demolish structures built in violation of CRZ notification. The most recent among these is the demolition of residential high-rise buildings in Ernakulum. The illegally constructed four apartments in violation of CRZ norms at Maradu municipality, Ernakulum district, Kerala were ordered to be demolished by Supreme Court on 8th May 2019. The Court observed that CRZ notification is meant to protect the environment and bring about sustainable development. Judges added that the violations should not be taken lightly; the law of the land must be obeyed and enforced.

Ministry of Environment and Forest & Climate Change (MoEF& CC) on 19th February 2021 laid down a procedure to deal with violations arising due to not obtaining CRZ clearance. Ministry's official memorandum said that the activities which are otherwise permissible and have commenced construction/ operation without clearance would be considered for prospective clearance if the proponent applies to CZMA. In turn the environmental and ecological damages will be assessed by CZMA and project proponent would implement mitigation measures within three years of grant of approval through 'Compensatory Conservation Plan' (CCP) and 'Community Resource Augmentation Plan' (CRAP). With the recommendation, MoEF&CC would refer the application for clearance to 'Expert Appraisal Committee', who would examine the adequacy of CCP and CRAP.

Cutting short the procedure would encourage unscrupulous builders, powerful hotel owners and violators who have constructed the buildings without proper CZA clearance on the strength of money and muscle power. This would lead to the destruction of coastal environment and natural eco system and further encourage unplanned development in coastal areas. The concern of violators would only be their commercial and pecuniary interest and they will have no respect for law of the land.

Unauthorized buildings and projects are constructed in many coastal areas which are part of no development zone, eco sensitive zones and also on sea word side of existing roads. Constructions have also taken place in prohibited areas by damaging

natural sand dunes and also by filling up river beds & lakes. Even the reserve underground drinking water sources and the areas within high tide line are also not spared, which are in blatant violation of CRZ norms and building regulations. Damage to natural sand dunes, water bodies and sea beaches cannot be mitigated through CCP. Growing mangrove plantations of some species and sea grass regeneration may not be difficult, but plantations of diverse mangrove species are generally quite difficult to achieve. Thus, CCP will hardly have any impact on the ecology of CRZ area.

Mangroves have complex root system which is efficient in dissipating sea wave energy and protecting coastal area from tsunami, storm surge and soil erosion. Their protective role is widely recognized, especially after devastating tsunami in 2004. Except Gujarat, Maharashtra and Odisha, no other coastal state has added mangroves as we compare ISFR 2017. In fact, Tamil Nadu, West Bengal and Andaman & Nicobar Islands have lost mangrove tree cover. The area under mangroves in Karnataka is stagnant.

Karnataka has been planting mangrove species in coastal belt regularly, the department must investigate why mangrove plantations are not adding to the forest cover. It can be inferred those mangroves are being destroyed at the same pace it is being planted.

Mangrove plants thrive in hostile environmental conditions like high salinity, oxygen deficient water-logged soil strata, tidal pressure, strong winds and sea waves and exhibit evolved morphological and physiological adaptations. The mangrove species towards the water front adopted with stilt and prop roots are *Rhizophora apiculata*, *Rhizophora mucronata* and with pneumatophores are *Avicennia*

and *Sonneratia*. Above these, luxuriant group of *Bruguiera gymnorrhiza*, *Lumnitzera racemosa* and *Aegiceras comiculatum* occur. These species form knee roots. Towards land side *Excoecaria agallocha*, *Heritiera littoralis* and *Xylocarpus spp.* occur. They generally produce buttresses.

Once mangroves grow, submersed banks are fully stabilized and plants reach climax vegetation, which comprise of terrestrial & aquatic animals and micro-organisms. If sediments do not stabilize, submersed banks are washed out. The process continues till the particular sediment is established.

Mangroves provide shelter to hundreds of fish species and productive marine life. Like all other animals' fish, shrimp, crabs and other marine life in the sea need a safe place to grow, away from many predators. With their tangles and intricate root systems, mangroves are excellent nurseries, providing safe hiding places for young animals. Mangroves are habitats to shore birds, reptiles, insects and mammals like monkeys, rats etc. The animals utilize the mangroves to roost, breed and take shelter from strong winds and heat from sun.

On the east coast particularly in Andhra Pradesh and Odisha, farmers occupy Government lands and erect prawn dykes in the plot spilling into CRZ areas. 55 ha land on the fringes of swampy mangrove forests in Bhitarkanika National Park of Odisha's Kendrapada district is recently retrieved. It is only a tip of iceberg.

During our visit to Pichavaram mangroves we interacted with the communities and also visited some villages facing tsunami and cyclone fairly regularly. We also happened to see the remnants of Chinnavaikkal village right on the sea shore. Prior to 26th December 2004, this was a village of nearly 50 families with total population of around 200. The village faced the brunt in tsunami. We learnt that 30

people from this village especially ailing persons and children were washed away in 2004 tsunami. The village was electrified. Electric poles were uprooted and 100 coconut trees were washed away. We were also told that nearly 30 to 40 people saved their life, as they could swim and catch hold of mangrove trees. Further the tsunami waves in villages covered by mangrove trees were less intense as compared to villages facing the open sea. Human casualties in all such villages of Cuddalore and Nagpattana districts of Tamil Nadu were unprecedented. Pichavaram mangrove is in Cuddalore district and as compared to this Nagpattana district does not have good mangrove forests. Human misery in Nagpattana was far higher than in Cuddalore district.

A joint committee constituted by National Green Tribunal (NGT) to look into cutting of mangrove forests in coastal area of Kakinada in Andhra Pradesh's East Godavari district for housing project, has confirmed destruction of nearly 30% of mangrove area at the site. The committee also directed district administration not to proceed with township project and to take "remedial measures" for rejuvenation of mangroves. The committee observed out of total extent of mangroves spread over 116 acres, work has been taken up on 58 acres for nine jewels house sites for poor and affecting mangroves in 30% extent of mangroves. "Mangrove areas fall under Coastal regulation Zone I (CRZ I) which is ecologically sensitive and the geomorphologic features of the Zone play a role in maintaining the integrity of the coast and no new constructions are permitted in CRZ I areas," the committee added. However, the district Collector said that the areas in question are not forest areas and Government is moving to change from CRZ I to CRZ II. However, NGT has directed district administration not to proceed with town development in the said area till necessary

permissions are obtained. Tribunal further added that the rejuvenation of mangroves and restoration of green cover must be taken up to protect the environment.

West coast of our country comprises of more steep areas and generally covered by naturally occurring wet evergreen species. The leaf area index of these trees is also high, and plays a better role of 'biotic pump' in sucking atmospheric moisture and its transport across the peninsula. Recent flood, landslides, land slips, soil piping etc in Kerala and Kodagu district of Karnataka is good enough indication of change of land use pattern. If we do not watch out, climate related hazards will hit the region with more regularity. West coast should also preserve their forests and mangroves and develop further.

To ease the already constrained economy during Corona virus pandemic, Central Government has opened flood gates for grant of prospective CRZ clearance to regularize the illegal constructions, which are otherwise to be demolished. The ease of doing the business through this relaxation would be the reason for cyclones and sea surges and will cause untold human misery.

Gulf of Mannar has drawn the attention of conservationists even before the initiation of Biosphere program of UNESCO in 1971. In 1986, an area of 560 sq km covering 21 uninhabited islands surrounded by coral reefs was declared a National Park. In 1989, the entire marine space between Rameswaram and Kanyakumari accounting for an area of 10500 Sq. km was declared as Gulf of Mannar Biosphere Reserve, which is first marine Biosphere reserve of this country.

About 3600 marine organisms are found here, which includes 147 species of sea weeds, 12 species of sea grasses, 13 species of mangroves, 200 species

of sponges, 100 species of echinoderms, 260 species of molluscs, 90 species of crustaceans, 450 species of fishes, 5 species of sea turtles, 14 species of dolphins, 6 species of whales and Dugong (sea cow) which is a symbol of Gulf of Mannar.

Gulf of Mannar is prone to severe anthropogenic pressures from the communities in the vicinity. More than three lakh fishermen catch fish for their living and are totally dependent on this Biosphere reserve. They use nearly 5000 mechanized trawlers and 25000 traditional boats. They also sometimes use dynamite and damage coral reef, which otherwise provide refuge to some varieties of fishes and protect them from predators like big fishes. In the process of damaging coral reefs the habitat is lost. Illegal collection and trade of highly endangered marine organisms like sponges, sea cucumbers, sea turtles, fishes and scheduled sea shells are prevalent. Sewage also drains into the gulf. Solid waste disposal locations are along the shore and the contents do get washed away into gulf.

The challenge in the region is to integrate biodiversity conservation, sustainable coastal Zone management and livelihood related development. The management of the Biosphere reserve is vested with Gulf of Mannar Biosphere Reserve Trust (GoMBRT), which is striving to empower local communities to manage coastal ecosystems and wild resources. The mission statement is 'To build and nurture the trust as vibrant organization of international repute which focuses on coordination between often conflicting agencies and organizations for sustained conservation.'

Rameswaram islands has Swamy Vivekananda Hall and interpretation centre for the Biosphere Reserve both located adjoining to each other. The island is also connected to the main land through Pomban Bridge, which takes care of road as well as rail connectivity. Until 1964 the rail line was continued on

the island up to Dhanush Kodi, which was port city in India closest to Sri Lankan Island. A very big cyclone had hit the region in 1964; even a train moving on the rail track between Rameswaram and Dhanush Kodi had washed away killing nearly 1000 people on board then. Many inhabitants of this township also perished. Survivors left Dhanush Kodi forever. Today we see the remains of all old structures including railway station, hospital, schools etc. We learnt that for nearly four decades no one came and lived here. The place is now visited by tourists and some members of fishermen communities have thatched temporary roofs and started living here. There are also some temporary shops displaying varieties of sea shells.

From the remains of the building structures, it is made out that all construction of that time had taken place using coral reefs. Coral reefs have been regularly extracted from sea and defence mechanism to check the intensity of cyclones and storms have been compromised. It is further learnt that coral reefs have also been extracted and used in the past as raw material for production of cement.

During the visit around some of these 21 islands of National Park, it is further found that coral reefs in different stretches are dead. Some of the live corals can be seen beneath water using snorkelling kit and they are in many colours, often presenting a view of a flower garden. It is reported in 2016 that colourful corals started bleaching and losing the original colour. This is on account of rise in temperature. Loss of colour is the indication of its death. It is also observed that in small patches corals are gaining color and reviving.

Coral reefs check the intensity of storms and cyclones originating from the sea. They also provide cover for the fishes especially at the young age.

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TELUGU BLUES: LEARNING TELUGU LANGUAGE & PASSING THE TELUGU EXAMINATIONS

By
Paresh Kumar Sharma

It was the month of November 1981, when I was still in the Indian Forest College, Dehradun. Rumours of Cadre allotment were doing the rounds. Every other day someone will come out with a news of starting of the Roster for cadre allotment for “outsider candidates” with a particular Letter/Alphabet and some brilliant chap would start working on the allotment of the cadres. It finally came to an end when the DoPT sent the final communique allotting all the Probationers to different Cadres. I was allotted “Andhra Pradesh”. I was expecting either Gujrat or MP as those were my second preferences of the first and second zones of my choice. This did not happen. Subsequently we learnt that the DoPT had not taken into account the 2nd Cadre preference in each Zone; instead, only the 1st Cadre choices of all the Five Zones were taken into consideration for Cadre allotment. As a result, they had jumped from 1st choice of Cadre in 1st Zone of preference to 1st Cadre choice of 2nd Zone of preference. Hence, I had landed in AP. Initially I was disappointed but on learning that it was a good Cadre; happily, reconciled to it.

The Cadre allotment was followed by ours a month-long Study Tour of South India; and this was to be ours last such Tours at the fagend of 2 years training programme at IFC. At Delhi Railway Station I purchased a short book titled “Learn Telugu in 30 Days” and started learning Telugu in the Train itself. I picked up alphabets very fast. I found those to be very close to Dev Nagari script with minor differences. As I was good at drawing, I could quickly remember and write Telugu alphabets. When it came to speaking, my Colleagues from AP, viz, CS

Ramalakshmi, KDR Jay Kumar and RV Rao, helped me talk. By the time we entered AP, I could broadly recognize the names of the Railway stations inscribed on the Platform Boards. By then I started learning the “Telugu Barah khadi” (Combining consonants with vowels). I continued to practice Telugu reading and writing during the Tour. By the time we returned to IFC, I had acquired fair knowledge of the language.

Once the professional training ended at IFC Dehradun, we joined LBSNAA Mussoorie for 3 months long Foundation Course (39th FC). Beside other subjects there was provision of teaching the Cadre specific Languages in the Academy. I joined Telugu class along with 4 others, including 1 IPS Officer Trainee. **Mr. Samraj** used to teach us Telugu. He in fact was from TN, but had good knowledge of all the 4 South Indian Languages; hence he used to take classes for Telugu, Kannada & Malayalam besides Tamil. So, in these 3 months I had good opportunity of improving upon my knowledge of Telugu. I had started speaking Telugu little bit, though it was highly bookish.

On completion of FC, I landed in Adilabad. As I had acquired fairly good knowledge of Telugu (reading, writing and speaking), I was convinced and fully prepared to converse in Telugu when I reached Adilabad. I stepped out of Railway Station Adilabad. On stepping out, the station wore a deserted look, as not many passengers had travelled in the train. Most of the passengers, I could guess were smugglers of Forest Produce and had already descended before

the outer signal. There were no Auto Rickshaws or Taxis. I could see only 2 Cycle Rickshaws. I approached one of the Rickshaw Pullers and asked him in chaste / bookish Telugu “**Atavi shakha karyalayamu ekkada undi?**” (Where is the Forest Department’s office?). The Rickshaw Puller bore a perplexed look. I thought probably I had not conveyed my query properly, hence repeated the question. This time he replied. “**Kya Saheb, Janglat ke daftar jana hai?**”, in Urdu. (Sir, do you want to go to Forest Office?) It was my turn to be amused. All my tension, of speaking only in Telugu all the time, had vanished. I was relaxed at once, having realized that in this part of the State people speak Urdu/Hindi/Marathi; hence one could manage with no or little knowledge of Telugu. I told him “Yes!”. The Rickshaw Puller told me “*Ye bahut hi kharibmein hi hai, aap saman laiye*”. (It’s very close by, please bring your luggage). Hence all my enthusiasm and preparedness for conversing only in Telugu disappeared at once.

I came to know through my DFO that it was necessary to pass the Telugu Language examinations by Lower and Higher Standards, besides Departmental examinations, to be conducted by the APPSC, in order to be promoted to the Senior Time Scale. These examinations were conducted only twice in a year, i.e., in the months of October and March. Hence, I was keen on clearing the Telugu Language Examination by Lower Standard ASAP. However, My DFO discouraged me to appear in the Telugu Examination stating that it was too tough and that I would definitely fail in it in the first attempt. My DFO appeared in the Examination but could not clear the same. He told me that one cannot clear the Telugu Examination in the first attempt, hence I need not bother about missing the very first opportunity as I would get enough chances. This made me to resolve

to pass this examination in the very 1st attempt.

I got an opportunity to further brush up my Telugu Language with the voluntary help of a Tutor **Sri Sanga Raghu Nandan, a Stenographer in Agriculture Department**. He had offered to coach me on his own, free of Fees. I insisted for paying the Tuition Fee, but he told me that he was not a professional Tutor but a Govt. employee and declined to take any fee, politely but firmly. He used to come to my Residence and was very punctual and expected that I should be ready to attend the coaching without wasting his time; and I did not disappoint him. He started with making me remember and chant Sanskrit Shloka “*Shuklam Vardharam....*”. His style of coaching was unique and amazing as well. He had beautiful and artistic hand writing. He used to assign a task to me daily and I used to complete it without fail. After looking at my sincerity, he also taught my wife how to prepare Upama and other Telangana dishes. We became good family friends; which continues till date. He had offered the same service to my DFO but he had never kept his word. He used to make him wait for half an hour to one hour. He did not find the DFO to be very sincere in learning Telugu; so, he gave up. For improving my spoken Telugu, he used to take me to Telugu classics starring ANR & NTR like **Sudi Gundalu, Veer Pandya Katta Bramhanna** and **Mayuri** etc. and explain the meaning of the dialogues. This really helped me a lot.

On the last leg of “On the Job Practical Training”, I was attached to the office of the Chief Conservator of Forests at Hyderabad. During this period the then Curator of the Nehru Zoological Park Sri T. Ram Krishna insisted that we, the 2 Probationers from North India, must converse only in Telugu. I happily

returned to Adilabad and was in the waiting for the posting orders as DFO. In the meantime, it was time to appear in the Language and Departmental Examinations. Final tips were given by Sri S. Raghu Nandan Guru ji. We worked on few probable questions for the Oral Examination as well as reading the manuscript. I appeared in the Telugu (Lower Std.) and Hindi (Higher Std.) examinations on 22nd & 23rd of March 1983 at Hyderabad and cleared both the exams in the very first attempt. I know many of the IAS, IFS and IPS Officers took 2 to 4 attempts and some even more in clearing the Telugu Exams. As this was linked to the sanction of Senior Time scale, I felt very happy on this achievement and profusely thanked my Guru ji!

I was posted as DFO Karim Nagar East and my batchmate Sri SBL Misra as DFO Karim Nagar West. Besides Collector, the **Zilla Praja Parishad (ZPP)**, a district level Panchayat Raj Institution, also used to review the functioning of various Govt. departments. It consisted of elected representatives of the district, besides Officials. With the coming into power of TDP, there was focus on Telugu in speech as well as written word. There used to be reviews on the implementation of Official Language Telugu in the offices every month. With this in the background, myself and my other colleague Sri Misra were mentally prepared to speak in whatever little Telugu we had learnt. When FD's turn came, being the HQ DFO Sri Misra was invited to the Dias to speak first. He started speaking in bookish Telugu with great effort, at this juncture the Chairman of the ZPP intervened stating "DFO Saheb you can speak in Hindi/Urdu as we all are conversant with Urdu, being in Telangana region of the State which was earlier a part of the Nizam's State of Hyderabad." This had soothing effect on Sri Misra. I too took a sigh of relief. Thereupon Sri Misra delivered his maiden speech

about the activities of the FD in his Division in fluent Hindi. I too followed the suit after him. This incident slowed down the speed of learning Telugu, specially the colloquial one, as the pressure was off.

However, I kept learning Telugu as I had to clear Telugu Language Test by Higher Standard to be conducted by AP Public Service Commission in order to be promoted to Senior Time Scale. This was the condition for grant of Senior Time Scale for the outsider Officers of AIS. I cleared the higher Std Telugu Examination, which consisted of written as well as colloquial part. In Oral Test, besides talking to members of the Board, we were required to talk to a villager and also read out a manuscript. **Sri Sanga Raghu Nandan**, Guru ji, continued to be in touch with me by way of writing letters in chaste Telugu in artistic manner. Those letters I have preserved till date. I cleared this examination too with ease. In my oral exam I had impressed the Board Members with my "address" to School Children about the importance of Forests in chaste Telugu in NTR style. Many of my IAS, IPS & IFS colleagues could not clear the exam along with me, mainly on account of poor oratory skills and failing to read manuscript. It used to be tough & many AIS Officers had lost monetarily on account of not clearing the Telugu Language Exam by Higher Standard for number of years. Though they had been posted as DFOs; continued to draw Pay & allowances in Junior Time Scale, till they passed in Telugu Language Exam by Higher Standard.

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action, climate change will exacerbate conflict and natural disasters and impede development projects in Africa. The world's governments not only have a responsibility to work constructively for a global agreement to manage climate change, but should also provide an enabling policy framework covering management, planning and service delivery functions for adaptation that facilitate and support local institutions and other actors' efforts. They should also ensure that devolved administrative responsibilities are matched by resources and

technical capacity. In addition, African governments need to invest more in climate and meteorological information; biophysical monitoring; and early warning, preparedness and response mechanisms, and integrate such data into their planning. Climate change can offer new opportunities for productive and sustainable land management practices, such as reforestation, improved water management, integrated soil fertility management, conservation agriculture, agro forestry and improved rangeland management.

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Scheduled Tribe category and OTFD category and such persons who cannot be treated as Tribals. In the same order the Forest Survey of India was ordered to make a satellite survey and place on record the encroachment positions as far as possible. The announcement of next date of hearing is awaited.

Considering the details mentioned above it is important to note, especially in regard to the FC Act 1980, that the Ministry of Environment , Forests and Climate Change has issued a notification dated 17-11-2020 to authorize officers not below the rank of Conservator of Forests in its Integrated Regional Offices; having jurisdiction over the forest land in respect of which any offence under the Forest (Conservation) Act, 1980 is alleged to have been committed; to file complaints against such person (s)/authority/organization prima-facie found guilty of offence under the Act or the violation of the rules made there under, in the court having jurisdiction in the matter.

Summing Up: It is clear from the analysis above that while the non-fulfilment of

essential criteria and non-adherence to the processes and procedures are clearly breach of the FRA itself, the moot issue remains that, a) recognition of forest right to ineligible people/communities, and b) recognition of forest rights and authorizing the use of forest land/resources that are inadmissible under the FRA are nothing but clear-cut violation of the FC Act 1980. The recognition of non-admissible claims or recognition in favour of ineligible people or both are violations of FRA 2006, Forest Conservation Act 1980, Indian Forest Act 1927, provisions of PESA in Scheduled areas, provisions of Biological Diversity Act 2002, Wildlife Protection Act 1972, and Orders of Hon. Supreme Court in regard to commercial exploitation/removal of forest produce in PAs etc. as applicable in specific cases. A strict and honest implementation of the Forest Rights Act will not only punish the wrongdoers while keeping the implementers safe but will actually benefit the intended target group i.e., the genuine FDSTs and OTFDs and will also conserve the resource base on which their forest rights are to be sustained.

SANCTIFIED GEOGRAPHY OF INDIA: A POIGNANT & SUCCINCT DESCRIPTION

By

Dr B Raghotham Rao Desai

Introduction: Whether or not the reader is consciously aware of it, a hoary tradition had been laid down and immortalised by Kalidasa, most notably in his Meghadootam in which the poet's choice of the cloud as a messenger who traverses across India is as aptly extraordinary as the vivid pictures he paints of our country's vast, varied and lush landscapes.

Equally, Kalidasa's other immortal classic Kumarsambhavam opens with a majestic description of the Himalayas and follows up with reference to the beauty of various regions of Bharat as the newly-wedded Parvati and Shiva embark on an all-India honeymoon. Kalidasa's insatiable appetite for, and attachment towards the physical geography of Bharat is also reflected in his grand Mahakavya (long narrative poetry), Raghuvamsham, narrating King Raghu's victorious conquest (Digvijaya) narrating Indumati's Swayamvara (wedding where bride chooses her groom all by herself) and narrating further of Sita and Rama in the Pushpaka Vimana.

The Nature of Sanctified Geography: The culture of India, like the country itself, is indivisible and timeless. Just like its indivisible geography that stretches from Kashmir to Kanyakumari, Indian culture too represents this indivisible continuum from the Rishis of the Vedas all the way to up to Ramakrishna Paramahansa. The ancients were unanimous in the view that this region was sacred and that its dharma, language and culture was a unified whole. They held that one had to accumulate virtues (in past births) to be born in such a land!

Thus the term "Bharata" resonating with poignant

meaning, is indicative of Mother India's Vedas, sage Bharata's treatise on performing arts, rishi Jada-Bharatha's spiritual tenets, king Bharata-Sarvadamana's empire, the abundance of wealth and natural resources, and the tremendous nourishing strength of Mother India. It is to constantly remind the people of Bharata of this conception as a unified whole that Indian culture provides a spiritual dimension to the physical and geographical features of India.

This unified wholeness is also discernible when one performs the Sankalpa, during which one invokes the current time (in the endless cycle of time) and the names of various sacred places in India. Similarly, this unified wholeness can be experienced by visiting various pilgrimage spots that Indians regard as sacred.

Conclusion: Land-place features are sacred, yet the reverence seems to be ritualistic without regard for the physical degradation of the natural. The mundane activities of the human are impacted by and in turn affect the natural — as in the case of the pollution of the Ganga or the destruction of a sacred grove. The first among the contradictions is the idea of the earth as sacred — the idea that the entire earth is a sacred goddess is evidenced by verses such as Bhumisukta in the Vedas. The apparent contradiction in the concept of the sacred earth and mundane regions of the land seems difficult to reconcile — if all land is sacred, then what is sacred or mundane about some landscapes?

The abstraction in the mythology of the goddess earth into the Bhudevi, or the consort of the mighty

god Vishnu, separated the terrestrial from the concept of a divine 'mother earth'. With the development of agriculture, the experience of the terrestrial became progressively mundane — i.e., of this earthly world rather than a heavenly or spiritual one. This required the earth to be sanctified by ritual, the less being as historical as is political.

The idea of geography that is sacred can also contribute positively to environmental ethics — like the restraint on fishing in the holy falls. There are also ritualistic practices with a moral basis that seem to prevent pollution of sacred places — like not spitting into the water, not washing clothes in a river directly (but using the water to wash elsewhere). For instance, in Talakaveri (Kodagu), the spring considered as the birthplace of the Kaveri, the bathing area is kept separate from the actual spring where the worship is offered. Kalyanis (or special tanks) were constructed on the lake banks in Bengaluru to provide for the immersion of Ganesha

idols which would have otherwise polluted the lakes and tanks.

It is in the body of human being that both the mundane and the sacred meet. The human being is the agent of moral action both for the ascent into higher worlds and the preservation of the nature in this world — the idea being to include the normative values within a place without the ecological value displacing the sacred value or imagination. Wherever possible, ritual practices must be supported by ecologically planned structures. Asking people not to bathe in the holy waters or cook under a tree grove would not be possible — however, asking them not to use plastic or ear or spit within the sacred perimeter would be well within the discourse of a sacred place.

It is important therefore to take into account the concept of sacred land-spaces and perceive them beyond the mere natural features to create a viable eco-ethics of place. ●

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Continuation from page No. - 18

Climate change leads to death of the corals, which in turn can aggravate the intensity of storms and can also impact the life of the fishermen.

During the visit the team came across a Scientist from National Centre for Coastal research, Ministry of Earth Sciences, Government of India. The field station of this Research centre was established in 2018, following death of corals in global warming in 2016. The scientist is engaged in coral health monitoring, GIS mapping, identifying degraded coral areas, impact of sedimentation etc. The centre has established four hatchery units on 20-hectare land in Mandapam for preparing seedlings of fish, lobster and prawn. This is done for enhancement of livestock to address the livelihood issues of fishermen.

Centre is also taking up regeneration of corals in wild. Live corals in cement slabs tied in iron mess is kept in areas two meter below the low tide level. Iron does not get rusted in brackish water and the structure remains intact and corals regenerate.

To control the illegal acts Forest department have established nine anti-poaching camps of different islands. They are connected by CCTV cameras for the monitoring by senior officers. Department is also engaged in planting *Thuspeca*, *Lenneacoromondelica*, *Pongamia* and *Azadirachta indica* and Palm trees on the islands for overall habitat improvement. Conservation of marine species is linked to human wellbeing and survival. Communities should be educated on this line.

(B K Singh Former Principal Chief Conservator of Forests (Head of Forest Force) Karnataka)

CONCEPT OF TRAGEDY OF THE COMMONS AND- DOCTRINE OF PUBLIC TRUST

By
K.B.R Reddy

Both the above theories are intended to safeguard, protect and manage among others, the forests which are the natural and national assets. Foresters have an obligation as trustees of the asset to do the job and it is also the duty of every other citizen of the country. It is my idea through this paper to highlight the spirit of the concept by quoting two examples

that were dealt by a conscientious judiciary and administrators in the recent times.

Justice Yatindra Singh in an article 'Greener Tomorrow' had said that, "The State is a Trustee of all-natural resources for the benefit of the public and under legal duty to protect the natural resources" Vide Page 43 Of Vana Premi of January 20005.

K.B.R. Park and Walkers Association:

KasuBrahmananda Reddy National Park (popular by its short name as K.B.R. Park) is situated in the Hyderabad city in a locality called Banjara Hill-Jubilee Hills, with a total extent of about Acs 356. It is being managed by the State Forest Department.

It has a chequered history. The area originally comprised of a part of Sy. No. 403, of Shaikpet, a *Sarf-e-Khas* village of the Ex-Ruler of H.E.H the Nizam's Dominions, with an area of Acs. 3288, earlier known as *Tattikhanakancha*. *Sarf-e-khas* lands were merged with the Diwani. J.P.L. Gwyn, ICS, Third Member of the Board of Revenue, held an enquiry in 1963 and he gave his opinion that the land does not belong to Nawab AzamjahBahdur known as Prince of Berar. Yet, in 1964 the Government conceded the right of the of the Nizam's successors

and restored the ownership rights to Barkat Ali Khan, the VIII Nizam, with an area of Acs. 3070. It was then known as Chiran Palace area. A palace and a Mosque were built in the area. The boundary was strengthened by masonry wall. In the Town Survey it was found that the Nizam was in possession of Acs. 90 in excess of Acs. 3070 granted to him. The possession of the excess land was given over to Municipal Corporation first and then to the Forest Department.

When the Urban Land Ceiling Act was enacted, the Nizam wanted to seek exemption by floating Nasser Cooperative Housing Society. But that was rejected and the matter went up to the Supreme Court when the SLP filed by the Nizam was dismissed. The area being surplus, was taken over by the Government and the Forest Department was put in possession of that area. The Forest Department, as a first step to protect the land, declared the area as Jubilee Hills Protected Forest. Later, proceedings were initiated to constitute the Protected Forest as a National Park under the Wildlife Protection Act.

The decision of the Government to constitute the Protected Forest as a National Park under the Wildlife Protection Act was not relished by a section of the people, who are not sensitive and lacked awareness to wildlife conservation. They organized themselves as a Walkers Association and challenged the Government's preliminary notification for declaring the area as a National Park in the High Court; it was urged that they are being prevented from taking up morning walk in the area, a facility

they had been enjoying before. The court passed an interim order to permit ingress to the petitioners. The morning walkers were given the facility of entry under permit system. They were not satisfied with the facility given by the Forest Department and it was alleged that the facility is a restrictive regulation and the staff were rude with them. The Association filed a contempt case and another writ petition to direct the Government to withdraw the notification.

The matter was heard by The Hon'ble Justice Sri T.N.C. Rangarajan when all the legal niceties of either side were considered including public and private interest. It was directed that the Forest Department should consider the grievances of the petitioners and asked the CCF to instruct the staff to be courteous with the walkers. The court did not relish the claim that the area belongs to the public and therefore the public should be allowed to enjoy. The writ petitions and contempt case were disposed of. While explaining the implied meaning in the concept of **“Tragedy of the Commons”** a very valuable message was given in the following words:

“Where a large number of people rush into a very attractive place, the place itself gets spoiled and loses its attraction”.

Sri R. Rajamani, IAS, ex-Secretary in the Ministry Forest and Environment of Government of India, while addressing the trainees at the Indira Gandhi National Forest Academy in 2002, said that our forests are without doubt one of our most important national common property resources. The forests subserve a common aim of welfare of all living beings and therefore must be managed like a trust property. He is of the firm opinion that the frontline of the trusteeship is with the foresters. He hoped that the young foresters will glean some lessons and learn

from their own experiences how better to manage this sacred trust. He was confident that the **“Tragedy of the Commons”** will not visit our forests – rather it may turn out to be a comedy which the whole Nation would applaud.

M.C. Mehta Vs. Kamal Nath & Others and Public Trust Doctrine:

The Indian Express dated 25.02.1996 published an article making serious allegations against Kamal Nath, the Minister for Environment and Forests in the Government of India. The heading of the article was: **Kamal Nath dares the mighty Beas to keep his dream afloat.** The allegations are that he has direct interest in Span Motels and Span Resorts in Kullu Valley of Himachal Pradesh while they are owned and managed by his family members. Span Motels took up another venture - Span Club - on the right bank of River Beas. The club was built in an encroached area of 27.12 bighas of forest land in 1990. It was regularized in 1990 and the same area was leased in 1994.

In September 1995, Beas swelled and changed course and engulfed Swan club. For long term planning, prior approval was obtained for 27 bighas 12 biwas. To prevent further damage, Span Resorts management, with a view to turn the course of Beas and prevent further damage in future due to floods, took up extensive repairs at a huge cost by employing four bull dozers and four earthmovers, and 35 tractors & trailers.

The Supreme Court took notice of the news item (W.P. No. 182/1996). Kamal Nath was the first respondent. He filed affidavit saying the he has been wrongly arrayed. He asserted that he has no right, title or interest in the property known as ‘Space Resorts’ owned by ‘Span Motel Private Ltd.’ The

allegations made are highly exaggerated, erroneous, mala fide, mischievous and have been published only to harm and malign his reputation.

It is argued on behalf of the respondents that whatever construction was done by the motel on the land under its possession and on the area around was done with a view to protect the leasehold land from floods. The Divisional Forest Officer permitted the motel to carry out the necessary works subject to the condition that the department would not be liable to pay any amount incurred for the said purpose by the motel. However, it could be easily ascertained from the facts that the motel had made various constructions on the surrounding area and the banks of the river.

The matter was taken up by the Supreme Court Bench comprising The Hon'ble Justice Kuldeep Singh and the Hon'ble Justice S.Saghir Ahmad. After hearing the Counsel for respondents dealt with the case exhaustively and delivered the judgment on 13.12.1996. The forest lands which have been given on lease to the motel by the Government are situated at the banks of the river Beas which is a young and dynamic river. The river is fast flowing carrying large boulders at the time of flood. Where the water velocity is not sufficient to carry the boulders, these are deposited in the channel often blocking the flow of water. Under such circumstances, river stream changes its course, remaining within the valley but swinging from one bank to the other. The right bank of river Beas where the motel is situated mostly comes under forest. The left bank consists of plateau having steep banks facing the river, where fruit orchards and cereal are predominant. The area being ecologically fragile and full of scenic beauty

should not have been permitted to be encroached to private ownership and commercial gains.

Their Lordships referred to the Roman Law: the notion that the public has right to expect certain lands and natural areas to retain their characteristics is finding its way into law of the land. The ancient Roman Empire developed a legal theory as the "Doctrine of Public Trust". It was founded on the ideas that certain common properties such as rivers, sea-shore, forests and the air were held by Government in trusteeship for the free and unimpeded use of the general public. Under the Roman Law these resources were either owned by no one or ever one in common.

The Hon'ble court also referred to "**Doctrine of Public Trust**" under English Law and adverted to Lake Mono case of the Supreme Court of California and concluded that public trust is more than an affirmation of state power to use public property for public purposes.

"**The Public Trust Doctrine**" as discussed by the court in the judgment is part of the law of the land. The prior approval granted by the Government of India in the Ministry of Environment and Forest and the lease deed dated 11.04.1994 in favour of Motel are quashed. The lease granted to the motel by the said lease deed in respect of 27.12 bighhas of area is cancelled and set aside. The Himachal Pradesh Government shall take over the area and restore it to its original-natural conditions. The motel shall pay compensation of Rs. 10.00 lakh for the restitution of the environment and ecology of the area. The pollution caused by construction made by the motel in the river bed and the banks of the river Beas have to be removed and reversed. □

KAZIRANGA NATIONAL PARK

BY

V. SANTHASEELA BABU

Kaziranga National Park is in Assam State located in Golaghat, KarbiAnglong and Nagaon districts. This National Park hosts two-thirds of the world's great one-horned Rhinoceros population and is a World Heritage Site. As per the census conducted jointly by the Forest Department of Assam and some Wildlife NGOs during March 2018, the Rhino population in Kaziranga National Park was found to be 2,413 comprising of 1,641 adult Rhinos (642 males, 793 females, 206 unsexed); 387 sub-adults (116 males, 149 females, 122 unsexed); and 385 Calves. Whereas during 2015, the total population of Rhinos in this National Park was found to be 2401. Kaziranga is home to the highest density of Tigers among Protected Areas in the world, and was declared a Tiger Reserve in 2006 (now the highest Tiger density is in Orang National Park, Assam). The Park is a home to large breeding populations of Elephants, Wild Water Buffalo, and Swamp Deer. Kaziranga is recognized as an Important Bird Area by Bird Life International for Conservation of Avifaunal species. When compared with other Protected Areas in India, Kaziranga has achieved notable success in Wildlife conservation. Located on the edge of the Eastern Himalayan Biodiversity Hotspot, the Park combines high species diversity and visibility. Kaziranga is a vast expanse of tall Elephant Grass, Marshland, and Dense Tropical Moist Broadleaf Forests, criss-crossed by four major rivers, including the Brahmaputra, and the Park includes numerous small water bodies. Kaziranga has been the theme of several Books, Songs, and Documentaries. The Park celebrated its Centennial

in 2005 after its establishment in 1905 as a Reserve Forest.

The history of Kaziranga, as a Protected Area, can be traced back to 1904, when Mary Victoria Curzon, Baroness Curzon of Kedleston, the wife of the then Viceroy of India, Lord Curzon of Kedleston, visited the area. After failing to see a single Rhinoceros, for which the area was renowned, she persuaded her husband to take urgent measures to protect the dwindling species, which he did by initiating planning for their protection. On 1 June 1905, the Kaziranga Proposed Reserve Forest was created with an area of 90 sq miles (232 Sq.km.). Over the next three years, the area was extended by 59 sq miles (152 sq.km), to the banks of the Brahmaputra River. In 1908, Kaziranga was designated a "Reserve Forest". In 1916, it was re-designated as "Kaziranga Game Sanctuary" and remained so till 1938, when hunting was prohibited and visitors were permitted to enter the Sanctuary. The Kaziranga Game Sanctuary was renamed the "Kaziranga Wildlife Sanctuary" in 1950 by Mr. P. D. Stracey, the Forest Conservationist, in order to rid the name of hunting connotations. In 1954, the Government of Assam passed the Assam (Rhinoceros) Bill, which imposed heavy penalties for Rhinoceros poaching. Fourteen years later, in 1968, the State Government passed the Assam National Park Act of 1968, declaring Kaziranga a designated National Park. The 430 sq.km. Park was given official status by the Central Government on 11th February 1974. In 1985, Kaziranga was declared a World Heritage Site by UNESCO for its unique Natural Environment.

We produce black - But our views are Green



Cultivation near Reclaimed Dump



Settling pond / Summer storage tank



Eco-Friendly Park



Award in recognition of eco-friendly measures

- Pollution control and Soil Conservation Measures.
- About 5.50 crore saplings were planted in Singareni spread over area.
- Artificial forest covers to OC Dumps.
- Avenue plantation in colonies and roads.
- Eco-friendly parks developed in colonies.
- Sand manufactured from OB.
- STP/ ETP at all Colonies / Establishments.
- Efforts of Singareni were rewarded by State and National level awards.



Colonies surrounded by greenery

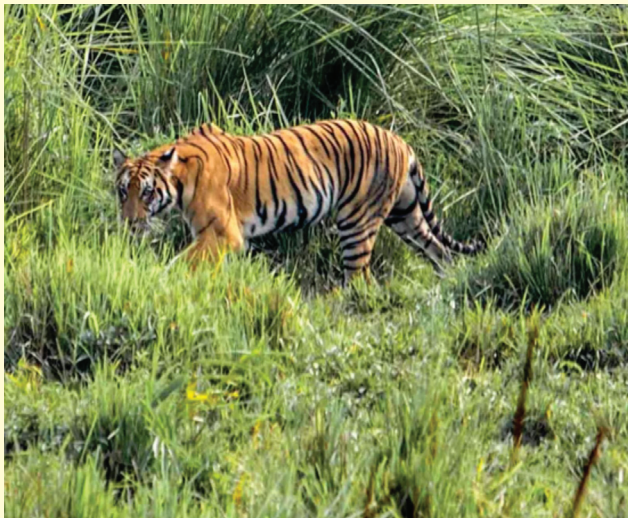


Reclaimed OB Dump

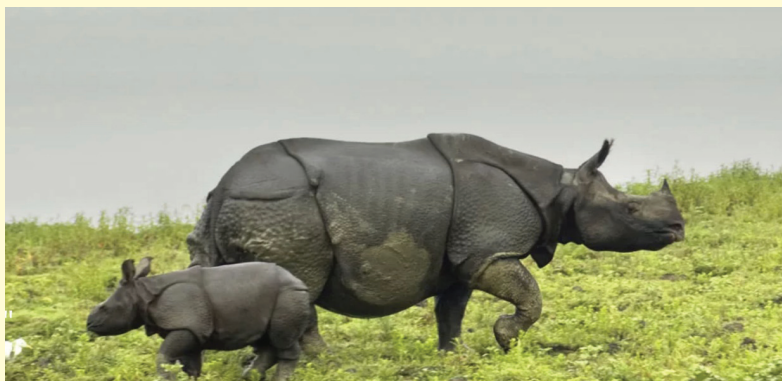


THE SINGARENI COLLIERIES COMPANY LIMITED

(A Government Company)



Royal Bengal Tiger. (*Panthera tigris tigris*)



One Horned Rhinoceros. (*Rhinoceros unicornis*)



Indian Water buffalo. (*Bubalus bubalis*)



Asian Elephant. (*Elephas maximus*)



Golden Langur. (*Trachypithecus geei*)



Hog deer(*Axis porcinus*)



Swamp deer or Bara Singha *Rucervus duvaucelli*)



Sambar Deer.(*Cervus unicolor*)



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- ◆ Consumers will now have access to vendors to procure plants of various kinds including indoor, exotic, lawns, roof top gardens, vertical gardens, etc.
- ◆ With this mobile app they will have access to the products like pot vendors, aquariums, landscape designers and many more.

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Kaziranga has been the target of several natural and man-made calamities in recent decades. Floods caused by the overflow of the river Brahmaputra, have contributed to significant losses of animal life. Encroachments by people along the periphery also led to a diminished forest cover and a loss of habitat. An ongoing separatist movement in Assam led by the United Liberation Front of Assam (ULFA) has crippled the economy of the region, but Kaziranga has remained unaffected by the movement; indeed, instances of rebels from the United Liberation Front of Assam protecting the animals and, in extreme cases, killing poachers, have been reported since the 1980s.

Kaziranga is located between latitudes 26°30' N and 26°45' N, and longitudes 93°08' E to 93°36' E within three districts in the Indian state of Assam—the Kaliabor subdivision of Nagaon district, Bokajan subdivision of KarbiAnglong and the Bokakhat subdivision of Golaghat district. The Park is approximately 40 km in length from east to west, and 13 km in breadth from north to south. Kaziranga covers an area of 378 sq.km, with approximately 51.14 sq.km lost to erosion in recent years. A total addition of 429 sq.km along the present boundary of the park, has been made and designated with separate National Park status to provide extended habitat for increasing the population of Wildlife or, as a corridor for safe movement of animals to KarbiAnglong Hills. Elevation ranges from 40 Mts. to 80 Mts. The Park area is circumscribed by the Brahmaputra River, which forms the northern and eastern boundaries, and the Mora Diphlu, which forms the southern boundary. Other notable rivers within the park are the Diphlu and Mora Dhansiri.

Kaziranga has flat expanses of fertile, alluvial soil, formed by erosion and silt deposition by the River

Brahmaputra. The landscape consists of exposed sandbars, riverine flood-formed lakes known as, *Beels*, (which make up 5% of the surface area) and elevated regions known as, *Chapories*, which provide retreats and shelter for animals during floods. Many artificial *Chapories* have been built with the help of the Indian Army to ensure the safety of the animals. Kaziranga is one of the largest tracts of protected land in the Sub-Himalayan belt, and due to the presence of highly diverse and visible species, has been described as a “*Biodiversity Hotspot*”. The Park is located in the Indomalayan Realm, and the dominant Ecoregions of the region are Brahmaputra Valley Semi-Evergreen Forests of the Tropical and Subtropical Moist Broadleaf Forests Biome, and the frequently-flooded Terai-Duar Savanna and Grasslands of the Tropical and Subtropical Grasslands, Savannas, and Shrublands Biome. Kaziranga is also surrounded by lush green Tea plantations, most of them contributing heavily to Assam's economy.

The Park experiences three seasons viz; Summer, Monsoon, and Winter. The Winter season, between November and February, is mild and dry, with a mean high of 25°C and low of 5°C. During this season, *Beels* and *Nullahs* (water channels) dry up. The summer season between March and May is hot, with temperatures reaching a high of 37°C. During this season, animals usually are found near water bodies. The Monsoon season lasts from June to September, and is responsible for most of Kaziranga annual rainfall of 2,220 mm (87 in). During the peak months of July and August, three-fourths of the western region of the park is submerged, due to the rising water level of the Brahmaputra. It was found that 70% of the National Park was flooded in the past. The flooding causes most animals to migrate to elevated and forested regions outside the

southern border of the park, such as the Mikir hills. 540 animals, including 13 Rhinos and mostly Hog Deers perished in unprecedented floods of 2012. However, occasional dry spells create problems as well, such as food shortages and occasional forest fires.

Four main types of vegetation exist in this park. These are Alluvial Inundated Grasslands, Alluvial Savanna Woodlands, Tropical Moist Mixed Deciduous Forests, and Tropical Semi-Evergreen Forests. Based on Landsat data for 1986, percentage of coverage by vegetation is: Tall Grasses 41%, Short grasses 11%, Open Jungle 29%, Swamps 4%, Rivers and Water bodies 9%, and Sand 6%. There is a difference in altitude between the Eastern and Western areas of the park, with the western side being at a lower altitude. The western reaches of the park are dominated by Grasslands. Tall Elephant grass is found on higher ground, while short grasses cover the lower grounds surrounding the *Beels* or flood-created ponds. Annual flooding, grazing by Herbivores, and Controlled Burning maintain and fertilize the Grasslands and Reeds. Common tall grasses are Sugarcanes, Spear grass, Elephant grass, and the common Reed. Numerous Forbs are present along with the grasses. Amidst the grasses, providing cover and shade are scattered trees—dominant species including *Careya arborea* (Kumbhi), *Emblica officinalis* (Indian gooseberry), *Bombax ceiba* (Cotton tree) (in savanna woodlands), and *Dellenia indica* (Elephant apple) (in inundated grasslands).

Thick Evergreen Forests, near the Kanchanjhuri, Panbari, and Tamulipathar blocks, contain trees such as *Aphanamixis polystachya*, *Talauma hodgsonii*, *Dillenia indica*, *Garcinia tinctoria*, *Ficus rumphii*, *Cinnamomum bejolghota*, and species of *Syzygium*. Tropical Semi-Evergreen Forests are

present near Baguri, Bimali, and Haldibari. Common trees and shrubs found are *Albizia procera*, *Duabanga grandiflora*, *Lagerstroemia speciosa*, *Crateva unilocularis*, *Sterculia urens*, *Grewia serrulata*, *Mallostus philippensis*, *Bridelia retusa*, *Aphania rubra*, *Leea indica*, and *Leea umbraculifera*. There are many different aquatic floras in the lakes and ponds, and along the river shores. The invasive Water Hyacinth is very common, often choking the water bodies, but it is cleared during destructive floods. Another invasive species, *Mimosa invisa*, which is toxic to herbivores, was cleared by Kaziranga staff with the help of the Wildlife Trust of India in 2005.

Kaziranga contains significant breeding populations of 35 Mammalian species, of which 15 are threatened as per the IUCN Red List. The Park has the distinction of being home to the world's largest population of the Greater One-Horned Rhinoceros, Wild Asiatic Water Buffalo and Eastern Swamp Deer. Significant populations of large Herbivores include Indian Elephants, Gaur and Sambar. Small Herbivores include the Indian Muntjac, Wild Boar, and Hog Deer. Kaziranga has the largest population of the Wild Water Buffalo anywhere accounting for about 57% of the world population. The One-Horned rhinoceros, Royal Bengal Tiger, Asian Elephant, Wild Water Buffalo and Swamp Deer are collectively known as 'Big Five' of Kaziranga. Kaziranga is one of the few Wild Breeding Areas outside Africa for multiple species of large cats, such as Bengal Tigers and Leopards. Kaziranga was declared a Tiger Reserve in 2006 and has the highest density of Tigers in the world (1 per 5 sq.km), with a population of 118, according to the latest census. Other felids include the Jungle Cat, Fishing Cat, and Leopard Cat. Small Mammals include the rare Hispid Hare, Indian Gray Mongoose, Small

Indian Mongoose, Large Indian Civet, Small Indian Civet, Bengal Fox, Golden Jackal, Sloth Bear, Chinese Pangolin, Indian Pangolin, Hog Badger, Chinese Ferret Badger, and Particoloured Flying Squirrel. Nine of the 14 Primate species found in India occur in the park. Prominent among them are the Assamese Macaque, Capped and Golden Langur, as well as the only Ape found in India, the Hoolock Gibbon. Kaziranga's rivers are also home to the endangered Ganges dolphin.

Mammals: One Horned Rhinoceros (*Rhinoceros unicornis*), Wild Buffalo (*Bubalus bubalis*), Indian Elephant (*Elephas maximus*), Royal Bengal Tiger (*Panthera tigris*), Indian Wild Boar (*Sus scrofa*), Eastern Mole (*Talpamicrotus*), Pangolin (*Manis crassicaudata*), Indian Gaur (*Bos gaurus*), Swamp Deer (*Cervus duvauceli*), Sambar (*Cervus unicolor*), Barking Deer (*Muntiacus muntjak*), White browed Gibbon (*Hylobates hoolock*), Hog Deer (*Axis porcinus*), Capped Langur or Leaf Monkey (*Presbytis pileatus*), Rhesus Macaque (*Macaca mulatta*), Assamese Macaque (*Macaca assamensis*), Leopard (*Panthera pardus*), Sloth Bear (*Melursus ursinus*), Indian Porcupine (*Hystrix indica*), Fishing cat (*Felis viverrina*), Jungle Cat (*Felis chaus*), Large Indian Civet (*Viverra zibetha*), Small Indian Civet (*Viverricula indica*), Indian Gray Mongoose (*Herpestes edwardsi*), Small Indian Mongoose (*Herpestes auropunctatus*), Bengal Fox (*Vulpes bengalensis*), Golden Jackal (*Canis aureus*), Common Otter (*Lutra lutra*), Chinese Ferret Badger (*Melogale moschata*), Hog Badger (*Arctonyx collaris*), Ganges and Indus River Dolphin (*Platanista gangetica*), Orange-bellied Himalayan Squirrel (*Dremomys lokriah*), Asiatic Black Bear (*Selenarctos thibetanus*)

Avi Fauna: Kaziranga has been identified by Birdlife International as an Important Bird Area. It is home to

a variety of Migratory Birds, Water Birds, Predators, Scavengers, and Game Birds. Birds such as the Lesser White-fronted Goose, Ferruginous Duck, Baer's Pochard Duck and Lesser Adjutant, Greater Adjutant, Black-necked Stork, and Asian Openbill Stork migrate from Central Asia to the Park during winter. Riverine Birds include the Blyth's Kingfisher, White-bellied Heron, Dalmatian Pelican, Spot-billed Pelican, Noedmann's Greenshank, and Black-bellied Tern. Birds of prey include the rare Eastern Imperial, Greater Spotted, White-tailed, Pallas's Fish Eagle, Grey-headed Fish Eagle, and the Lesser Kestrel.

Kaziranga was once home to seven species of Vultures, but the Vulture population reached near extinction, supposedly by feeding on animal carcasses containing the drug Diclofenac. Only the Indian Vulture, Slender-billed Vulture, and Indian White-rumped Vulture have survived. Game birds include the Swamp Francolin, Bengal Florican, and Pale-capped Pigeon. Other families of birds inhabiting Kaziranga include the Great Indian Hornbill and Wreathed Hornbill, Old World Babblers such as Jerdon's and Marsh Babblers, Weaver Birds such as the Common Baya Weaver, threatened Finny Weavers, Thrushes such as Hodgson's Bushchat and Old-World Warblers such as the Bristled Grass Bird. Other threatened species include the Black-breasted Parrotbill and the Rufous-vented Grass Babbler.

Two of the largest snakes in the world, the Reticulated Python and Rock Python, as well as the longest venomous snake in the world, the King Cobra, inhabit the Park. Other snakes found here include the Indian Cobra, Monocled Cobra, Russell's Viper, and the Common Krait. Monitor Lizard species found in the park include the Bengal Monitor and the Asian

Water Monitor. Other reptiles include fifteen species of Turtle, such as the endemic Assam Roofed Turtle and one species of Tortoise, the Brown Tortoise. 42 species of Fish are found in the area, including the *Tetraodon*.

Best Time to Visit: Kaziranga Park remains closed from 01 May till 31 Oct every year for the visitors. Therefore, November to April is the best time to visit Kaziranga National Park.

Summer (April to May): During this time of the year, the climate remains dry and windy; one can find animals around the water bodies.

Monsoon (June to September): From June till September, the region receives heavy rain, approximately 2,220 mm; thus, the climate remains hot and humid. The Park remains closed from May to October due to warnings of Brahmaputra River floods.

Winter (November to February): Perhaps the best time to visit the Kaziranga National Park as the climate is mild and dry. Chances of spotting rhinos are more in winter as the grass burns off and the background becomes clearer.

Safaris in the National Park: To promote Wildlife Tourism, Kaziranga Park authorities organize both the Jeep and Elephant Safari tours.

Safari Gate/Zones: Sprawling over an area of 430 sq km, the Park alias the Hotspot of Diversity is split into four areas; each has its own distinguishing features regarding grasslands, the density of Mammals & Bird, Land Topography, Terrains. Below are some points of the pre-defined Tourist Circuits where the Jeep Safari takes place:

- ❑ Mihimukh in Central Range at Kohora

- ❑ Bagori in Western Range at Bagori
- ❑ Agaratoli in Eastern Range at Agaratoli
- ❑ Ghorakati in Burapahar Range at Ghorakhati

Major Attractions in & Around the Park: To enjoy the best of the Park, it would be good to take a Jeep or Elephant Safari. Fortunately, around Kaziranga, one can find an ample number of Nature Getaway options like Wildlife Sanctuaries, Parks for Bird watching and Hill Stations. So, if, by chance, the Tourists have some extra days at their disposal they can plan to go to the list of places mentioned below to make the holiday even memorable. Below are some places to visit around Kaziranga National Park:

- ❑ Orang National Park (114 kms)
- ❑ Hoollongapar Gibbon Sanctuary
- ❑ Addabarie Tea Estate
- ❑ Kakochang fall (46 kms)
- ❑ Deopahar (51 kms)

If on an extended trip to Kaziranga, tourists can visit:

- ❑ Shillong
- ❑ Guwahati
- ❑ Dibru-Saikhowa National Park
- ❑ Nameri National Park
- ❑ Manas National Park

Kaziranga Wildlife Tours & Safari Packages: So as to let tourists discover the best travel packages for Kaziranga, the website www.kaziranga-national-park.com offers some good options; ranging from three to ten days. All the wildlife holiday packages are inclusive of Stay, Breakfast, Lunch, Dinner and Wildlife Safari. And some of them include a trip to neighboring places and hill stations too. Designed

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WHAT IS IN STORE FOR WILDLIFE?

By
B. M. T. Rajeev

Wildlife is the animals free in nature. It comprises scores of species of animals of diverse behavioural habits with diverse requirements for survival in terms of climates, habitats, foods, water, shelters-breeding and safety etc....if all the diverse requirements are met in a given habitat, the wildlife of that habitat will flourish in... if not, the animals present in such habitats will face disturbance/and will move out to safer places or die/extinct. India is a treasure trove of rich biodiversity and wildlife. The wildlife in India was preserved well in the pristine era of Vedas & Puranas and in the period of Jainism & Buddhism but subjected for hunting in the medieval age, Mughal era and suffered worst during British era. The arrival of modern arms, ammunition and vehicles...the fruits of the Industrial Revolution to India during British era were the beginning of the *game-sports for entertainment of the kings, British officers and the rich elites who annihilated the wealth of wildlife*. The dark period was the free for all hunting in the post-Independence era till the *Indian Board of Wildlife (IBWL) 1952* was formed and brought some restrictions on hunting/trade; and then protection assured with the enactment of Indian Wildlife (Protection) Act (IWLPA) 1972 then NBWL-1972 those ushered an era of scientific conservation/management of wildlife since 1973.

India achieved laurels for conservation of the national animal -Royal Bengal tiger-the spirit of the Indian jungles by starting «*Project Tiger* » in 1973 followed by many more projects for the conservation of many endangered spp. of wild animals like rhinoceros, lions, crocodiles, elephants, barasingha, dancing deer of Manipur etc. These projects gave

umbrella protection for all spp. of wildlife in the forests and also to the vegetation of the *Protected Areas (PAs)*-wildlife Sanctuaries and National Parks to flourish. The Indian wildlife management faced severe problems in the beginning in controlling poaching of endangered spp. of wild animals like tiger, leopards, rhinoceros, elephant, lion, bison, small cats, dogs, deer, antlers, birds, reptiles and amphibians by unscrupulous fellows for encasing the trade in wild animal's body parts in the international market & also for flesh. The Wildlife management partially achieved success with the support from the organizations like CITES-(*Convention of International Trade in Endangered Species of Wild Fauna and Flora*), and WWF-(*World Wide Fund for Nature*) etc. The poaching problem is under control with the prescription of severe punishments for the wildlife crimes with successive amendments to the wildlife Act and formation of NTCA-*National Tiger Conservation Authority in 2005*, and with deployment of local watchers in *Anti-Poaching Camps-(APCs)* deep inside the PAs which added support for decline in Poaching of Wildlife. But the wildlife continues to face newer /complicated problems with the passage of time.

First, the wildlife habitats outside the PAs are shrinking/fragmenting due to unabated release of vast forest lands for the encroachers and beneficiaries under the law- *Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA)*-(*Onus lies on States*). Further release of rich forest lands for development of Infrastructures' Projects- like highways, railways, dams, mines, institutions, housing etc -(*Onuslies on*

NBWL & SBWL). These releases of forest lands cause to disrupt/block the traditional wildlife corridors forcing the wild animals to meander into human habitations in search of migratory routes to find their seasonal foraging or breeding grounds, forcing them to indulge in foraging on the farm crops/ trampling of crops/ damage to human's properties/ killing human and lifting of cattle etc causing severe *Man-Animal Conflicts* (MACs) and to earn the ill-will of the farmers who lived with them for time immemorial.

Secondly, the wildlife authorities continued the age-old practices of wildlife management...non-interference with the vegetation in PAs without following silvicultural practices to maintain the health/ fodder wealth of the forests since 1973. *This non-interference with the vegetation caused for the grayling of forests/ habitats with matured trees, felling of dead & fallen trees without natural regenerations; thus, causing accumulation of dead fuel wood loads in PAs inviting frequent fires especially in deciduous forest regions.* These fires caused the opening of the PAs for exotic invasive weeds like *Lantana camara*, *Eupatorium odorata* and *Parthenium heterophorias*. Now, these weeds have become so menacing that no grass can grow/no trees can regenerate under their thickets. In Addition, the weeds cause obstructions for foraging/ movement of wild animals in their habitats (*Onus lies on PAs*).

Eg. The exotic weeds are estimated to be occupied more than 75 -80 % of the forest floors in the famous PAs like Bandipur, Nagarhole and BR hills Tiger Reserves of Karnataka; Wayanad WLS of Kerala and Mudumalai TR of Tamil Nadu in the Nilgiris Biosphere Reserve causing dearth for fodder resources for the herbivores seasonally & fires in summer... The wild animals in these PAs which have assured protection for survival have multiplied in

population, and they naturally try to move out in search of food and breeding grounds seasonally... and thus, they land on into the adjoining farm lands and coffee/tea estates by crossing all the barriers built along the boundaries of these PAs- like Cattle proof trenches, old rail fences, Solar fences, Rubble stone walls etc ...and create havoc with farming communities. Thus, forcing the PAs management to capture and relocate them...mostly elephants, tigers and leopards...even the Bisons, bears, monkeys and pea-fowls are not falling behind in creating conflicts. The most feared wild animal by the farming communities is the wild boar which raids the crops in the adjoining areas of the PAs/forests in hundreds and terrorises the farmers during nights.

Thirdly, the wildlife management spends a huge budget for resolving the MACs with creation of barriers along the boundaries between the PAs and the farm lands with different models but animals are smarter than the managers in crossing them. Further, the management spends huge amounts to control poaching of animals and forest fires and to meet water scarcity during summers...as routine practices of wildlife management without looking into the problems for the cause for migration of the wild animals- (*Onus lies on PAs*).

Fourthly, there are fewer efforts to stop shrinking/ fragmentation of the wildlife habitats outside the PAs (*Onus on NBWL, SBWL & states*). The PAs management is also not in a hurry to improve the fodder resources of the PAs by removing the exotic weeds/ improving the regeneration of trees & grasses etc. And there are no plans to analyse the *Carrying Capacity* of the wildlife habitats to limit the population of the wild animals on far with the carrying capacities/ extents of the PAs since no habitat can support

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ARTHRITIS -OSTEOARTHRITIS (D.J.D.)

By Dr. N.V. Jayanth Babu

Continued from last month...

ANATOMY OF CARTILAGE: Cartilage can be divided into 3 Zones or layers in L.S., basing on the presence and arrangement of different types of cells in each layer with specified functions.

THE OUTER MOST SUPERFICIAL ZONE, whose thickness contributes 10 to 20 % of total thickness of cartilage, contains a smooth and durable surface for articulation and secretes abundant hyaluronan and lubricin which are essential for lubrication in joints. It also contains sparsely arranged flattened chondrocytes.

THE MIDDLE ZONE contributes about 40 to 60 % of the total thickness in cartilage. The upper half of middle zone comprises of randomly arranged collagen fibrils and round shaped chondrocytes. **The lower half of middle zone** comprises of linear collagen fibrils arranged in perpendicular to the surface, along with rounded chondrocytes, in stacks, in alignment with fibrils. The main function of middle zone is shock absorption.

THE BOTTOM ZONE or DEEP ZONE comprises of around 30 % of total thickness of cartilage. – wherein upper portion is in continuation of the lower middle zone with linear arrangement of collagen fibrils and chondrocyte stacks meant for shock absorption. The lower most region of bottom zone is calcified (mineralised), which provides mechanical stiffness of cartilage tissue as it merges with the supporting underlying sub-chondral bone, wherein hypertrophic chondrocytes present in the bottom zone that secrete mineralised matrix. The junction where cartilage and bone meet are called the Chondrus – Osseous junction. The sub chondral bone contains blood

vessels and nerve endings, whereas – the remaining portion of cartilage doesn't have blood vessels and nerves. It is observed that, as the thickness of cartilage layer decreases, the thickness of sub chondral plate increases. Sub chondral bone serves as shock absorber in weight bearing joints.

OSTEOARTHRITIS CAN BE DIVIDED OR CLASSIFIED INTO FOUR (4) STAGES.

Stage - 0: Normal stage. Observe and be watchful that there would be some little inconvenience in the movements at times or otherwise, it would be normal.

Stage - I: Minor stage: Pain and discomfort are experienced in movements. Intake of Chondroitin sulphate and Glucosamine, Life style modifications and exercises are recommended to overcome the problems experienced under this stage.

Stage - 2: Pain and stiffness in the Joints, discomfort after rising from the bed, sitting for an extended period are experienced. At this early stage, it is easier to stop the progression of osteoarthritis. Intake of suitable diet, relevant exercises for muscles, physiotherapy, usage of knee braces, Knee supports, shoe inserts can be done.

Stage - 3: Moderate stage of erosion of cartilage: A person can experience Inflammation, frequent pain while walking, running, squatting and kneeling. Stiffness in the joints is experienced while waking up from bed. There may be popping up or snapping sounds while walking. Intake of suitable diet, relevant physiotherapy exercises are to be done followed by rest. Treatments – Like usage of NSAIDS, or pain relief therapies are done – If not subsided, the

orthopaedic doctors may prescribe stronger pain-relieving medicines like Codeine, and Oxy codeine, Intra articular injections of Hyaluronic acid in to knee joints. This treatment is to be taken for at least 6 months period under the guidance of an orthopaedic doctor. Up to this stage osteoarthritis can be treated and cured. Intake of suitable diet, relevant muscles strengthening physiotherapy exercises, usage of knee braces, Knee supports, shoe inserts can be done.

Stage - 4: Severe & Acute stages: Joint spaces between bones are considerably reduced as a result of wearing off cartilage. Cartilage develops fissures and cracks.

It takes years of time period ie., more than a decade for wearing out of cartilage to reach this stage - 4. One can prevent this in the early stages itself, with little awareness.

In Acute stage: cartilage is totally worn out and there will be 'bone on bone' condition. Joints become stiff and rapid breakdown of cartilage takes place. Decreased secretion of synovial fluid causes friction, greater pain in joints resulting discomfort in walking or in moving joints. Soft tissues around the knee joints are destroyed. It would be a challenging task in climbing stairs, or walking or even standing for a while. Joint re alignment or Total knee replacement surgery are to be done.

TREATMENT IN ALLOPATHY - Glucosamine sulphate Chondroitin, Collagen with Boswellia serrata in the form of tablets are being prescribed by the Doctors for Osteoarthritis patients, for the purpose of development of cartilage in the joints in early stages. For Pain management, intake of pain-relieving tablets like IBUPROFEN, DICHLOFENAC SODIUM, and other pain killers are being prescribed. If there is no response, Non-Steroidal Anti-

Inflammatory Drugs (N.S.A.I.D. s) are also being given to the suffering patients, which cause side effects and risks.

OZONE THERAPY Injecting Ozone gas (O₃) into knee joint capsule reduces pain and improves functioning ability of the joint which is far better than usage of NSAID. The side effects are burning of eyes, cough and vomiting sensation. Ozone being the toxic gas and as there is no safety or effectiveness, this treatment was prohibited by FDA during April 2016.

Hyaluronic acid, Cortico steroids, Rooster comb injections, which are directly injected in to knee joint, may reduce pain and inflammation temporarily, but carry side effects like blood clots, allergic reactions, skin discolouration and infection. **Cartico steroids**, when injected in to the joint for a longer period weaken the bones

PLATLET RICH PLASMA (P.R. P) TREATMENT: Injecting platelet rich plasma autologous concentration in to the suffering joint is a novel treatment for managing pain, in sports related knee joint injuries aimed at speedy recovery. Blood sample (about 20 to 60 ml) collected from the suffering patient is subjected to centrifugal process. The sediment derived, containing the platelets is injected in to the suffering knee to induce the growth of cartilage. Doctors prescribe exercises, intake of collagen, Calcium, vitamin D, and pain relievers. PRP injections are given 4 to 6 times, with a gap of 4 to 6 weeks apart. The cost of treatment per each sitting would be around Rs.20, 000/-. Side effects are mild nausea, dizziness, infection and tissue damage. This treatment is not yet approved by The Food and Drug Administration (F.D.A.), as it involves further researches and clinical trials, which may take few years.

CHONDROITIN: Occurs naturally in animal tissues especially in connective tissues. It is useful in blocking many enzymes that degrade the connective tissues and contributes construction of new tissues. **It makes cartilage and connective tissues to absorb more water and avoid brittleness.** Intake of chondroitin supplements @ 800 mg to 1500 mg., per day combined with 1200 mg of Glucosamine in 3 split doses, for 2 months, is useful in relieving pain, rebuilding cartilage and connective tissues in joints to some extent. Side effects are nausea, diarrhoea, hair loss, bloating. Chondroitin is derived from cartilage of shark fish, and cartilage of pigs and beef.

GLUCOSAMINE With the combination of chondroitin acts effectively in regeneration of cartilage naturally which affords flexibility and easy movements of Joints to a greater extent. Glucosamine is derived from chitin found in the shell fish, bone marrow, sea crabs, fungi and lobsters.

ABOUT RESEARCH WORKS FOR PAIN MANAGEMENT AND FOR CARTILAGE DEVELOPMENT.

"Messner and Maletius" have established in their researches that, 75% of young Athletes who participated in high impact sports have developed space reduction in their joints, chondral damage, knee Osteo Arthritis and sought elective surgical procedures in order to address cartilage injuries.

REVERSAL OF OSTEO ARTHRITIS BY NATURAL INTERVENTION: M. Painter D.C. ACA Journal of Chiropractic (Nov 1990), by Dr LUKE R. BUCCI Ph.D., EUROPE, reveals that **"Cartilage cannot heal itself is not completely True and nothing can stop / reverse the process"** – **This concept has over turned by the recent research findings. There is substantial evidence that O A can be**

reversed or reversible.

The proper type of electrical and mechanical stimulations of chondrocytes is currently being investigated. *Categories of Chndro protective nutrients are 1. G.A.G means - Glycose Amino Glycans and antioxidants. G A G s are Chondroitin sulphate - forms the bulk of GAG Products. ARTEPARON and RUMALON are the pharmaceutical products containing chondroitin sulphate - that (a) inhibits (b) promotes direct stimulation of anabolic metabolism (c) act as Anti-oxidants with known chondro protective abilities like Ascorbic acid (VIT-C), Tocopherol (VIT-E), Superoxide dis mutase (SOD) and Catalase enzyme. Other anti-oxidants have shown "in vitro" protection. Anti-oxidants share common properties of inhibition of free radical damage to cartilage and direct stimulation of chondrocytes. – Kneepain was decreased for a period of 5 years – with the usage of APTEPARON and RUMALON.*

CONCLUSION: O.A. can be reversible by Chondro protective agents if the following conditions are met with A) Cartilage is to be available over joint surfaces, B) Sub- chondral bone is to be available intact without any damage C) Life style changes to reduce pressure on the affected joints are to be taken up and followed. D) Analgesics which impair the process of synthesis of Cartilage in joints – are to be avoided. E) Consistent and daily intake of supplements and Chondro - protective nutrients- - is to be ensured in a regular manner.

CHONDROCYTES AND STEM CELLS

IMPLANTATION: Brit Berg et-al during 1994 have introduced transplanting of in-vitro cultured and expanded chondrocytes into defective cartilage. Stem cells paste obtained from the patient's own bone stem cells - harvested at a single contiguous cell sheet and adhered to other sheets to obtain the required thickness was used for the implantation.

Only 11 % of the total cases are successful since cartilage lesions having up to 4 to 11 % of cartilage damage are only suitable for cartilage repairing procedures. This is challenging for both the surgeon and patient, since the patients are charged with the responsibility of committing to strict post-operative conditions on which the success of the operation depends.

A NEW DRUG ON PAIN RELIEF: Very recently, a drug called **Tanezumab**, in the clinical trials conducted by the professors, inhibited nerve growth factor, a protein involved in pain signalling, expressed in the patients of osteoarthritis by which, 1) the reduced pain and 2) increased physical function could be noticed in the patients. For application of this drug, it requires further researches into its safety.

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with the purpose for wildlife viewing, Jeep Safari included in the packages will be led by an experienced guide. Apart from the regular ones, they also offer customize holiday package as per the traveller's requirements. To plan a great & memorable holiday in Kaziranga Tiger Reserve and Wildlife Sanctuary, the following special Wildlife Tour Packages are available in Kaziranga.

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- Kaziranga Photography Tour – 9 Nights & 10 Days (Delhi-Guwahati-Kaziranga- Delhi)

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Corporate Office (Tour My India)

C - 81C, Sector - 8, **NOIDA**, U.P.- 201301

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(85 hunting lines are available)

Fax - + 91 - 120 - 4052699

(24 hrs helpline) + 91 – 9212777225, 9212553107

Website: www.kaziranga-national-Park.com

Email: info@kaziranga-national-Park.com

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- **SOURCE: Internet and**

www.kaziranga-national-Park.com website)

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unlimited population of wild animals (*Onus lies on PAs*).....these are the root causes for all the present MACs in all the PAs and elsewhere in India which leads for the following dilemmas.

How long can the wildlife management contain animals in PAs with barriers?

What/where the herbivores have to feed on.... when the forest floors no longer hold grasses/fodder due to invasion by exotic weeds?

To where, the ever-increasing wild animals in PAs have to move with the disrupted corridors/fragmented forests outside the PAs?

How long/how much will the authorities be able to translocate the strayed wild animals into elsewhere-forests/ houses in zoos-(the big cats)?

With the above scenario in wildlife management,

What is in store for wildlife? is a multimillion-dollar question for wildlife management in India?

The writer is a Retired Dy. Conservator of Forests (Bandipur/Bannerghatta PAs) Karnataka and is an author/lance writer in wildlife, forestry and environment. He can be contacted on Mob.9632781811 . ●

CRUISING THROUGH CHALLENGES

Nagarjuna Sagar Srisailam Tiger Reserve Case Study

By

Dr K.Thulsi Rao

Introduction: The Nagarjunasagar-Srisailam Tigers Reserve (3,568 Sq.Km), the only Tiger Reserve of undivided state of Andhra Pradesh situated in the Central Nallamalai Hill ranges - an offshoot of Eastern Ghats was established in the year 1978. Considering the potential Tiger population, it was elevated to the status of "Tiger Reserve" in the year 1983. This sanctuary is an abode for floristic and faunal diversity. This represents the 6A 1 6B Biogeographic region Deccan Peninsula. The forests are of mixed dry deciduous type and the moist deciduous patches are seen along the valleys. The woodland savannas are characteristic feature along the gorges of the River Krishna. 1. Socio-economic Profile & Existing situation Bordering the P.A about 200 villages with a population of about 1.70 lakhs and one lakh cattle inhabit. Besides this, about three lakh cattle migrate from plains into this P.A every year. The people depend on the forests for their, food requirements, day to day needs NWFP, fodder for cattle and land for Agriculture. The degree of dependency of these people for their sustenance on Tiger land is substantial which affects habitat of the Tiger considerably. The Primitive tribe group- the "Chenchus" also inhabit the Nallamalais adding human component to the ecosystem. Lambada - one of the most versatile of the tribes with an ingrained ability to adapt to changing scenarios, also live in the border villages of the NSTR. The poverty coupled with unpredictable crop yield pattern make these people depend on P.A resources such as timber, fuel, fishing, and excessive collection of NWFP etc., beyond the carrying capacity of the land. The inter censal growth @ 1.3% further alarms the possible

encroachment of the habitat for the agricultural expansion.

As a result, people living close to the P.A. resort to felling of trees for commercial purposes to supplement their income. Excessive collection of fuel, fish and NWFP lead to the deterioration of the habitat. Most of the forest fires caused is purposeful by the NWFP collectors. The denial of resource use by the stake holders, has created a substantial gap between the People and the Park Management initially and the extremists made their presence felt by taking up their issues by threatening the forest staff and the situation hitherto was quite peaceful turned into danger when comparing with the inception years of the Project. The following were the state of affairs in the early years

Law and Order Situation in the early years of Tiger Project

Two Decades Back

- Absolutely no extremist activities
- Order of the time was enforcement
- Forests were intact Smuggling was not rampant
- Tendency of animal population was at increasing side
- Poaching occasional, peripheral & not from organized groups
- Plenty of water was available in the plains as the project act as large sink
- People living in good spirits - not much of Man-Animal Conflict

Problem Profile:**Origin of the Problem: Man - Man Conflicts:**

Ingression of extremism (Naxalism): The entry of extremists occurred during 1985 to settle some of the Socio-economic issues of the poor and downtrodden in Nallamalai belt. These issues prompted them to take hold on the issues in Nallamalai Forests. Brief history of their emergence is given in the following

1985 - Entered in to the Nallamalai Forests

1987 - Extremists initiated action on middle men that harass the Poor

1989 - Taken up issues related to FOREST DEPARTMENT.

Pre-participatory approach & its consequences in NSTR

The extremist activity reached its peak in this region against the government between the years 1989 and 1994 and acted against the interests of the tiger Project due to the **no knowledge of conservation values and their linkages with the lively hood of the people living within the vicinity of the forests. At the outset they were blatantly supporting the destruction initially with the following arguments:**

The initial arguments of Extremists against Tiger Project were

- ❑ Upgrading of Sanctuary status to that of Tiger Project was threat to inhabitant tribals & to extremists' existence in terms of imposition of certain restrictions such as Relocation, denial of access to resource use, on developmental activities etc.
- ❑ Therefore, they promoted disobeying the forest laws and supported revolt of people against forest officials

- ❑ Extremists warned forest officials of dire consequences if they enter into the forest.
- ❑ Annoyed of restriction on cattle grazing inside core area.

What Went Wrong?

- ❑ Lack of adequate knowledge
 - a. Importance of the Tiger Project among the people & extremists.
 - b. About the sensitivity of the problems among the PA authorities.
- ❑ P.T. shown as hindrance to the development of the people by development agencies like I.T.D.A, G.C.C to cover their short falls

Apart from the above reasons Man-Animal conflicts were also responsible for the situations turn from bad to worse in the beginning as the staff could not get the first-hand information due to the restrictions imposed on them by the extremists. However, the following gives the brief account of the problems encountered both by the people and the staff.

Man-wildlife conflicts and factors responsible for ingression of extremists

- a) **Crop Raiding:** Crop damage by wild animals has become the main reason for the conflict between the P.A. management and the people. It was observed that 30 - 35% of the crops are eaten or destroyed by wild animals.
- b) **Cattle Lifting by Carnivores and poisoning:** Tiger and panther attacks on the livestock are not uncommon. The compensation paid to the loss of cattle by the carnivores was a meagre and it was paid only to those killed outside the P.A. This tendency has led to an antagonistic attitude among the graziers and used to poisoning the carcass as they know that the forest staff could not get the

information under those circumstances.

c) **Death / Injury To Humans**: Injuries to human and rarely deaths do occur due to attack by the wild animals. Such incidences coupled with inadequate compensation created antagonism.

d) **Aggression towards forest officials**: With the support from the extremists, local people started rebel against the forest department on trivial matters even. There are incidents where the forest officials were beaten up badly by the people in presence of extremists.

e) **Prevention of Stakeholder Uses**: The establishment of P.A. and initial prevention of traditional stakeholder use had significant negative impacts on different P.A. resource users. Those traditionally highly dependent on the resources of the P.A. for their livelihood have had their previous economic strategies severely disrupted by the new restrictions. Landless households and women along with the peripheral residents who depend on P.A. resources for both subsistence and income supplements were most affected.

f) **Relocation**: Project Tiger Directorate had the opinion to shift all the core villages in a phased manner to declare it as National Park. To start with, the first phase has been successfully launched to relocate the "Peddacheruvu" village along with small gudemms of Pangidi. The responsibility of the rehabilitation was not vested with the Project Directorate. Due to the non-compliance of total rehabilitation and non-fulfillment of the commitments made before relocation, the Chenchus went back to their old habitation. Now they are not willing for any more relocation outside the P.A.

g) **Nature and extent of problem and the dynamics over time**: The problems which were beyond the

administrative control of N.S.T.R. was at the peak during 1993-94. Some of these problems were very sensitive and needed a careful handling. The problem specific treatments to each of the cases were the need of the hour. They took shelter in the remote forests of sanctuary. Most of the staff members were beaten badly and humiliated for booking any offenses against the tree fellers who were the sympathizers of the extremists. One Forest Range Officer was shot dead and warned forest staff with dire consequences if they enter into the forest. This has totally demoralized the staff and they were not ready to discharge their duties in the forest protection. People have taken advantage of this situation and started large scale felling of the trees, which led to considerable loss to the habitat.

Costs paid initially

- ☐ Risks
 - One Forest Range Officer was assassinated
 - Property Loss due to blasting of buildings
 - Staff lost morale and unable to perform duties
- Which led to decline in Tiger population due to poisoning of the carcass
- People took advantage & caused habitat destruction
 - Administration became weak to tackle the issue immediately.

BEGINNING OF THE CHANGE PROCESS:

1. **Genesis of change process**:

Historically there was healthy tiger population in the region. At the time of the sanctuary's declaration, 43 tigers were recorded (1978). The population had grown to 65 animals in 1984 and reached peak (94) animals in 1989. However, several anthropogenic factors led to the depiction in tiger numbers from 1990's. These included conflicts over

livestock kills made by tiger, habitat loss, and a corresponding loss in prey base. These problems primarily resulted from increased dependency of local people on P.A too.

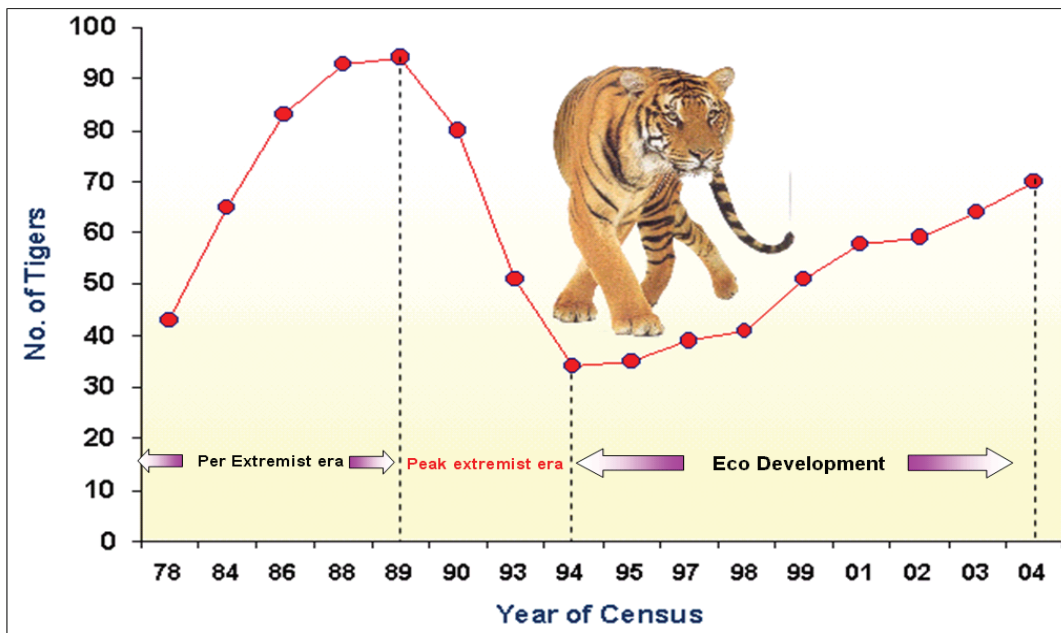
SOLUTIONS & OPPORTUNITIES: (Multi-Pronged approach) Realizing the need for people's involvement in conservation in general, and tiger conservation in particular, the Government of India identified N.S.T.R. as one of the eco- development program implementation sites. An Eco-development Team was constituted under a trained Ecodevelopment Officer. Main task of the Ecodevelopment team was to 1) prepare an Ecodevelopment Action Plan and 2) to bring an attitudinal change both in the staff and the people. Though the task was strenuous, this has accomplished the task very successfully. The first Eco-Development Action Plan for Nagarjuna Sagar

- Srisaillam Tiger Reserve was prepared to initiate actions required to stop the disorder. This plan recognized a need for shift of management strategy from total Regulatory to Participatory coupled with high degree of Conservation education specially designed to tackle the present circumstances known as **Conservation Holic (Consholic) Education**.

1. Conservation Holic Education: This is aimed at psychological transformation and attitudinal change of the hostile people into friendly and responsible conservation-oriented citizens with the following objectives.

Objectives:

- Motivation, sensitizing the people or the public irrespective of different walks of life to work voluntarily for conservation of nature and natural resources



Year	1978	84	86	88	89	1990	93	94	95	97	98	99	2001	2002	2003	2004
No.	43	65	83	93	94	80	51	34	35	39	41	51	58	59	64	70

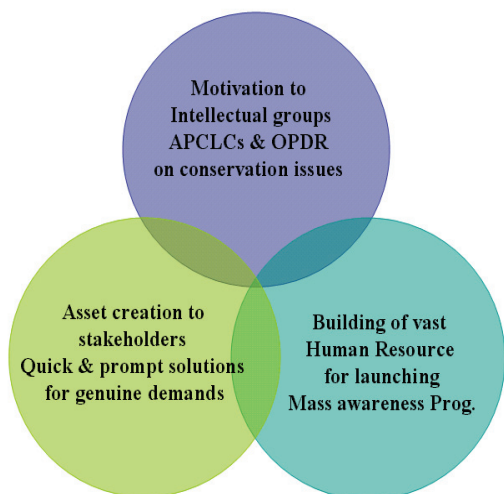
- ❑ Bringing an attitudinal change in proper understanding of nature and its function holistically by making people to realize through an effective practical oriented environmental education in the Forests.
- ❑ Inducing people to get addict to conserve environment without compromising, conservation ethics.

2. Process of influencing (Boosting up of Morale):
The first and fore most task of the Ecodevelopment

Team was to boost up the morale of the staff from the state of despair to delight. Countless number of motivations-cum- sensitization classes has been conducted to the staff to invigorate them to respond positively to people’s problems. Special Classes were conducted to build up the courage. Infusion of the positive mental attitude towards people by sterilizing their indifferent attitudes. This strategy has really resulted a friendly ambiance and confidence in the people to make friendship with the forest department.

Pro-Environment change:

Strategy adopted



1. Educate the intellectual groups and legal wings that have influence over the extremists such as Andhra Pradesh Civil Liberties Committee (APCLC) & Organization for People Democratic Rights (OPDRO)
2. Development of Human Resource (HRD)
3. Building trainers of trainers
4. Participatory planning
5. Simultaneous implementation of entry point activities
6. Formation of Ecodevelopment Committees
7. Organization of thrift and credit by women
8. Assets creation for forest dependents.

As told earlier, the voices of the Andhra Pradesh Civil Liberties Committee (APCLCS) and Organization for Protection of Democratic Rights (OPDRs) and extremists were at the peak and demanded denotification of Project Tiger from the scheduled area. During one of such movements, the E.D.O. had availed the opportunity to exchange dialogue with APCLCS, OPDRs and sensitized them about the importance of the conservation for the welfare of the poor. The sensitization classes have yielded result and APCLC; OPDR has taken up environmental

issues as one of their agenda items. This has brought a dramatic change in the attitudes of the extremists towards the Project Tiger staff besides warning the tree fellers of dire consequences of felling the trees. Again, the morale of the staff boosted up and from then onwards no. noteworthy humiliation was met with from the extremists. Though major promises were not given, most of the people’s aspirations as far as their living conditions are concerned were discussed at length. This has further accelerated the momentum and created a satisfactory confidence

among the people. Apart from this, the wage-earning employment through habitat restoration works stopped migration. Many water harvesting structures were constructed and old tanks and Kuntas were repaired through 'people's participation'. In some villages, where, the agricultural fields were kept barren for years together for want of water, were provided with irrigation facilities which led to cultivation of paddy on these lands. The people who were below the poverty line were brought above the poverty line within no time with the little incentives from the P.A. The people who owned lands but depended on forest resources due to the non-availability of water found themselves busy attending their fields along with providing employment to those who do not possess agricultural lands. The agricultural labour got employment in the fields for more than six months, which led to a significant reduction in habitat destruction. The P.A. management has shifted its policy about relocation of villages from the core area which removed the fear of translocation among the villagers. Now the people have started co-operating with the P.A. management and readily accepted the programmes of their choice listed during the P.R.A. The Ecodevelopment Committees have been formed in the villages involving both sexes as members. Women and marginalized people have been given due and true representation in the committees.

Entry point activities:

During the process, some entry point activities were initiated as desired by the villagers. Construction of water harvesting structures is one such entry point activity, which yielded excellent results. Water was the biggest constraint in the villages. Construction of water harvesting structures within and outside P.A. improved recharging capacity of previously dried up wells and bore wells now to raise crops and keep

them busy in their own farm lands.

Programme Planning:The Ecodevelopment NSTR truly followed the concept of Eco-development that is the "strategy with a site-specific package of measures evolved through people's participation with the objective of balancing socioeconomic development of the people and ecological sustenance". The main objective of the strategy is to reduce the thrust on the Protected Area habitat on one hand and improving the degraded eco-system on the other.

Human Resource Development

With regards to human resource development for successful implementation of the program, conducted several training sessions and workshops that aimed at motivating the staff, NGOs, EDC members, villagers, and other important stakeholders. In total, 1,140 such training workshops were organized involving 689 staff people of all levels, 434 representatives of NGO'S, 130 representatives from other governmental departments, 7,580 villagers, and 4,826 EDC members.

Alternative Income Generation Programmes (AIGP):

The local area needs were identified and addressed through a total of 60 income-generating schemes. To reduce the grazing pressure on the habitat, the animal husbandry scheme was implemented which replaced goats with sheep (586 households benefited). To reduce the fuel wood collection the alternative biogas (534 households) and smokeless chullahs were provided (10,330 households). 169 households were benefited through vegetable vending scheme, 44 through provision shops, and 53 through a basket weaving scheme. Other examples include fish rearing, apiculture, tailoring, canteen, cycle shops, mat making, etc.

Alternate income generation programmes substantially have brought economic empowerment among the woman. These programmes have also in many cases raised the resource dependents above poverty line and the purchasing capacity is also increased. Now this has helped the beneficiaries to start savings to create their own assets.

Women's participation:

Realizing the importance of the role of the womenfolk in conservation activities, the NSTR developed special strategies to ensure their involvement. To this end, special training programmes for women in conservation, eco-development, thrift and credit schemes were implemented. As women are often the primary fuel wood collectors, alternatives such as the use of bio-gas and smokeless chullahs were emphasized at these meetings.

As a means of economically empowering womenfolk, the Social Banking Scheme was formulated which constitutes a framework, with the participation of the NGOs, by which large numbers of individuals are encouraged to save nominal amount (Rs. 20 per month) with an ultimate goal of establishing a Low-Interest Rural Banking System from which all contributors can be benefited. 141 thrift and credit groups involving 3,126 members have been developed to date with savings of about Rs. 10 Lakhs.

Terrorism was mitigated via direct dialogue with the concerned parties. In the past, there were several cases of physical assault on staff resulting in grievous injury and death. As a result of the efforts of the Ecodevelopment team, the previously hostile attitude of these people towards Forest Department activities changed to one of cooperation. This was critical in ensuring the support of local people in further

implementation of conservation activities.

KEY RESULTS: a) Habitat enrichment: A total of 115 EDCs are formed in and around the Nagarjuna Sagar - Srisailem Tiger Reserve since 1995 onwards, covering an area of 10,420 hectares under the habitat improvement scheme. This scheme involved the removal of weed growth, soil and moisture conservation (SMC) works, construction of check dams and percolation tanks, bamboo mounding, and enhancement of the regeneration process by dressing up of the competitive canopies. Beside these activities, several measures were taken to reduce the biotic pressures on the habitat.

Consequently, wherever bamboo regeneration was suppressed by lanthanum, now has own tremendous growth. This has benefited the herbivores to disperse more into the open areas created by through this work. Tigers are seen moving in these areas after prolonged absence in these places. SMC works have substantially improved the ground water potential which not only helping the wild denizens to quench their thirst but also helping hapless farmers on the fringes on the other side. Gully plugging works have helped in checking out the soil erosion.

RESULTS:

1. Once the hostile extremists against the P.T, now, warned the people of dire consequence for destruction of forests.
2. Socio-economic problems of the people successfully been prioritized and addressed.
3. Sensitization on the importance of conservation to the livelihoods of people minimized conflicts.
4. Orientation of staff towards welfare of the people created confidence in them.
5. No more fear of extremism in the staff for discharging duties.

- 6. No interference of extremists in PA activities except for little stray incidents either by mistake or when perceived threat.

The successful implementation of the eco-development program through people’s involvement has improved the quality of habitat, which in turn has led to the dispersal of fragmented and restricted prey base. Frequency of sighting of wild herbivores - Chital, Sambar, Nilgai, Four-horned antelope, and Chinkara has increased during the past two years.

Lessons learnt: Diagnosis of the Problems: The Eco-Development NSTR has broadly classified the problems in to 1. Apparent and 2. Real problems. Most of the times, the real problems are hidden away by the apparent problems which do not respond for the treatment designed to the latter. One should explore to identify the root cause of the problem. Quick and better results can be obtained through the sincere and positive approach. Therefore, a micro planner should bear this in the mind, while designing an appropriate treatment without compromising the conservation values.

Problem Ranking:

Problems get precipitated if they are not properly addressed to at right time. The problems in the context of Eco-Development can broadly be identified in to three categories **1. Benign 2. Malignant 3. Terminal stage**

Benign stage : The P.A. Manager should be shrewd enough to tackle the problems in the benign stage which does not cost much to the conservation. Any negligence precipitates the issues inherently before it could be blasted suddenly.

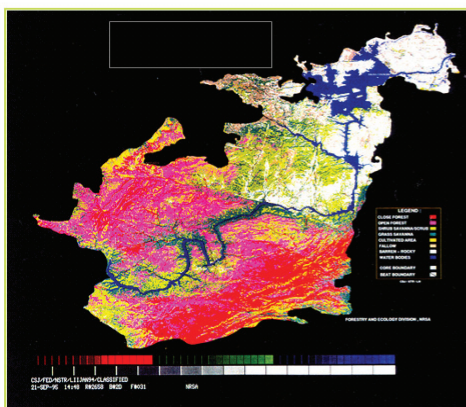
Malignant stage: If the issues are found at the stage there is still a chance to cure (50..50%).

Terminal stage: There is a little chance left for treatment and ends with disastrous results.

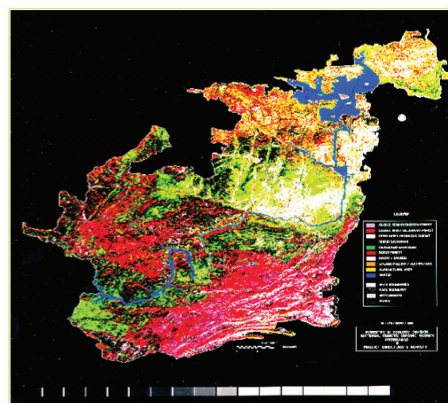
Mostly the problems start slowly and gradually gain the momentum. If a problem which is at static level receive an impetus through an external force gains the momentum like a big falling stone from the state of rest. The static energy of the problem gets

RESULTS OF ECODEVELOPMENT APPROACH

DECREASED PROBLEMS & IMPROVED HABITAT



1996



2000

converted in to the kinetic energy that creates proportional impact in relation to the depth and gravity. **Here the depth is the Gap between the people and P.A.**

The problem further gets aggravated with the influence of Catalytic or Accelerating forces. This again warrants a separate treatment with high premium to neutralize the actions of the above driving factors.

Designing the treatment: The energy level at which the problem revolves should properly be estimated before we could design an appropriate treatment. Otherwise, the problem gets immunised and needs longer path ways to mend it back on to the trails.

The design should also take in to account of the aetiology of the problem.

Treatment: The treatment should be based on the problem specific, intensity specific. The root cause to the most of the problems in NSTR found to be water related. Those villages which have fertile lands also suffered from drought. The existing tanks are getting dry because of destruction in the catchment. Smugglers are caught in the forest and motivation yielded good results.

Follow the Golden Principle DDT

1. Diagnosing the problem (Problem ranking i.e., Stage of problem)
2. Designing the right Strategy
3. Treatment (precedes pre-treatment)

Treatment consists of a capsule with the ingredients of five "P"s.

- P1. Positive thinking
- P2. Purity in approach
- P3. People's participation
- P4. Practically
- P5. Pursuance.

Recommendations:

- Include in vision - 2020 to ameliorate from present and expected future problems.
- Institutionalize the process
- Continue Ecodevelopment approach till it becomes obsolete or a new approach is discovered.
- Consider human dimension is part of the management of P.A. ●

(To be continued...)

“The great thing about getting older is that you get a chance to tell the people in your life who matter what they mean to you.”

– Mike Love

BOOK REVIEWS

Title: Forest Rights Act – Accelerated Deforestation.

Author: Brij Kishore Singh, IFS (R) **Language:** English

Pages: 357; **Year:** 2021 **Price:** 399/-

Published by: Notion Press, Mylapore, Chennai - 600004

Reviewed by: Dr. B Raghobham Rao Desai

Of all Brij Kishore Singh's books, **Forest Rights Act – Accelerated Deforestation** is the new favourite. **Any book that kindles our obligation towards environment and biodiversity has got to be a good book.** The author has outdone himself with this magnificently packed offering by filling it with realistic and engaging occurrences as an aftermath of implementation of the impugned Act ---- the reader is drawn-in by the detailed descriptions of the damages undergone in many States he had dealt, as the Forest Rights Act undermined other Forest Laws. Almost as subtext, there's on view the unbelievable avarice, machinations and brutal disloyalty that plagued the lawmakers and subsequently by the political bosses in speedy implementation of the provisions of the Act, to reap rich dividends and consolidate their political futures.

Indeed, the aim should be to assess a tree patch's value in an ecosystem needing to be evolved as a protocol giving due consideration for the protection of environment rather than need to expand agriculture at the cost of existing tree-growth! The book amply highlights this in no uncertain words, that to sustain life support system on earth: forests are vital components. As a cultured & refined lot and traditional in-caring for environment which had throughout given so much to survive & celebrate, it is sad to see that such an Act had been thoughtlessly promulgated which is nothing but a culprit leading to the social, cultural and civil discrimination & ruination for the unjust rise of the claimants fictionally getting

the forest land granted as a right under the provisions of the controversial Act. However, it's still not very late if we could think wisely and cause the Act repealed at the Apex Court level as early as possible, to save whatever has not yet been lost and stop further destruction as also rebuild the ruined ecosystem and live a life that balances with nature.

Interpreting the Act as a land distribution exercise and Godsend, the politician across party lines in various States fixed targets for the districts in their constituencies/jurisdiction on the one hand, while the both groups brazenly misusing the law. As a result, large scale fresh encroachments & deforestation of prime forests was witnessed in most of the States for occupying forest-lands in a hurried manner, to claim individual 'Forest Rights' over the said lands. In the melee not only natural trees of indigenous species (including Sandal) were felled but also the planted trees to replenish scantily clothed gaps & peripheries, at enormous cost and stupendous effort over the years. The author has painstakingly collected the figures from all over, to conclude with evidence that at least about ten million hectares of forest land had been lost after the promulgation of the Forest Rights Act. Taking a cue, the officials too had connived in quite a few cases.

An extraordinary accomplishment of binding the sweep of unprecedented haste with which the exploitative Politicians of every State had gone ahead with the implementation of the Act, within the

covers of the book by constructing the narrative, taut and full of nuggets (or valuable facts) for the reader. **More importantly, the deforestation of even Eco sensitive zones is reconstructed with immense concern as an entity whose passion for the invaluable vegetation which took centuries in nature to clothe the earth will haunt the contemporary reader.** Packed with descriptive narratives, we find spaces where time stands still while the narrative tarries, explores the damages & destructions which will have long-term adverse effects on all living creatures.

The deft writing and the slow reveal are bound to build up an enthralling & evocative thirst in the reader, a thirst that is quenched only by reading the entire book in one go. Isn't it true that when the dawn, is still dark, a bird called 'Faith' feels the light and starts 'Singing' ---- **the country's forests were in the throes of a protracted showdown, buffeted all of a sudden by the most controversial Forest Rights Act,** and thence enter Brij Kishore Singh to rise & write a book, laying clearly the contours of all our expectations!

The unusual protagonists, like the retirees of Indian Forest Service J V Sharma and V Sambasivam, and the efforts they made against several odds, about a decade-and-a-half ago make this book also an entertaining read. The inherent drama propels the narrative and the simple language aids in this ---- **no literary-flourishes being there that would stand out as inauthentic.** Whether it is the sincere efforts made in some States by the Protagonists or no efforts made in the others but deforestation went on at an accelerated rate in spite, it is all drawn in sharp and precise detail.

The expository and chunky title serves the book well. **We humans pride ourselves or being more intelligent but ironically, history and the world around us is littered with the consequences of our follies and foibles,** our whims and inconsistencies, sinister sequences and brutal assaults on forests are bound to let the reader's head spin around, as he learns (by going through Brij Kishore Singh's book) how everything is going wrong and the denudations of forests becoming a reality ---- **larger pictures of darkness beneath the seemingly placid surfaces. ●**

“Nobody grows old merely by living a number of years. We grow old by deserting our ideals. Years may wrinkle the skin, but to give up enthusiasm wrinkles the soul.”

– Samuel Ullman

FOSTER A GREENER FORTUNE WITH JANBHOOMI

By
Akshita Gupta

Enactus Kirori Mal is a student chapter of the international non-profit organisation 'Enactus', striving to formulate and implement social business modules for the economic upliftment of underprivileged communities. Guided by educators and supported by business leaders, we take a kind of entrepreneurial approach that empowers people to be a part of their own success. With over 70 members, our team currently operates three projects: Project Dor, Project Syahi and Project JanBhoomi.

Project JanBhoomi aims to tackle the problem of land degradation by producing organic compost. It is a significant step towards creating impact and changing lives by ensuring sustainable development. The project was manoeuvred in the college premises on 26th of April, 2018. After receiving technical expertise from the IARI (Indian Agricultural Research Institute), we set up compost pits across Delhi.

JanBhoomi promotes composting, a sustainable alternative to the use of chemical fertilizers. To address the greater issue of loss of soil fertility, we collaborated with the Government of Haryana to create a direct impact on grassroot level. Through this intervention in Palwal, Haryana, we encouraged farmers to substitute DAP for compost to boost the harvest and pull down the input prices. The alarming rate of land degradation has fostered a dying need for a vital action to combat climate change. Given its viability, the introduction of compost tackles two problems simultaneously: it helps in taking care of the waste generated by animals whilst striving towards the ultimate goal of making the environment "green" by reducing the magnitude of the many

harmful effects that widespread use of chemical fertilizers causes to the planet.

The locations where we have created an impact till now includes Vasant Kunj, Pitampura and Palwal.

We believe in an organic lifestyle and cultivation of one's own nutriment is the best way to practice it. With that in mind, we launched a "gardening toolkit"-encouraging people to adopt an eco-friendly way of life. The JanBhoomi toolkit contains 5 high-quality tools which will enhance your gardening experience. These include a hand cultivator, a fork, a trowel, a weeder, and a transplanter. These are all contained within a jute bag, thereby reiterating the idea of "Go Green". We have also collaborated with Angelique Foundation that helped us in setting-up a flower composting machine at Birla Mandir. All the floral waste collected from the temple goes to the machine and gets converted to a fertile treasure that is flower compost. This is how our initiative is not only preventing river pollution but also leading the way towards efficient waste management.

By conducting surveys and using critical thinking skills, we are focussing more upon intensive research and development to diversify our approach towards waste management in urban areas. The vision of our project is to ensure that the fertility of the available land should be maximized to make the most of this limited resource and maximize productivity. Our project strives to combat global warming, climate change and form more sustainable social entrepreneurial business models with an optimistic approach for a better tomorrow. Let's all unite for a greener and cleaner tomorrow. ✨

BEHAVIOUR OF TIGER

(Source Internet)

Social Structure: Tigers are territorial and usually solitary in nature. Their social system is connected through visual signals, scent marks and vocalizations.

Tigers are usually solitary in nature, interacting briefly only for mating purposes and occasionally to share their kill. However, there has been a few rare instances documented in which tigers have collaborated on a hunt, similar to a pride of lions.

The size of tiger territories varies greatly by locality, season and prey density (the amount of prey in a given area). In areas with high prey densities, tiger territories tend to be smaller in size because ample prey may be found in smaller vicinity. For male tigers in Ranthambhore India; the prey concentrations are high and male tigers have territories that range in size from 5 to 150 km² (2 to 60 Sq.miles). In Siberia the prey concentrations are much lower and male tiger territories range in size from 800 to 1200 km² (320 to 480 Sq.mi). Seasonality in terms of prey migrations, food availability and weather may also affect prey populations and therefore the size of tiger territories.

Social Behaviour: Males have larger territories than females. An adult male's territory will usually overlap several females' territories. The larger area contains more than enough food, water and shelter resources, but is larger to accommodate more females' territories. Therefore, females are the most coveted resource for males.

Aggression amongst adult male tigers can be influenced by the number of tigers in a given area (density) and whether there is a social disruption in which males are competing to take control of a territory. The intensity of aggression increased when there are high tiger densities for a given area because there is more competition of resources and mating

opportunities. Resident male territory-holders may be challenged by other young males for possession of the territory or the young males may challenge each for ownership if the resident male has vacated or dies. The strongest male will take possession of the territory. These times of social disruption may also cause aggression between females.

Tigresses' territories are smaller than that of males but focus on vital resources required for rearing young.

Tigresses usually occupy territories adjacent to or take over parts of their mother's territory.

Daily Activity Cycle: Tigers are mainly active at night and less active during the mid-day heat. However, this pattern may vary. Grooming is an important part of the tiger's day. They use their rasping tongue to remove loose hairs and dirt from their fur. The grooming process keeps the tiger's coat in good condition by using their tongues to spread oils secreted from their glands.

Individual Behaviour: Tigers, unlike many other cat species, readily enter water to cool themselves and in the pursuit of prey. They are powerful swimmers and capable of traversing lakes and rivers.

Tigers assert and maintain their control over their territories by continuously patrolling them.

Interaction With Other Species: Tigers coexist with other predators such as leopards, Asiatic wild dogs, brown bears and wolves throughout most of their range. Usually there is little interaction between species especially since tigers are mostly nocturnal (active at night) and the other species are mainly diurnal (active during the day). *



Birthday Greetings
We wish the following born on the dates mentioned
"A Very Happy Birth Day"



S.No. Name of the Member D.O.B.

Sarva Sri

1.	A.V. Joseph	05-08-1956
2.	P. Rajendranath	10-08-1953
3.	M. Mohan Rao	12-08-1952
4.	L.R. Sekhar	13-08-1953
5.	K. Suryanarayana	15-08-1952
6.	V. Kishan	16-08-1950
7.	M. Pradyumna Reddy	23-08-1955
8.	N.V. Jayanti Babu	23-08-1953
9.	A. Sudhakar	24-08-1948
10.	D. Basavasankar Rao	25-08-1955
11.	P. Vishweshwaraiah	27-08-1951
12.	C. Muralidhar Rao	28-08-1941
13.	P. Ranga Raju	30-08-1952
14.	T.V. Ranga Rajan	31-08-1935
15.	M. Narasimha Reddy	02-09-1954
16.	K. Tulasi Rao	03-09-1954

S.No. Name of the Serving Officers D.O.B.

Sarva Sri

01.	Syed Maqsood Hussain	07-08-1967
02.	Ananth Shankar	07-08-1988
03.	Smt. M. Revathi	09-08-1970
04.	Ps. Srinivasa Murthy	14-08-1962
05.	Sivala Ram Babu	21-08-1980

S.No. Name of the Member D.O.B.

Sarva Sri

06.	Smt.Sunita J.MaheshBhagwat	26-08-1970
07.	S.Srikanthanatha Reddy	25-08-1974
08.	B. Srinivas	02-09-1962
09.	V. Ram Mohan	06-08-1967
10.	A. Narsimha Reddy	08-08-1983
11.	T. Venu Babu	09-08-1969
12.	A. Rama Murthy	10-08-1969
13.	P.B. Narayana Kumar	13-08-1979
14.	Smt. I. Pushpa Sowjanya	13-08-1981
15.	S. Venkatesh	15-08-1977
16.	Smt. P. Sunitha	15-08-1980
17.	M. Venu Madhav Rao	16-08-1967
18.	D. Veena Vani	16-08-1981
19.	Ch. Sivaiah	20-08-1967
20.	S. Rajasekhar	20-08-1970
21.	I. Kasi Viswanatha Raju	20-08-1967
22.	S.M. Hussainy	20-08-1961
23.	Smt. P.N. Adilakshmi	23-08-1970
24.	Ms. E. Harika	24-08-1984
25.	P. Anil Kumar	30-08-1965
26.	K. Ashok Kumar	31-08-1976
27.	N. Siva Kumar Sangala	31-08-1975
28.	M. Ravi Prasad	04-09-1966

- Secretary



OBITUARY



Sri P.S. Reddy

06.06. 1932 – 09.05.2021

Sri Pulimamidi Srinivas Reddy (Popularly known as P.S. Reddy and P.S. to friends) passed away on May 9, 2021 due to Covid /Viral Pneumonia at Hyderabad.

He was born in an elite family of Bhongir. His father Sri P. Venkat Reddy was a Civil Engineer and mother Smt. Meenamma was a housewife. Srinivas was the third son of his parents. He had his early education in Bhongir and higher education in Hyderabad. He passed B.Sc. in 1954 from

Osmania University College of Science. He then joined Law College, discontinued LL. B, when he was selected by the Government of Andhra Pradesh for undergoing training in forestry for appointment as Forest Ranger. He joined Southern Forest Rangers College at Coimbatore and secured Higher Standard in the year 1957 – '59 batch. He then commenced his career in Government Service as Range Officer in the Forest Department.

As F.R.O, P.S. Reddy worked at several places, like Mahbubnagar, Pasra, Mangapet, Narsampet, Yellandu, Tiruvur etc. He got his promotion to the State Forest Service as Assistant Conservator of Forests in 1975 and after a few years, as Deputy Conservator of Forests. He received special training for a year in wildlife management and received a Diploma from The Wildlife Institute of India at Dehra Dun.

As ACF and DCF, Srinivas held important posts and discharged duties sincerely to the utmost satisfaction of his superiors. As curator of Indira Gandhi Zoological Park at Vishakhapatnam he did a marvelous job and received laurels from his Conservator. He was Divisional Forest Officer of Achampet and Medak divisions. He went on deputation to the Andhra Pradesh Forest Development Corporation and worked as Divisional Manager at Bapatla. While working in the A.P.F.D.C, he raised plantations successfully. At the end of his career, he was appointed as the Deputy General Manager at the Head Quarters.

P.S. Reddy was a unique personality who had vast experience in several areas of Forestry like Range Administration, Wildlife Management, Raising Successful Plantation and above all he gained adequate experience in personnel management.

Srinivas was married to Smt. Sujatha in 1960 and the couple had two sons: Ajay (Doctor, USA) and Sharath (Electronics Engineer, USA); and a daughter Geeta (Officer, Reserve Bank of India) married to Dr Vishnuvardhan. They have seven grandchildren and two great grandchildren.

P.S. Reddy consciously maintained good health. Even in his advanced age, he was a regular morning walker and tennis player in the evening. He was social and sociable. He had a very good public relation. In service, he was highly disciplined and was liked by his superiors and loved by his staff. His death has created a void which is difficult to fill. We extend our sympathy and sorrow to the bereaved family.

We pray God to rest his noble soul to peace!

K.B.R

OBITUARY



K. Mohan Reddy

16.01.1934 – 18.07.2021

Sri Korpola Mohan Reddy, breathed his last peacefully at his daughter's residence in Habshiguda, Hyderabad on Sunday 18 July, 2021 at 06.30 a.m. He was 87. Mohan Reddy was born in an agricultural family of Upperpally village in Wanaparthy district and was the 5th among the six siblings of his parents, Sri Narasimha Reddy and Smt. Manemma. After primary education in the village, he had received secondary education in Wanaparthy High School. He then did B.Sc. from Nizam College at Hyderabad.

Mohan was selected by the Government of Andhra Pradesh for appointment as Forest Ranger and was deputed for training at the Southern Forest Rangers College at Coimbatore. He successfully completed the forestry training 1956 –'58. He worked creditably as Range Officer for about 17 years at Kammarpally, Banswada, Siddipet, Narsapur, and Mannanur. He assisted in preparing Working Plan for Asifabad Forest Division. Mohan was promoted as Assistant Conservator of Forests in 1975 and Deputy Conservator of Forests in 1989, in the State Cadre. He was then appointed by promotion to the Indian Forest Service (I.F.S) in 1989 in Senior Time Scale and to the Junior Administrative Grade in 1992. In Superior Forest Service, he worked as Sub-DFO at Karimnagar, and as DFO Logging division at Bhadrachalam. His services were lent to the Andhra Pradesh Forest Development Corporation where he worked as Divisional Manager at Kothagudem between 1978 and 1985. He was then repatriated to the Department where he worked as DFO Kamareddy, and Asst. C.C.F in the Office of the Chief Conservator of Forests at Hyderabad. He retired after a successful service of 34 years on January 31, 1992.

Mohan Reddy was a very popular officer who worked hard in whatever capacity he was posted and he strove to keep the morale of himself and his subordinates high. Raising plantations was his forte. His pioneer plantations in Mulugu of Siddipet district and plantations in Kothagudem district are living monuments. In recognition of his performance, he received quick promotions. He was lovable and friendly with everybody.

Mohan was married to Smt. Lakshmi in 1959 and the couple have one son and two daughters. He was a very accomplished and proud parent to Dr Madhukar, Dr Madhavi and Dr Manjula, proud father-in-law to Mrs Tanuja, Dr Sundeep Reddy, Dr Krishna Reddy and a proud grandfather to seven grandchildren and a great grandson.

God has been great to accept his prayer.

Anaayasena maranam Oh Lord! grant me peaceful death
Vina dainyena jeevanam May there be no bodily pain

May the Lord bless his soul to rest in peace!

KBR



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Imitating the mother, (*Elephas maximus*) Asian elephant

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