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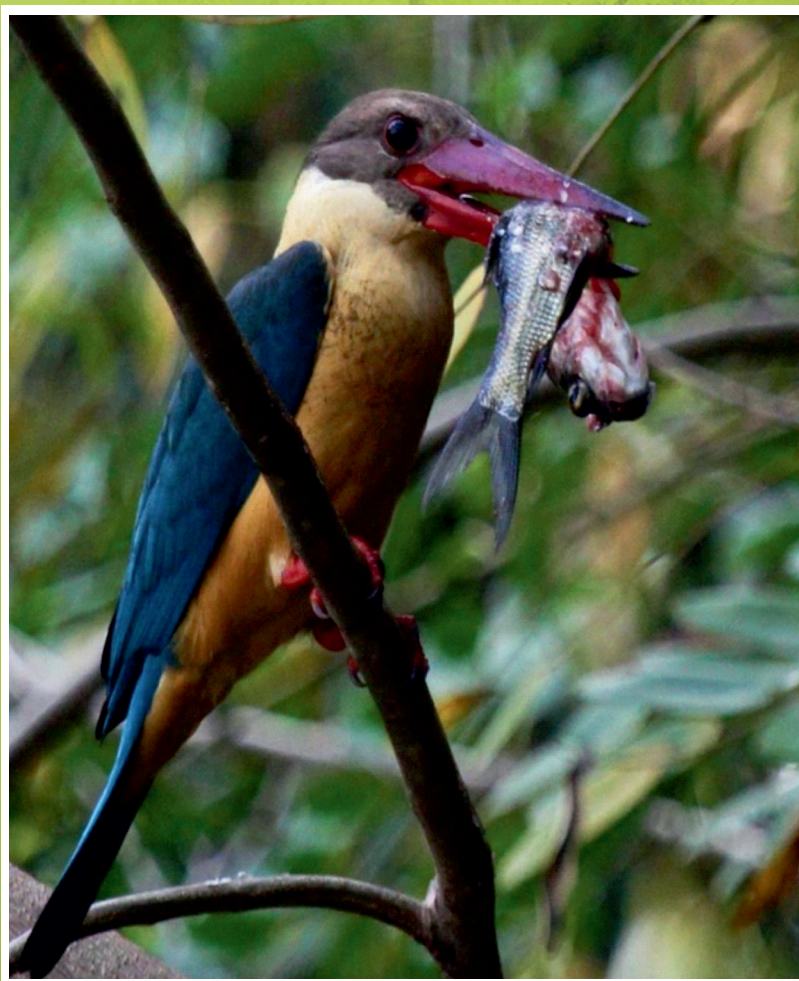


Photo by Imran Khan from Pench

Stork-billed Kingfisher (*Pelargopsis capensis*)
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- TSFDC is also developing Urban Parks in Lalgudi Malakpet RF Cluster, Thumukunta RF & Gowdelli PC Kalan & PC Khurd Cluster. Sankalp Taru NGO is collaborating with TSFDC in improving greenery at Gowdelli Park.
- TSFDC has also taken up consultancy work for NTPC and RFCL and successfully raised multiple Row avenue plantation along Rajiv Rahadari highway in peddapally Dist.
- Dhanvanthari herbal garden is revived with support from Deloitte and Technical support of environment forest solutions.

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Editorial

Uttarakhand floods:- A major tragedy occurred in Uttarakhand's Chamoli district on 7 February 2021 in the environs of the Nanda Devi National Park, a UNESCO World Heritage Site in the outer Garhwal Himalayas in Uttarakhand state. It is believed to have been caused by a landslide, an avalanche or a glacial lake outburst flood. It has caused flooding in the Chamoli district, most notably in the Rishi ganga river, the Dhauliganga river, and in turn the Alaknanda—the major headstream of the Ganges. At least 58 people are confirmed to have been killed (till 17th February) and more than 150 are still missing. Several labourers working at Rishi Ganga hydroelectric power project were reported missing soon after the incident. According to the details, a dam of the Tapovan power project was breached and has been washed away.

Flash floods in Uttarakhand had massively increased the turbidity in the Ganga river, overwhelming the filtration systems at two Delhi Jal Board water treatment plants in Delhi, eventually impacting the supply of water across multiple localities in the city. Due to alarming levels of impurities, Delhi Jal Board's water treatment plants in Bhagirathi Vihar and Sonia Vihar were only functioning at 30 to 40 percent capacity. A glacier break is suspected to have caused the flash floods in Uttarakhand's Chamoli.

It is believed that in morning hours flash flood occurred in river Rishiganga due to falling of glacier in the river which exponentially increased the volume of water. Due to this the Rishiganga hydro project near Raini village was completely devastated. The Border Road Organization bridge on Joshimath-Malaria highway was also completely washed away. There were six graziers with their livestock and they were also taken away by flash flood. Rishiganga meets Dhauliganga near Raini. So Dhauliganga

also got flooded. Few houses of the village were washed away. There was an NTPC project on river Dhauliganga near Tapovan. The entire project was completely devastated. Two ropeway bridges connecting villages on the other side of river also washed away. Some 2,500 people in 13 villages were initially cut off by the flash floods sparked by the glacier's collapse. As the ice melts, glaciers become unstable and start to retreat. Large glacial lakes can form, and when parts of the glacier in front of it break away, they unleash the water trapped behind it causing an outburst of floods. A 2019 study found that Himalayan glaciers are melting twice as fast as last century, losing almost half a meter of ice each year. Environmentalists have long warned that rampant development in the Himalayan state is an ecological catastrophe waiting to happen, authorities described recent landslide as a freak event. This mishap is the result of construction along the state's rivers, which in recent years have seen an increasing number of hydroelectric dams, projects and infrastructure connecting them, such as roads and new developments. Most of the destruction was centred on two hydropower projects. The Rishiganga Power project -- a small dam of 13.2 megawatts -- was completely washed away in the deluge, India's Ministry. Dr Ankal Prakash, Research Director at Indian School of Business' Bharti Institute of Public Policy, said "it looks like a climate change event." Environmentalists have claimed that climate change led to the burst of a part of the Nanda Devi glacier at Joshimath in Chamoli district of Uttarakhand.

"There is no doubt that global warming has resulted in the warming of the region. Climate change-driven erratic weather patterns like increased snowfall and rainfall, and warmer winters have led to the melting point of a lot of snow falling. The thermal profile of ice is increasing, where earlier the temperature of ice

ranged from minus six to minus 20 degree Celsius, it is now minus two, making it more susceptible to melting". Disasters of this kind are becoming more frequent in the Himalayas, with many scientists pointing to rising temperatures as one of the causes. The Himalayas have been warming at an alarming rate for years, melting ice long trapped in glaciers, soil and rocks, elevating the risk of devastating floods and landslides, scientists warned. Nearby populations were vulnerable, they said, and the region's ecosystem had become too fragile for large development projects. The devastation of the Uttarakhand floods has once again focused attention on the fragile ecosystem of the Himalayas, where millions of people are feeling the impact of global warming. The World Bank has warned that climate change could sharply diminish living conditions for up to 800 million people in South Asia. But the effects are already felt, often in deadly ways, in large parts of the Himalayan belt.

The region has about 15,000 glaciers, which are retreating at a rate of 100 to 200 feet per decade. The melting feeds or creates thousands of glacial lakes that can suddenly break through the ice and rocky debris holding them back, causing catastrophic floods. In Nepal, Bhutan, India and Pakistan, a large number of glacial lakes have been deemed imminently dangerous by the International Centre for Integrated Mountain Development, an intergovernmental group. Ravi Chopra, the director of People's Science Institute in Uttarakhand, said a 2012 expert group appointed by the government had recommended that dams should not be built in the Alaknanda-Bhagirathi basin, including on the Rishiganga. He was part of a scientific committee appointed by India's highest court in 2014 that also advised against building dams in "the para-glacial zone," what he described as an area where the valley floor is more than about 7,000 feet above sea level. "But the government has gone ahead and chosen

to build them," he said. Both of the hydroelectric projects hit by Sunday's flood — one obliterated and the other badly damaged — were built in that zone, he said. D.P. Dobhal, a former scientist at the government-run Wadia Institute of Himalayan Geology, said, "When we develop such projects in the Himalayas such as hydro projects or roads and rail, in detailed project reports the glacier study data is never taken into consideration or included." The government is building more than 500 miles of highway in Uttarakhand to improve access to several places, despite environmentalists' objections to the massive forest clearance required, which can hasten erosion and raise the risk of landslides. A scientific committee appointed by India's Supreme Court and led by Dr Chopra concluded last year that the government, in building the highway to the width of 10 meters, about 33 feet, had gone against the advice of its own experts at the Transport Ministry. The Supreme Court sided with one faction of the scientific committee and ruled that the road should be limited to 5.5 meters, or about 18 feet. But by that time, hundreds of acres of forest and tens of thousands of trees had already been cut, a report in the Indian news outlet The Scroll said.

The recent floods and devastation are not the first incident in our country which is very thickly populated and pressure on forests is very high. Such major mishaps have occurred on Himalayan regions, Kerala, and western ghats. In 2012 in Himalayan region major devastation took place in which human and property loss occurred. On 16 August 2018, severe floods affected Kerala, due to unusually high rainfall during the monsoon season in which 500 persons died and more than hundred are missing. During August 2018 mishap occurred in the Western Ghats due to landslides and heavy loss of lives and property occurred. These are some of the incidents occurred in the recent past in our country. Why these incidents are occurring? Are these incidents man

made? Why these incidents were not occurring few decades ago? The answer is yes, we are responsible for all such mishaps. These mishaps are definitely man made. We are very careless and not respecting the nature. We are cutting crores and crores of trees in the forest for various purposes, like agriculture, roads, railway lines, dams, mining, and canals. Large scale felling of forests is causing global warming and rise of average temperature. This in turn is causing melting of glaciers, melting of ice in polar region which rises the sea level and flooding in rivers. Due to felling of forest in Himalayan region,

Western and Eastern Ghats landslides are occurring which is causing havoc in the hilly regions. Nature is ringing danger bells but we are not listening to these danger bells and continuing to fell the forest without bothering about the ill effects of forest felling. If we do not protect our planet our next generation will hold us responsible. It is high time for us to initiate action to save our planet.

Vana Premi wishes that we all realize the importance of forest and protect our forest for the betterment of all living organisms. **QMK.**

In this age, when soil is eroded because of a thousand reasons, the wetlands are a gift of nature that help protect soil erosion.

The wetlands help to sustain life on this planet and so it is of utmost importance that we save the wetlands.

The Wetlands are the homes to many creatures and they would be homeless if the wetlands were to vanish.

The Concept of Degrowth in Economics is a Gandhian Philosophy

By UMA SHANKER SINGH, DSc

Once, the term 'growth' was considered a panacea. This was especially true of the West as it emerged from a dark Second World War. As buyers joyously took to new indulgences, 'growth' became the gold standard of an economy's performance. However, this growth had many layers in itself and one of them was huge devastation of environment. Growth came with rising emissions until 1990, Europe and the United States of America produced over 70% of carbon dioxide emissions. This also led to a phenomenal growth in consumerism and most of the developing countries became a market for the developed world. The world's top ten percent income earners were the reasons and they caused up to 43% of environmental damage, degrading land, water, air and biodiversity globally. While the developing world needs growth to provide adequate living standards to its people, it is apt for developed nations to slow down consumption now, reducing their energy and material use. Now the new concept of de-growth has come up, which means to consume far more responsibly and waste less. For many Western consumers, the change has started at home instead of discarding goods to cram landfills, recycling has proliferated. Instead of buying more clothes the consumers are turning to brands which exchange apparel as 10,000 litres of water are needed to make one pair of jeans therefore, they save water as well. Instead of choosing more meat products as livestock farming causes 18% of global greenhouse gas emissions, consumers are exploring plant-based alternatives, the number of Americans identifying as vegan growing by 600% between 2014 and 2017. These trends show consumer driven de-growth reshaping Western economies. Humanity now faces a Rubicon of choice. It is still possible to grow beyond growth, caring for those who share this earth with us, and those who are yet to grow

up. This is heartening to see a well-known economist called Giorgos Kallis and a seasoned campaigner to explain why the idea of ceaseless economic growth is being questioned all across the world. We are literally on the brink of a planetary breakdown now. We are sacrificing the well-being of the planet, and our own lives, just to keep GDPs infinitely growing. Our societies are shaped by this idea social services are cut to ensure growth. Then, a pandemic hit and everyone wonders where the state is. Our belief that an economy can keep growing all the way to infinity is absurd. And to this idea, we are sacrificing both people and environments. This pandemic taught us and revealed how much of our wellbeing we have forfeited but this castle is broken to pieces. In Europe, the health systems were caught off-guard and we were able to pull through this tough time only with self-discipline. This has been extremely painful to see that disease monitoring and public health systems were debilitated by years and years of spending cuts, in the name of sustaining growth. The pandemic also showed the lack of resilience of growth-oriented economic systems. It seemed impossible initially to close airports or cancel concerts and conferences until it was too late. In many places, people lost their jobs, and there was no provision to shift human resources from where they were made redundant by the pandemic (such as in tourism) and put them to work where they were badly needed (such as in track and trace systems). The growth economy revealed its weaknesses it cannot shift and redistribute resources fast enough to where they are needed, and it can collapse, rather than adapt to a changing environment.

GANDHIAN PHILOSOPHY STILL GOING STRONG:
This is actually a Gandhian philosophy which means

that we each have to live a simple life, so that those less lucky have enough to simply live. Right now, over-consumers in the western world are living in excess, and they are shifting the costs of this over-consumption to poor people living in India and other less developed world whose very survival is threatened. Think of climate change, a rich American is enjoying his SUV while a poor person in the sunders ban loses his or her house because of sea level rise and floods. De-growth believes that if the rich American learns to live a simple and meaningful life, then he will let the Bangladeshi or Indians also live a dignified life. Mahatma Gandhi taught this idea about 90 years ago. There are always people who want to live a simpler life because they know that is more meaningful and in solidarity with others. The growth model crushed this desire but it has not made it vanish. It does appear utopian to the extent that the current system does not let room for it to develop. But, in fact, this vision of a simpler life is the only one compatible with planetary boundaries. What is truly utopian, and in a negative sense, is the idea that we can keep growing as usual. The fact is, the more growth you have, the more energy and resources you use, and this means more environmental damage. There has been speculation for decades that more growth will bring less resource and energy use but study after study shows this has not happened in a meaningful way. We have been getting more efficient at how we produce and, as a result, we have been producing more. The quest is to produce less, and live better while producing less. A good life can be secured with a fraction of the energy and resources high-income nations use now. Currently, money enters economies as debt that needs growth to repay the interest. Thus, money goes where there is profit to be made, which is in stocks and buying and building new houses. In the de-growth model, money would be reallocated to where it is truly needed, for example, in de-carbonisation projects and stronger care systems. If we don't get up today then the

next generation who will have to bear the burden of climate change and pay off the debt of the recovery. They will not forgive us.

THE CONCEPT OF DEGROWTH: The concept of de-growth dates back to the 1970s, when a group of French intellectuals led by the philosopher Andre Gorz proposed a simple idea: In response to mounting environmental and social problems, they suggested that the only real solution was to produce and consume less to shrink our economies to cope with the carrying capacity of our planet. The proposal was considered by many at the time to be too radical. But with today's climate crisis, debates around de-growth have been reinvigorated, and many major figures such as Noam Chomsky, Yanis Varoufakis and Anthony Giddens have, to varying degrees, expressed support for the idea. For others especially business leaders, the concept of de-growth is completely unthinkable, not least because of the anti-capitalist and anti-consumerist roots of the term. The prevailing view is that growth is an economic necessity, and any threat to that not only undermines business, but basic societal functioning. The de-growth movement has already begun: at a grassroots level, consumer demand is actively being transformed, despite political and corporate reticence. A recent 'You Gov poll' in France highlights that 27% of respondents are seeking to consume less double the percentage from two years prior. The number of people eating less meat or giving it up altogether has been rising exponentially in recent years, too. Similarly, the movement of "Flygskam" (literally "flight shaming" in Swedish) has had early successes in reducing pollution: 10 Swedish airports have reported considerable declines in passenger traffic over the past year, which they attribute directly to Flygskam. In the apparel industry, fast fashion is still popular, but garment manufacturers like H&M are preparing for a backlash as consumers voice growing criticism of the ecological impact of clothing.

Contd.. on page No.18

Increase in Assaults on Forestry Personnel: Causes and Concerns

By Dr Arvind Kumar Jha

The Culture Minister of a State of our country accompanied by a group of about 20 supporters barged into *Badgonda* Forest Office, threatened the forest staff and forcibly took away a JCB earth moving machine and tractor-trolley that were seized in a case of illegal breaking of land in *Ada Pahad* forest area. The police station did not register the case that was reported to them by the Deputy Forest Ranger. The Deputy Forest Ranger was transferred and an enquiry was ordered by the Forest Minister because the opposition raised the issue. "Some forest officials are over-enthusiastic and blowing a small incident out of proportion. It is not a big deal and such incidents often take place in villages" the Forest Minister said while interacting with the media and added "The permission from forest department in such cases is just a formality." The Revenue Department's enquiry report suggested that the land where the alleged illegal quarrying was done belonged to the revenue department. This report was rejected by the Chief Conservator of Forests and that resulted in his immediate transfer.

Within 100 kilometres of the above location and within twenty-five days of the above incidence, a forest beat guard patrolling his beat was shot dead by a country weapon by timber mafia/ poachers in the *Choti Tali* area of Punjapura Reserve Forest in the adjoining District on 4th February 2021. The culprits are yet to be apprehended.

The cases quoted above, unfortunately, are not excerpts from a bollywood film. Dates are real, the Minister in the first incidence is the Madhya Pradesh Culture Minister Ms Usha Thakur and the district is Indore while Dewas is the district where the gruesome murder took place in the second incident.

Such incidents are not just assaults on the foresters. They are slaps on the forest conservation and governance in the country. Such occurrences not only expose the vulnerability of the field personnel of the forest service but also reflect typically the kind of support they get in their efforts towards protection and conservation of forests and also when they face the implications of their sincere regulatory efforts.

In India the forestry personnel in the field live and function, more often than not, in isolation away from their family, in remote areas, and under hazardous working conditions; survive on low pay, contemptibly small benefits, and pitiable facilities; operate with outdated, often non-operational, and inadequate equipment; and are expected to protect and conserve forests for you and me utilizing grossly insufficient resources. To quote the latest, the current national budget of 2021-22 has maintained the trend of allocation of funds for the Ministry of Environment, Forests and Climate Change and kept it as low as Rs 4,400 crores for the whole country.

In addition to the above, considering the fact that for any regulatory institution, human resource management issues also influence the effective strength and even the vulnerability of its personnel to assaults by criminals, the report of noted environmentalist Perna Singh Bindra brought out in late 2018 is quite relevant for the subject under consideration. According to the report "(Forest) staff shortages average about 30% across India. Vacancies, on an average, however, stand at around 50% and during the peak season, one forest guard has to do the work of two."

The history of human resource management in the forestry sector reveals that for reasons best known

to the decision makers; the regulatory character of the organization was glossed over and recruitments to field positions were discontinued for 15-20 years till almost middle of the decade of 2000 in the name of austerity/zero budgeting in most of the states. As a consequence promotion quotas were increased/manipulated to manage numbers at various levels; under the compulsion to run the department with lesser number of personnel, keeping vacant the research, training, forestry education, and working plans was adopted as the easiest option; the training and research institutes as well as working plan wings in the states gasped for survival resulting in huge professional deficit in the sector; buildings and infrastructure of many training institutes run by the Government of India for Range Officers were transferred to the states; the age profile in different cadres in the field was completely disturbed and considering the example at the level of Range officers, proverbially called as the spinal cord of the Department, the cadre had majority of promoted officers with age above 50 years with compromised agility, strength, and dexterity. The feeder levels to this cadre had to work with similar handicaps that were further amplified due to large vacancies compelling allocation of large and unmanageable areas to each person. This team had to face the challenge of forest and wildlife protection in the wake of ever-increasing threats by criminals having the latest equipment.

Sudden opening up of vacancies also led to creation of serious problems due to the commonly adopted approach of quickly filling them just for declaring to the world that forest department's posts were not vacant! Many of the states recruited huge numbers in various cadres despite lack of availability of adequate training facilities for them; as a quick fix measure, the pedagogy was modified, training periods were curtailed and even the contents essential for creation of appropriate competencies were cut down. Semi trained young recruits were posted in the field and

were often left to learn by committing mistakes. For these young foresters, who did not possess adequately crystallized skills imparted systematically to handle unique situations that they had to face day in and day out, the changed mindset of the local people influenced as a result of indistinct interface amongst statutory instruments operationalized on the same forest resource/ produce by different Ministries like the Tribal, Revenue, and Panchayati Raj keeps throwing up formidable challenges. Their attempts to tackle them with the subjectively perceived predominant paradigm of 'expect no support from anywhere other than their own sector' also fail often due to the vulnerability of the senior levels themselves, and that often leaves these field officers at cross roads.

The top echelons of the forestry sector caught in the abovementioned imbroglia fuelled by the sensitivity that the terms 'democratization' and 'empowerment of forest dwellers' command today have found no alternative better than choosing to 'let it happen' rather than taking it head-on to provide any safe solution to the field staff. What they could do and have done is that they have kept the pressure on to ensure that the field staff continues to perform its duty of protection. The field staff who are dedicated and disciplined keep going beyond the call of duty to save forests, jump into the fire and, more often than not, hurt themselves.

The Indian Forest Service Association (Central unit) in order to get addressed the issue of vulnerability of forest staff and provision of safer working conditions submitted a letter on 2nd September 2020 to the Hon. Union Minister of Forests asking primarily for increased ex-gratia support in case of unnatural death while on duty, full salary to the family of the deceased, immediate medical support to the injured, constitution of President's Green Gallantry award, providing firearms along with appropriate protection under IPC, better field accommodation facilities, and

high quality field gears in addition to formulation of a national policy and guidelines on the matter. Nothing is heard on the same till now.

The Statistics: According to the statistics released by the International Ranger Federation, India accounted for about 31% of all forest ranger deaths in the world between 2012 and 2017. The number of Rangers killed was 162 during this period. India, shockingly enough, was the highest ranked country in 2014 in terms of field staff mortality.

The table below gives details of assaults on the forest officers in different circumstances during the financial year 2020-21 (Till 15th February 2021) as reported in various newspapers. Duly appreciating the fact that reporting in media is often a function of the sensitivity of the journalist and the newspaper/channel and also depends on the outreach of the department to the press in that particular area; the number of cases reported, reasons and effects of the assaults are being considered for analysis. The aim is to consider

the causal factors and help the authorities to develop an institution based well formulated effective as well as efficient response system to the problem at hand.

Analysis: Historical Perspective: Contents of the table given above do indicate that face-off between foresters and law breakers occurs mostly in relation to cases of encroachment, illicit felling, poaching, illegal mining and removal of forest produce and that culminates into attacks and counter attacks depending on the prevailing circumstances and their handling by the forest staff. There is no two opinion that assaults on forest as also wildlife law enforcement personnel have increased at an alarming rate in the recent past although law breakers have always been the target of any State's enforcement machinery and vice versa. The ease of culmination of the wrath of law breakers into assault, more often than not, is primarily a function of their perception about the immediate strength and preparedness of the enforcement machinery.

ASSAULTS ON FOREST OFFICERS: 2020-21 : REASONS AND RESULT
(Source: Newspaper reports)

Time	Place	State	Reason/Action	Result
March 2020	Manpur forest in Jhallar Thana	Rajasthan	The Forest Guard tried to stop illegal felling of trees. The villagers reacted by using sling and pelting of stone	Forest Guard hit by axe
March 2020	Tiruvannamalai	Tamil Nadu	A forest guard was shot by fleeing poachers at Kavuthimalai Reserve Forest (RF) in Tiruvannamalai	Forest Guard injured
March 2020	Palghar	Maharash- tra State (M.S.)	A mob that had planned poaching before holi ransacked forest office and attacked the staff of the Tungareashwar Wildlife Sanctuary (TWLS) when stopped by the forest staff.	Forest Guard suffered serious injuries and Range officer and others escaped with minor injuries.
April 2020	Bheemnagar Village	Telangana	4 Beat officers attacked by villagers when they seized 2 tractors of smuggled timber	Injured due to hurling of stones & mirchi powder
April 2020	Kamarpalli Range	Telangana	Five foresters including 2 lady guards attacked by large group of villagers of Karepalli when they tried to take into custody timber smugglers	Staff suffered minor injuries

April 2020	Niwaskhar village, Surhi Range, Achanakmar Tiger Reserve	C'Gad	Forest guards humiliated, beaten up, and forced to do sit-ups by the mob when they went to enquire into the trapping of tiger. A local MLA visited the village and made the community to register atrocity case against the concerned forest officials. Villagers apologized to police for damaging their vehicle.	FGs sustained serious injuries and three staff hospitalised. Later Police Van was damaged and some people hurled stones on the police thinking them to be of forest dept.
April 2020	Mastan Iliapur village	Telangana	RFO and Beat Officer Attacked by timber smuggler	Hurt due to stone pelting
May 2020	Ghatigaon, Gwalior	Madhya Pradesh	Shot by a poacher who was hunting a blue bull	Death of Forest Guard
May 2020	Gandigopalpur, Khanapur	Telangana	Gandigopalpur villagers went on a rampage and ransacked the Udumpur forest office under the impression that a shepherd committed suicide because of beating by forest staff after detaining him for setting fire to the forest.	Ransacking of the Udumpur forest office
May 2020	Pipariya Santosh village, Pilibhit	Uttar Pradesh	FGs assaulted by a mob while trying to rescue a sloth bear that had entered village	Forest Guard hit with sticks
May 2020	Mehla Beat, Chamba	Utthara-Khand (U.K.)	10 persons beat Forest Guard while he was enquiring about freshly felled timber used by a person for the construction of his house	Forest Guard beaten by Mob
May 2020	Mt Abu Wildlife Sanctuary	Rajsthan	Five men attacked the Dy Conservator of Forests with axe, hammer and sticks.	Dy Conservator of Forests hurt
May 2020	Kalwa Mumbra, Thane Division	M.S.	Encroachers attacked the Forest staff and pelted stones on the staff having three-woman guards	Injuries to three of the officials.
May 2020	Purbadih village, Gola, Ramgarh	Jharkhand	Tractor seized in Korambe village for involvement of illegal stone mining	The traders at Purbadih attacked the staff
May to Sept 2020	Khandwa Dist. Kalwa Forest; JhirpaComp 853 Jai Bai Forest near Kotwaria; and Talyadhad	Madhya Pradesh	Encroachments: The leader allowed encroachers to have 10 acres for Rs 2.5 to 3 thousand. 4000 ha between May to September 2020	Dy. Ranger and Forest Guard beaten up. Violent clashes between encroachers and forest personnel
June 2020	Etapalli, Gadchiroli	M.S.	Naxals allegedly vandalised an office of the forest dept. and assaulted two guards	Assaulted 2 Forest Guards
June 2020	Pilibhit	Uttar Pradesh	Killing of a man by tigress of Pilibhit Tiger Sanctuary,	the locals attacked a team of forest guards and set ablaze a picket

June 2020	Bambarde Village, Sindhudurg	M.S.	Bombay high court order declared the Dodamarg-Swantwadi belt as a no tree felling zone. Forest officers attacked by locals when they went to assess the damages due to illicit felling in 2 acres	Range Forest Officer and staff injured
June 2020	Sarasala village, Kumram Bheem Asifabad District	Telangana	Attacked by Zilla Parishad vice-chairman and his supporter villagers when the lady Range Officer Ms Anitha went for plantation programme under 'Haritha Haram' programme.	Range Forest Officer and Beat Guard seriously injured
July 2020	Laokhova WLS Nagaon	Assam	Mysterious death in the sanctuary	Death of Forest Guard
July 2020	Chaibasa	Jharkhand	Twelve buildings of the Jharkhand forest department blown up by suspected Naxalites	12 buildings of the Jharkhand FD blown up. Several employees were also beaten up.
July 2020	Burhanpur	Madhya Pradesh	Large group of encroachers armed with guns, catapults and axes encroached forest land and attacked forest staff when they tried to intervene	Six forest officials injured.
July 2020	Gundalpadu village, Kothagudem	Telangana	The irate villagers forcibly stalled construction of a wall around the reserve forest near Kothagudem. Later, five staff, including a woman Beat officer were attacked by a group of Gutti Koya tribals when encroachment in Res. Forest by tractor ploughing at 2 AM was opposed.	The staff suffered contusions and minor injuries.
Aug 2020	Sariska Sanctuary	Rajasthan	Stopping illegal mining of minor mineral	The mowed down Forest Guard dies
Aug 2020	Salaiyah village, Damoh	Madhya Pradesh	Retaliation against forest offence filed by the FGs for illegal cutting of trees	Forest Guard injured
Aug 2020	Sringrampur beat	Madhya Pradesh	On questioning about the source of timber being loaded for transportation, the offenders abused the officials and attacked them with axes and sticks	The Forest Guard was seriously injured
Sept 2020	Ballarshah, Compt. 494	M.S.	Sand mining and smuggling	RFO, Forester, FGs threatened with weapons, seized Tractor taken away
Sept 2020	Sarmeshwar Beat, Sarmeshwar Handia Road, Khandwa	Madhya Pradesh	Encroachment: 90 tribal encroachers from Badwani equipped with bows and arrows, slings, axe came to Khandwa forests	Dy Ranger and Forest Guard threatened.
Sept 2020	Dantewada	C'Gad	Hit by a vehicle while the FGd was chasing a vehicle smuggling forest produce	Forest Guard killed

Sept 2020	Baran	Rajasthan	Forest Guard run over by a tractor and dragged some 200 metres by 5 to 7 people who attacked his patrolling squad during an anti-encroachment drive	Forest Guard run over by a tractor
Sept 2020	Bijapur district, Bastar division	C'Gad	Maoists abducted the ranger and took him to school in the village and then killed him with a sharp-edged weapon.	RFO killed
Sept 2020	Khanapur Range, Adilabad	Telangana	Family members of a poacher vandalised Range office and hurled stones on staff	Govt property destroyed and one staff injured
Nov 2020	Bodlijhira area, Pench Tiger Reserve	Madhya Pradesh	A group of 60 to 70 men attacked the Special Tiger Protection Force team engaged in patrolling to stop illegal fishing.	Patrol boat hijacked and burnt, solar panels and documents destroyed.
Dec 2020	Karadabani forest, Dhenkanal Forest Division	Odisha	Stone mafia of 25 people attacked the Patrol party while they tried to stop the illegal stone-mining	7 staff injured. One seriously. Service revolver of forest officer snatched
Jan 2021	Badgonda Forest Range, Indore District	Madhya Pradesh	State's culture minister along with her 15-20 supporters entered the Badgonda forest office premises and forcibly took away the earth moving JCB machine and tractor-trolley deployed for illegal excavation in Ada Pahad forest land after threatening the forest staff	The forest staff was threatened. Forester made police complaint, transferred. Complaint against Ms Usha Thakur and her supporters not registered by the police. Forest Min. constituted a high-level inquiry.
Jan 2021	Totladoh,	M.S.	Local people were stopped from illegal fishing and setting fire to the forests. Firing was resorted to for stopping heavy stone pelting and attack.	Minor injuries to staff.
Jan 2021	Namkoda village, Malkangiri FD	Odisha	The forest staff had gone to rescue Pangolin. They were attacked by the villagers	10 forest officials sustained injuries. Police case lodged
Feb 2021	Choti Tali area, Punjapura reserve forest, Dewas District	Madhya Pradesh	While patrolling the Forest Beat Guard shot at by poachers/timber mafia who accosted them	Forest Beat Guard died. Case registered under IPC (sec.302)
Feb 2021	Basani Tribal Village, Poynad, Raigad	M.S.	Tribals were selling snakes. Range Forest Officer and team apprehended them. Attacked by the offenders.	Range Forest Officer injured.
Feb 2021	Chirangwadi, Umarched	M.S.	While preparing records regarding poaching of Blue Bull (Rohi in M.S.) Forester and Forest Guard attacked by offenders	Forester and Forest Guard suffered injuries
Feb 2021	Chandrapur	M.S.	While the Range Officer and Team were removing the encroachment, the Nagar Sewak threatened them.	The Forest officers were threatened by the Nagar Sewak.

In addition to the above, another constantly operative and important determinant, although in the background, is the general perception of the public and miscreants also about the overall strength as well as vulnerabilities of the enforcement agency. For appreciating this aspect in the context of the forestry sector it is necessary to analyse the evolution of the overall environment in which the forestry sector has to perform its regulatory role today.

The participatory forest management programme most commonly called as Joint Forest Management (JFM), duly prompted by the National Forest Policy 1988, attempted to share the responsibility as well as authority of the Forest Department with the local institutions so far as protection and management of earmarked forest area in the vicinity of the villages were concerned. This attempt however got projected over time by the leaders; in their compulsion to nurture and suitably exploit their constituencies; as a means to put the local people and institutions at a pedestal higher than the machinery of the forest Department through which the Government fulfils its constitutional obligation of providing to each of its citizen a continued supply of eco-services. The forest field staff, in the process, began to, de facto, lose out on its regulatory role as also its confidence as the representative of the Government authorised to take action against crimes pertaining to forests. The local level institutions, with a smart tweaking of their corresponding provisions to provide statutory basis to the concept of JFM, acquired a major role in handling the JFM as a committee under the Panchayat. In the process the forester who was earlier the member secretary of JFM Committee, was effectively edged out so far as his professional as well as regulatory roles were concerned. This situation got further pronounced in scheduled areas after the PESA 1996 came into being. The unique statutory provision regarding putting to vote even the contents of the technical document viz. micro-plan

(for example under Maharashtra State's PESA Rules 2014), that too with the open option of complete rejection of his professional opinion, has brought the field forester to a situation where his total learning and experience of forest management suddenly seems to be of no relevance. This is a matchless instance of exclusionary approach and apparently doesn't have any parallel in any department e.g., the Police which also exercises regulatory authority in scheduled areas. The resultant effect has been a de facto quietly progressing dis-empowerment of the field staff on one hand and a consequently increased offensive stance of people against their legally assigned authority.

The next onslaught resulting in irreversible damage to the forest resources, its protection mechanism and management practices was unleashed by the widespread and blatant misuse of the provisions of the Forest Rights Act 2006. The Ministry of Tribal Affairs (MoTA) has handled the implementation of FRA in the country and issued guidelines and executive directions on all matters related to FRA but have not taken cognizance of lakhs of ineligible cases including post 13-12-2005 encroachments that have been illegally recognized as Individual Forest Right (IFR) despite MoTA's monitoring and superintendence. This has grossly changed the relational matrix between the forest offenders and the implementers of forest and wildlife related Acts, the latter progressively becoming disillusioned and despondent. The morale of the offenders, in contrast, has gone up.

Similarly, The Ministry of Tribal Affairs are not taking any action on the large number of cases of Community Forest Rights (CFRs) and Rights to Community Forest Resources (RCFR) which have also been cleared illegally by the District Level Committees in clear cut violation of the eligibility conditions as also those mentioned under sections 3(1)(c), 3(1)(i) and 4(3) of the Forest Rights Act 2006 in almost all parts

of the country. The Tribal department in its own right in Maharashtra, for example, has engaged selected NGOs and paid to them about Rs. four crores of public money to prepare micro-plans for forest lands with illegally recognized forest rights on them. The Forest Department has not been involved in preparation of these micro-plans and the situation in the field spells doom for the landscape-based management of forests and wildlife. Such instances of grant of RCFR despite non-eligibility and further exclusion of foresters from preparation of management plans are getting quoted in all other states as precedence and the system is being attempted to be copied in other places in utter disregard to the forest related laws of the land. It will be naïve to think that the field staff of the forest department is unaware of the facts on the ground. Conduct rules prevents him from openly going against it. He doesn't raise the issue also for the fear of being branded as anti-tribal and getting prosecuted under Scheduled Caste and Scheduled Tribe (Prevention of Atrocities) Act, 1989. The sincere forester is thoroughly demoralized noticing the deterioration of management on the ground as a result of manipulations that are taking place with unabated vigour. In clear contrast, however, those who are manipulating the whole situation are increasingly emboldened by the fact that nothing happens to them, a fact that obviously enhances the danger to the strict field foresters.

If one considers all the above interventions together, it is clear that despite all above experiments of democratization conducted in the crucible of forest conservation, their benefit has not been able to reach the intended target groups. Rather, they have benefitted the rural elite, the rich and powerful. Notwithstanding the abovementioned aberration and poor quality of the implementation of the above instruments, there appears to exist a basic fallacy in the presumption on which the success of such experiments is based. The presumption is that the

local populations have traditionally conserved and are still conserving the forests. The fact remains that in the past the forests could survive and sustain the removals by locals because the population was small, people were relatively honest, there existed fear of law and also of the unanimously selected headmen or *Panchas* who were chosen on the basis of their intrinsic qualities of honesty and fairness, good roads and fast modes of transportation of forest produce didn't exist, and the methods of commercial utilization of forest produce as also market linkages were not well developed. The situation today, which is conveniently ignored to promote the much-hyped democratization and empowerment of masses, is quite different. People today are divided on caste, religion, and political lines more than ever before; leaders are elected on party lines; not only have the population and concomitant pressures on the forests gone up but there are well developed road networks that are used by smugglers and market forces alike; along with politicization and devolution of power, there has been a conspicuous growth in corruption in the local level institutions; and there exists a clear hiatus in the two types of thought processes operating in governance, one that harps on five year work duration set by electoral democratic system for earning support of the people and also revenues from the resources, and the other that considers long term management of forests for sustaining eco-services not just for the specific village but for the whole nation as such. The conflict between the local people and foresters is the resultant of fast concretization of this hiatus. Yet another reason of conflict emerges because while bringing up the sensitive issue of the 'welfare of the forest dwellers', the Tribal, Panchayati Raj, and Revenue departments side-track the issue of sustainability of forests and allow unbridled exercise of rights on the forest resources. The local populations naturally prefer the situation of absence of any regulations. The insistence by the Forest department to adhere to the ethics of conservation

is naturally not liked by the local leadership. It is interpreted as Forest department's attempt to retain its authority and is used by interested groups to create situations where the foresters are pitted against the local people.

In addition to the above, demoralization of foresters is attempted day in and day out specially by those people and sectors that, in their enthusiasm to side with the so called 'development', avoid to understand and appreciate the long-term sustainability approach of the forestry sector that is essential for conservation of forests in the interest of one and all.

The Way Ahead: While it was heartening to note that the Hon. Prime Minister of India touched upon the point of forest protection and biodiversity conservation in his Independence Day speech on the 15 August 2020, the Indian Forest Service Association (Central Unit) approached the Union Minister of Forests on 2nd September with specific demands related to safer service conditions and recognition of exemplary works by foresters, and the Nature Conservation Society, Amravati has filed an interim application (I.A.) in the Supreme Court on 18th September seeking justice for the forestry personnel. Getting approvals to the demands may take time and therefore it is important to at least start taking initiatives to make the staff aware of various aspects of the problems related to assaults and encourage them to take steps in the interest of the safety and security of the forestry personnel.

To begin with, the MoEFCC must, on priority, analyse and take appropriate cognizance of all the reasons that have led to the current situation of increased attacks on the forest field staff; work towards initiating inter-ministerial dialogues to create an atmosphere in which the field staff feels confident and empowered to carry out fearlessly the constitutional duties and responsibilities assigned to them; and develop and put in place an institutional framework to support the

field staff in their protection related tasks.

The Forest ministry in the States have to realize that such unjustified acts of assaults limit every officer's capacity to perform his duties and threaten officer's physical and emotional well-being. In addition, instances of assaults on field staff lead to lowering of the image of the parent organization and consume costly public resources. For these reasons State should take action to consciously address the issues that cause such instances in the field. Taking the examples from the above analysis, there should be a free and frank discussion amongst the Ministries/department before touching issues that may apparently be opposed to the policies of other Ministry/departments or that may denigrate any department in the eyes of public. In addition, it should provide adequate institutional and infrastructural support along with manpower and resources to implement in the field the safety policy proposed by the Head of Department.

Despite all actions taken at the Ministry level, there may always be a possibility of assaults on the forestry staff. The Office of the Principal Chief Conservator of Forests should analyse the field situation, develop a safety policy for its staff, and organize trainings covering the same. The salient points to be covered by the safety policy should be the following:

1. The policy should stress upon prevention as the primary method and suggest ways to do that.
2. Analysis of sensitive areas and the pinpointing probable sites of assaults
3. The nature of hazards and the strategy to handle the same
4. Authorization for the use of force for self-defence and for safety of public property
5. Provision of self-defence equipment and training for the same

6. Proactive and Aggressive methods for defending each officer's safety in the field
7. Prosecution of the attackers to the full extent of law.

At the level of the Chief Conservators and Conservators of Forests holding territorial position, a further detailed analysis and action plan must be developed for each earmarked sensitive area. The basic principle behind this plan is the fact that the life and safety of forestry personnel are most important and that should contribute to the level of preparedness and response of the field staff in any eventuality especially, e.g., when a joint operation for raids/ removal of encroachments etc. is conducted. Some of the items that could be suggested here are a) assessment of the area by gathering as much information as possible b) constant maintenance of situational awareness c) all staff to be optimally equipped with appropriate equipment like communication devices, head gear, and arms (if provided) d) the team to have casualty-care supplies e) having tools and equipment to handle injured persons f) maintaining safe distance while patrolling and accosting mobs g) acting from tactically advantageous location and preparing for an appropriate response while simultaneously

deciding upon a point of safe cover too h) Keeping the additional assistance force ready i) returning fire as per need j) advance planning to assist wounded officer, if any, and k) administering Aid to all who are wounded.

The above actions have been suggested to correct the conditions under which the field staff, burdened with the regulatory as well as management functions are not able to effectively perform their duties and responsibility. Their vulnerability to assaults is sufficiently indicated by the attacks on them in recent times. The strength of any enforcement agency in regard to the safety of its personnel is perceived through the mindset of the personnel, knowledge in the public regarding availability of appropriate machinery and equipment with the staff, the presence of skills to take correct decisions in the situations of expected or actual assaults, and the ability as well as willingness of the personnel to act on that decision whenever situation demands. The decision makers in the Forestry sector have to take immediate action to address the above concerns not just to ensure safety of the life and limb of its staff but to also ensure effective protection of the ecological frontiers of our country. (The author is former PCCF & DG(SF), Maharashtra.)

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Accounts such as these indicate how consumers in many contexts are increasingly conscious of the negative consequences of consumerism and are seeking to change their habits. We are witnessing the emergence of consumer-driven de-growth. These stories also indicate how opens de-growth new opportunities: some companies and industries will certainly be disrupted, but others that are sufficiently prepared for such transitions will handily outmanoeuvre their competitors. For instance, Flygskam has been a boon for train travel, bolstered by a social media movement called Tågskryt ("train

brag"). Meanwhile reduced meat consumption has been accompanied by an explosion in meat substitutes that produce one-tenth of the greenhouse gases compared to the real thing. Accordingly, de-growth reshuffles competitive dynamics within and across industries and, despite what many corporate leaders assume, offers new bases for competitive advantage. As we continue to grapple with climate change, we can expect consumers, rather than politicians, to increasingly drive de-growth by changing their consumption patterns.

Pollution in Delhi NCR Due to Stubble Burning

**By
B. K. Singh**

The threat due to air pollution has again choked north India, particularly Delhi NCR. COVID 19 pandemic is adding another chilling dimension to annual malice. There are reports of early harvest of paddy this year, as NASA's VIIRS satellite detected 10,987 fires in Punjab and Haryana in first three weeks of October nearly double the number recorded during same period in last two years. The practice of stubble burning has not reduced despite the efforts put in by Central and State Governments. The matter was also dealt in Supreme Court recently and Central Government came up with ordinance with measures to deal with pollution. To pacify farm Unions protesting against recently enacted farm laws, Government conceded to one of their demands to decriminalize stubble burning. The penalties on stubble burning which is part of new ordinance on air quality management in NCR and adjoining areas is now decided to be dropped.

Air quality index (AQI) dipped to 'severe' during second week of November in last two years, the period when meteorological conditions such as temperature, humidity and wind speed & direction dictated the pollutants to accumulate in air. Because of excess moisture in this period in atmosphere and very little wind movement, the pollutants remain attached with the water vapour resulting in heavy smog in the region. The air can be dispelled horizontally and vertically only when the conditions change and the wind velocity increases.

The second spike in corona virus infection cases in Europe and probably the third in USA is the indication of the fact that north India, where winter has approached, will also face spike in cases. The virus survives cold condition for a longer period and can spread faster when people are in-door, with

windows closed and rooms heated. High level of precautions is necessary especially for people with co-morbid conditions; otherwise, infection and death due to Corona virus would increase.

People with kidney diseases, lung disorder, high blood pressure, high sugar, obesity etc would be worst affected by virus, when AQI dips to 'very poor' and 'severe' category. The studies in China have revealed that 1 microgram increase in PM 2.5 level will result in 6 to 9% increase in spike due to virus. Post COVID, physical and mental health will be big issues to deal with. Mental health issues are going to be cumulative. It has already started taking its impact on school children. World corona meter has indicated people suffering from 'COVID brain fog' and the symptoms include memory loss, confusion, dizziness, difficulty in focusing and grasping for every day word. Increasingly COVID survivors say that brain fog is impairing their ability to work and function normally.

Winter months being the season for important festivals, people in gatherings ignore the standard precautions due to what is called as 'COVID behaviour fatigue'. They are tired of using face mask, repeatedly washing hands with soap and maintaining social distancing. Situation being more challenging due to dip in AQI and spike in corona cases in winter, the double whammy communities face can be catastrophic.

A study published in European Society of Cardiovascular Research Journal on 27th October recently has said that long term exposure to pollution is linked to 15% of COVID-19 deaths globally. Region wise data in the report links 19% deaths in Europe, 17% in North America and 27% in East Asia to

pollution. The study noted that increase in particulate matter (PM 2.5) increases the activity of a receptor on lung cell surfaces, ACE-2, which is known to be involved in the way COVID-19 infects patients. We have the double hit; air pollution damages the lungs and increases the activity of ACE-2, which in turn leads to enhanced uptake of virus.

Apart from stubble burning in neighbouring states of Punjab, Haryana and Western Uttar Pradesh, the main reasons for pollution in Delhi NCR are emission from vehicles, industries, construction activities and coal fired power plants. Though stubble burning contributes below 10% of the pollution, but it becomes critical during second and third week of November when the dispersing capacity of air is low due to wind pattern in this period.

During the year 2009, Punjab government passed a law for conservation of underground water, which prohibited transplantation of paddy in the agriculture field till 15th June each year. The water table goes down during summer months, and recharge starts with the onset of monsoon. A similar law was passed by Haryana government as well. The planting of paddy was thus delayed by a month in both the states. Accordingly, the harvest of the crop was also delayed, leaving very little time between harvest and sowing of wheat for 'rabi' crop. Since paddy harvest is mechanised, big volume of stubble is left in the field. For paucity of time manual labourers cannot complete the task within narrow window and the farmers resort to burn it. Unfortunately, the burning of agriculture waste coincides with the wind pattern, when pollution is accumulated in air and does not move out quickly.

The ground water has been depleting in the region at alarming rate; the natural recharge is poor, as both Haryana and Punjab have very little forests. Panchayath lands and village woodlots are also deforested in due course and lands are either encroached or auctioned annually for agriculture.

The micro forests in villages (known as 'Bani' comprising of species such as *Peepal*, *Bargad*, *Roheda*, *Jal*, *Khair* etc.) have vanished and the lands are encroached. This makes the situation worse. Although some farmers practice agro-forestry, but they plant 'Poplar' for supplying wood to Yamuna nagar rayon factory. The trees are harvested every five years and thus do not have capacity to recharge underground water sufficiently. It is advised to take up afforestation with native species and bring revenue and panchayath lands under tree cover. Drive for agro-forestry with species like jamun, sissoo, neem, arjun and *Melia composita* etc would also hasten the process of recharge.

Aravalli hills in Haryana where a number of stone quarries operate are generally devoid of vegetation. Large scale afforestation of the area is absolutely necessary. These are lung spaces for Delhi NCR and Supreme Court has rightly asked to notify it as Protected Area and also notify Eco Sensitive Zone around it. Choice of species in forest plantations in Delhi has been limited to exotics and thorny species. It is high time that the strategy is changed and broad-leaved species such as *Neem*, *Peepal*, *Bargad*, *Jamun*, *Sisoo*, *Arjun* etc are chosen for any plantation in Delhi.

Punjab has many rivers and sand mining during summer months is quite rampant there. If state Government can crack whip and regulate sand mining in rivers, there will be more scope for recharge of underground water. For recharge of ground water, both states have taken up schemes of open wells in protected places and parks, but the same may be required to be scaled up. The ponds and lakes may have to be filled up using canal water during summer months on a regular basis, wherever feasible. The wind velocity is poor in urban areas during November and December. As against this, water bodies and river beds experience better wind. City planners ensure that the lanes are laid parallel

to each other and end up to face the river, where wind originates due to wave action. All low-lying areas adjoining River Yamuna in Delhi are occupied and retaining walls are built to prevent flooding of the houses during heavy monsoon; the wind remains trapped and does not move out of the river. City lanes opening on river banks do not have the advantage of wind blowing in them and blowing away the pollutants. Further the network of streams and drains in Delhi, carrying waste water to River Yamuna, has potential to generate wind and flush out pollutants. There are encroachments in all such water channels impacting the velocity of flow and thus impairing the flushing of pollutants. If encroachments are removed and drains are restored and widened to maintain the water flow, it will go a long way in generating winds and blowing away pollutants.

Further farmers should be educated to change the cropping pattern and grow maize, jawar, pulses, ground nut etc instead of paddy, which may be useful in reducing water requirement and can help conservation of underground water. Government may have to step in with better support prices for respective produces so that the economics of growing these crops are comparable to that of paddy and is equally remunerative for farmers.

Stubble burning causes loss of carbon, nitrogen, phosphorus, and Sulphur, the nutrients from the top soil. Farmers should be educated and told that if fire is not set in the field, the nutrient in soil can be conserved and level of fertilizer application in subsequent crops can be brought down. There is technology to generate power using the agricultural wastes. Such biomass power plants should be established and encouraged to use paddy straw generated in the agricultural fields.

The harvester, called 'Combine' cuts the grainy part of the paddy plant (spike) leaving 30 cm of stem in the field. Non-basmati varieties of straw, being unpalatable to livestock are burnt in the field.

As against this basmati rice straw is palatable to live stock and the variety is harvested manually. The problem is persisting for more than a decade; I wonder why manufacturers have not designed harvester, which cuts paddy just above the ground.

Stubble burning is also linked to socio economic status of the family. To compensate the farmers, State and Central Governments have committed to pay Rs 100 per quintal of paddy or Rs 2500 per acre of the crop to dissuade farmers from burning the stubble. However, ground reports indicate that the payments are not made to them, and they go for stubble burning with vengeance.

Central Government has informed Supreme Court that "Anti-pollution Commission" is newly created for Air Quality Management in National capital Region and adjoining areas and will begin to curb stubble burning and other sources of pollution to arrest deteriorating air quality in the region. The posts created in the commission will have to be filled up, before it can take up the task. I do not expect them to make any improvement in the situation, more because the offences against the stubble burning is decriminalized and it would be now free for all. The best results can be achieved if the local governments connect with the communities, educate them and make the support prices for crops from dry land farming attractive. Manual harvesting can also be ensured by encouraging cultivation of basmati rice.

Central Government has also committed to come up with comprehensive legislation to deal with the pollution in Delhi NCR. This is quite unnecessary. We have Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974 and Environment (Protection) Act, 1986 which can deal with the issues effectively. Central Pollution Control Board and State Pollution Control Boards may have to be strengthened and they must be held accountable. The capacity and

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How the Left Was Won Through of A Cultural Strategy!

By

Paresh Kumar Sharma

(A success story of implementing JFM in the extremist affected area)

Here I am going to narrate the story of the protection and development of forests, specially, degraded forests, on participatory basis and the teething troubles it encountered; specifically, as to and how these were overcome in the State of Andhra Pradesh (inclusive of Telangana now) and Warangal Circle. 1992 was the formative year of the new concept of **Joint Forest Management** or **JFM** in short, in the combined State of Andhra Pradesh (AP). This was the outcome of the revised **National Forest Policy of 1988**. Government of Andhra Pradesh had come out with an Order on the adoption of Joint Forest Management in the State. Simultaneously, there were talks of an Externally Aided Forestry Project with the help of World Bank. The World Bank was also supportive of the concept of the **Joint Forest Management**. Therefore, the State Government came out with detailed guidelines on the implementation of the concept of Joint Forest Management by way of involving the people at the village level, specially abutting the notified degraded forests.

This was a departure from the way Forest Departments and Foresters worked traditionally. This needed a paradigm shift in the thinking and functioning of the Foresters. To familiarize and sensitize the Forest Officers with the new concept, the Prl. Chief-Conservator of Forest organized a one and half day Workshop of all the Forest Officers above the rank of Sub-Divisional Forest Officers in the Jubilee Hall in the Legislative Assembly Complex at Hyderabad on 8th and 9th of January 1992. The conference was inaugurated by the Union Minister for Forests **Shri Kamal Nath**. Besides the Chief Minister of AP **Sri N. Janardhan Reddy**, State

Forest Minister **Sri M. Chandra Shekhar Rao** and Chairman of the APFDC **Sri Mohan Rao**, graced the inaugural function.

As the concept was new, most of the Foresters could not digest the fact that they would have to share the space with the people. Hence, after the inaugural speeches, with detailed introduction of the concept by **Sri AV Ram Krishna Rao**, the CCF of the subject, the floor was opened to the Forest Officers for deliberations. I remember vividly that Officers of all the cadres, one after the other, spoke against the concept. They were highly sceptical about the “participation” of the villagers in the protection of forests. They argued how the villagers could be trusted when most of them were actively or passively involved in the illicit destruction and smuggling of the forests? Not even a single soul spoke in favour of the proposition, which had taken the form of a Government Order. The assault on the new concept continued till the end of the day. Next day the CCF made a conciliatory request stating that the concept is part of the new National Forest Policy as well as the APGO; hence all the Forest Officers from PCCF to Forest Guard rank were dutybound in its implementation in true spirit and requested all the Officers to take it as a challenge, internalize the concept and explain it to the people with whom powers and responsibilities were to be shared. He requested all the DFOs to form at least 1 **Vana Samrakshana Samithi (VSS)** or **Joint Forest Management Committee (JFMC)** in each of the Forest Division to begin with and then gradually go for its expansion. So, in the first year only 2 VSSs were constituted. At that time, I was DFO Mahbub Nagar. I constituted a VSS at **Maisigandi** village in

Amangal Range. In the second year the number rose to 48. With this, focus was given on training of the Forest Officers on the sensitization on the concept of JFM and the guidelines enlisted in the GO for implementation of JFM in the **Research & Training Circle** facility at **Dulapalli (Later on converted to AP Forest Academy / TS Forest Academy)**. However, the required enthusiasm and motivation was lacking, and hence the number of people (FD Officers and VSS members) getting trained was much less than targeted.

At this juncture of time (June 1993), I was promoted as Conservator of Forests and posted as CF Research & Training Circle, Dulapalli. I contacted all the Conservators of Forests and DFOs personally and impressed upon them on the need for training the people, both FD Officers and VSS members, if we were to implement the JFM in true spirit. I had the firm belief that unless Foresters themselves are fully convinced about the fruitfulness of the concept of Participatory Forest protection and development; the new concept could not be implemented successfully. For achieving this it was *sin-qua -non* that the people, specially, the fringe forest villagers (who were to be constituted or had been constituted into VSSs), need to be taken into confidence. This again required proper communication and motivational skills in the Foresters, so that the village people could be explained the objectives and modalities of implementation. As all the Foresters were not good at communication and motivation skills, it was decided to rope in the NGOs working at grass roots level in the Project. Because, by that time the World Bank funded AP Forestry Project (APFP) had commenced; which also had emphasis on participatory approach. Keeping all the above in view the curriculum for the training of Foresters and villagers was redesigned and intensive training programme started. Best of the resource persons were drafted for the training from various Institute of National repute & NGOs.

With this approach the number of trainees increased; in fact, more than the targeted. Within a short span of 8 months almost all the Forest Officers involved with the JFM and Managing Committee members of all the VSS constituted, had been trained effectively. Many of the Staff and VSS MC Members became the Trainers. With this, a strong foundation for the implementation of JFM had been laid.

At this point of time (last week of Feb 1994), I was transferred as Conservator of Forests of Warangal Circle. It was one the best forest Circles in terms of richness of floral and faunal bio-diversity. It was home to 2 Wildlife Sanctuaries, viz., Eturnagaram & Pakhal. Warangal was also the seat of Regional Engineering College (later christened as NIT), which unfortunately, was considered mother bed of Naxalism / Extremism. There were allegations against some of the faculty members that besides Engineering they were teaching Marxism & Leninism also in the college and orienting the young students towards Marxist socialism. The interior and remote forest areas were also considered safe sanctuaries for the extremists.

One of the Professors of this College came out with a paper titled "How not to form VSS!" criticizing the FD. As it was, the progress in the formation of VSS and implementation of JFM was very slow and this kind of adverse publicity, further applied brakes on the progress. The Extremists considered the JFM as a ploy to wean away the villagers from their professed philosophy. A statement of the then Home Minister to this effect (rightly or wrongly quoted) which appeared in leading local news Papers, further angered the Extremists. Therefore, they warned the NGO involved in the village level trainings to wind up his show or face the consequences. Then came a diktat from the Extremists to the Presidents of the already formed VSS to step down or face the consequences. Lots of pamphlets and handbills appeared in the villages to this effect. As most of the VSS were located in the

interior forest area, outreach of the Govt., specially, Police, was poor. Defiance to their diktats in the past had resulted in brutal assaults, dismemberment of appendages as well as murders. Hence none of the VSS Chairpersons wanted to take any chance and tacitly rescinded from functioning as Chairpersons. This had totally crippled the JFM movement. They, when questioned, informed that Naxals are totally opposed to JFM as it had roots in Democracy and they believed in "Dictatorship of the Proletariat" and not in vesting powers with the people.

There was nothing wrong with programme and the National Forest Policy. But the challenge was how to communicate with the Naxalites that it was not against their philosophy and that it was totally an apolitical programme only for the mutual benefit of the people as well as degraded forests; and how to convince the people that the programme was for their benefit only. One to one dialogue with the Naxalites was ruled out for the obvious reasons. It struck to me that if the Naxals had been effectively using a popular art form "**Burra Katha**" (a Dance drama with folk lore and folk music) to spread the philosophy of Marxism-Leninism in the villages; why can we not employ the same technique to convey the message of the JFM to the people? But the question was where from to find out the persons who could perform this task. A search was thus launched for cultural troupes in the District for the purpose.

Our staff zeroed on a person **Sri Vallampatla Nageshwar Rao**. I invited him to my office duly intimating the purpose of the proposed meeting. Once he came, I explained to him the objective, the target group and the hostile environment in which the project was to be carried out. Initially he was hesitant but decided to take upon the challenge. Once he was inclined to take upon the task, I opened my mind to him. I explained that the Burra Katha should not be heavily loaded with the messages; rather it should be lighter, full of humour but at the end the

viewers must carry the message at the back of their mind in a subtle way. It should not only contain the messages on the protection of forests and wildlife, but also the ill effects of illiteracy and consumption of alcohol (as at that time Prohibition was in force in AP). I also narrated the success story of **Babban Khan's famous play "Adraakh ke Panje"** (This play later on entered the Guinness book of world Records for the greatest number of plays), wherein the central message of having small family had been conveyed in most humorous but subtle manner.

Vallampatla grasped the intent and started working on the script. We discussed the script a number of times over a period of 3 months, duly improving it every time we sat together. Finally, the script was ready. We gave it the name "**Paryavarana Jan-Chaitanya Kala Jatha**" (Artistic Journey for public awareness on Environment). The inaugural show was hosted in Warangal on the eve of Annual Forest Games and Sports Meet of the Circle. It was a huge hit with the sportspersons, forest officials and district level Officers. Then we worked out the nitty gritty of the project, i.e., the financial aspect and logistics. It was decided that the transport and lodging of the performing troupe would be arranged by the Forest Department. Arrangement for stay would be made in a Community Hall or FRH (if it was available) or Forest Staff's Residential Quarter. A modest amount of **Rs. 2000.00** per play was fixed as Honorarium for the actors. Boarding charges would be borne by the actors from the proposed Honorarium.

We proposed to host 100 shows in the interior forest villages of Warangal and Karim Nagar districts to begin with. I prepared a scheme accordingly and approached PCCF for sanction of a modest amount of **Rs. 2.00 Lakh** for this purpose. I also got permission of the PCCF for hosting a show of the above Jathara at Hyderabad in the cultural programme at the end of the State level Annual Forest Games and Sports Meet on 31st of December 1994. It was witnessed

by the outgoing PCCF **Sri A.H. Moosavi** as well as incoming PCCF **Sri C.N. Rao**. It was once again a big hit; it was appreciated and admired by one and all.

Next day I approached the PCCF with my proposal. He directed me to the CCF in-charge of the World Bank funded AP Forestry Project, I explained the salient features of the proposal including the necessity to the CCF. He appreciated the proposal but declined to support the same with funds stating that there was no provision for this kind of activity in the Project. I tried to reason with him that this meagre fund could be provided from the provision under "Extension activities" or "Trainings and Workshops" as Paryavarana Jan-Chaitanya Kala Jatha could very well fit into any of the above activities as it was meant for bringing awareness about the concept of JFM, a key component of the AP Forestry Project. But my reasoning and pleadings fell on deaf ears. CCF was persistent in telling me that there was no mention of this kind of activity in the Project, hence no funds could be provided for PJCKJ. Typical bureaucratic approach; not to budge from the written word! I was thoroughly disappointed.

However, I did not lose heart. I was forced to think of other alternatives. Name of the Collector Warangal came to my mind. I approached him, **Shri Ajay Misra, IAS**, with the proposal. I explained to him at length the idea behind the proposal and the requirement of funds. He was impressed, as the PJCKJ contained the messages of illiteracy, need for small families as well as ill effects of liquor consumption. He promised to provide Rs. 1.00 Lakh for the project. I was really glad and thanked him profusely. While, Forest Department, despite having a Rs. 369 Crore worth of World Bank aided AP Forestry Project, had failed to support the small but a path breaking mini project, the District Administration came to rescue. Kudos to the Collector Warangal and the District administration!!

With assured funds, I gave green signal for the launch of the PJCKJ in the remote villages of the Warangal District. We, the forest Officers and V. Nageswara Rao, chalked out the itinerary of hosting the PJCKJ dance drama in the district. The matter was also placed before the **District Forestry Committee** for approval. Initially the funds were provided by **Project Officer ITDA** (Integrated Tribal Development Agency). Later on, some funds were provided by the **Education Department**. As there was apprehension of disruption of the programme by the extremists, **District Police** was informed of the dates and places of the shows. One NGO, viz., MARI was appointed as facilitator. Thus, after taking all the precautions, began the hosting of PJCKJ in Warangal District, starting from village **Jakharam**. It was received with enthusiasm and appreciation by the villagers. There was no untoward incident. This emboldened the department and encouraged & reassured the NGO MARI and PJCKJ troupe. Morale of the Foresters and PJCKJ artists was on the high. Slowly the troupe moved into the interior villages and staged the dance dramas. In all 50 shows were enacted in the district. It was reported that some of the shows were witnessed by the members of extremist "dalams" (groups); they too enjoyed these and found nothing against their philosophy. On the other hand, it was all about protection of forests, wildlife and involvement of people in the management and development of forests abutting their villages. It was considered as their tacit approval to this programme. With this, the PJCKJs could be staged without fear in all the planned 50 villages. This programme put the JFM on strong footing in the district.

I then approached the Collector of Karim Nagar district, **Sri CBS Venkat Ramana, IAS**, with similar request. By that time the stories of the success of PJCKJs had already reached him. He too sanctioned Rs. 1.00 Lakh for staging 50 shows in the interior villages of his district. And, this was quickly launched

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Significance of 'The Indian Constitutional Day'

By

Dr. B. Raghotham Rao Desai

"Constitution is not a mere document, it is a vehicle of life, and its spirit is always the spirit of age"

Prologue: The preamble to our Constitution goes as:

'We, the people' gave to ourselves Seventy years ago (on 26th of November) the responsibility to secure for all ---- Justice, Liberty, Equality, and Fraternity. Also called 'National Law Day', the Constituent Assembly of India adopted the Constitution which came into effect two months after on 26th of January in 1950. Obviously as it was framed in the backdrop of Partition, the framers were very much concerned with the unity & integrity of the Nation. And it was not without reason ---- the fundamental political relationship in a modern democracy being between the citizen and the State, its relevance resulting in a process (which constitutes 'the people'), is the direct outcome of undivided citizens fighting **to give direction to their lives, and communities mobilizing to gain voice**, rather than being something determined by the State.

We must assert this principle in engaging our elected representatives, we must also collectively speak truth to power ---- the idea of holding the State to account, pervading all our communities, as a must. For, after all, **society is responsible for generating the values by which it will live** ---- values that are open to debate and refinement, and in response to socially & politically demanding problems.

Holding the political class accountable will only work when we yoke the idea of a representative government and civic participation together. There is no other path ---- going beyond the mere casting of votes ---- fostering a shared identity of those who govern and those who are governed, it being a fallacy to assume that democratic conditions automatically maintain themselves, since democracy does often fall on hard times. This is easier said than done! In a democracy, it is a challenge to define

the scope and range of the public ---- in practice, it being a difficult question as to where the concerns of private should end and the sphere of public should begin. So, the question remains as to who defines the public interest that enforces the rule of law, and who challenges the politicians for personal interests.

Fact file: Perhaps it is time that our electoral laws are rewritten since the Representation of People Act, 1951 is seven decades old, during which time India has grown and the common citizen is learning to be independent of the State.

Coming to the **Supreme Court**, it happens to be a great institution of our democracy that has come so often to our rescue from the perils we faced, by pioneering several judgements of great significance, for the protection of life, liberty and the freedom of its citizens. The concept of constitutional morality has been elaborated by the Apex Court through its various judgements wherein it held the values enshrined in the text, when a holistic approach was adopted to the same in the essence of constitutional morality. It is that fulcrum which acts as an essential check upon the functionaries which is antithetical to the very idea of democracy.

Epilogue: While the Act provides for the conduct of elections, preventing corrupt-practices (in connection with such elections) and resolving electoral disputes, but nothing at all is provided to the voter! When we have the right to elect our representatives, is it too much if we feel we should also have the right to recall them (without having to wait to complete full term) when they found to indulge in unconstitutional activities and misdemeanors? We need to change this to prevent the representatives from committing any constitutional impropriety and to save our dignity as well as our democracy from any possible future perils. It may thus be stated that Constitutional morality is not a natural sentiment: it has to be cultivated while our people have yet to learn it. ✍

BANDHAVGARH TIGER RESERVE, MADHYA PRADESH

By

V. SANTHASEELA BABU

Bandhavgarh has flourished through various significant historical legends most of which have been learnt from the legends of Ramayana. Interestingly, Bandhavgarh is a legendary place that has many historical importance's. One can learn through the ancient books of the '*Narad Panch Ratra*' and the '*Shiv Purana*' that this place is associated with Ramayana. The word '**Bandhavgarh**' is a combination of two words: *Bandhav*+*Garh* where *Bandhav* means brother and *Garh* means Fort. So, the meaning of *Bandhavgarh* is Brother's Fort. The name Bandhavgarh given to the reserve is due to the presence of an ancient Fort in the hillock of the Vindhya ranges of Umaria. It has been believed that Lord Rama gifted this amazing Fort to his younger brother Lakshmana. The Bandhavgarh fort is scripted with many convincing evidences of human activities and architectural techniques and interestingly, the legend explains that the ruined fort was being reconstructed by two monkeys who built a bridge between Lanka and the mainland. The fort also lets you explore several manmade caves with inscriptions and rock paintings. The Bandhavgarh Fort is a great masterpiece of "*Treta Yuga*," one of the ages of mankind in Hinduism (Period of Lord Rama), that has been discovered to be the most ancient masterpiece dating Before the Christ (BC) period through the Archaeological surveys.

The tourists heading to Bandhavgarh National Park make a must visit to the fort to find the written proofs of the *Bharis* and *Vakata* dynasties who ruled over the land in and around the Bandhavgarh region. This region also unveils the history to find the major dynasties that ruled the Bandhavgarh regions including *Sengars*, the *Kalchuris* and the *Baghels*. Out of all the *Baghels* were believed to rule the

regions for the longer period. In the twelfth century, the fort was given in dowry to the *Baghela* clan, of which the present Maharaja of Rewa is a direct descendent. During their rule, the *Baghels* decided to shift their capital to Rewa as they were extending themselves and the Bandhavgarh region came to the corner of the kingdom bringing difficulty in reaching there and thus the location was converted earlier into a deserted land due to the presence of thick forest and then into the habitat of the wild beasts (the Tigers). Simultaneously, Bandhavgarh was also declared a game reserve where only the royal families were allowed for hunting these wild creatures. The forests became the hunting reserve of the Maharaja and his guests. Gulab Singh of Rewa shot 480 Tigers across his kingdom. By 1968, all the animals in the Park had been hunted out and, on the day, the present Maharaja's late father gifted the forests to the State, there were no quadrupeds left in the Park. Soon after, the forests were declared a National Park in 1968 and later in 1993, a Tiger Reserve. The Park was extended in 1986 and today it covers 1,161 sq.km, including the buffer areas, in which village communities exist. Famed over the years for its charismatic male and female Tigers that are well documented, it today has over 90 individuals residing within its forests.

This amazing forest beholds the great population of Tiger species even now and so today Bandhavgarh is being considered as the Tiger Reserve. When the park was established the cases of poaching were increased to greater extents and the density of the animal population began to deteriorate and so several measures were taken to improve the living conditions of the wild animals in Bandhavgarh National Park. Small dams were also constructed

to solve the water crisis where the animals got some kinds of shelter and relief. Also, the villages were relocated within the boundaries of the Park and strong vigil took place at the Buffer as well as Core area for the Wildlife protection. In this way, the majestic journey of the Bandhavgarh National Park took place which was declared a Tiger reserve in 1993 under the Project Tiger network at the neighbouring Panpatha Sanctuary.

Bandhavgarh National Park is located on the extreme north eastern border of Madhya Pradesh and the northern edges of the Satpura mountain ranges. Due to the tropical monsoon climatic zone, the Park has been characterized by well-defined winters, summers and rains and the sprouted weather definitely makes the whole environment lush and more unabridged. The altitude of the reserve varies between 1,345 ft. to 2,657 ft. and being flourished with 32 hills with a large natural Fort in the centre of the Park. The fort has magnanimous view sides with its cliffs of 2,625 ft. high, 1,000 ft. above the neighbouring countryside. Prospering with high and thick Sal forests the entire jungle brings a blissful aroma to the surroundings. The upper slope of the reserve is filled with the mixed forest of *Shorea robusta*, *Dalbergia paniculata*, *Terminalia tomentosa*. Although the entire area covered by Bandhavgarh National Park is 1,161 sq.km. the tourists are restricted only to an area of 105 sq.km of the Park which can be called as the Tala Range. Richest in terms of Biodiversity this area brings the great visiting of the Tigers in the Core Zone. The Core Zone of the reserve is composed of four other zones namely- Magdhi, Kallwah, Khitauli and Panpatha.

Winters are comparatively much colder in the entire region that normally varies and almost freezing at night, around 68° F in the daytime. The tropical conditions of the forest make the summer nights also much colder than the daytime bringing about the temperature of 104° F. The forest remains closed

during the Monsoon (or breeding) season (July-August). The rainfall in the Bandhavgarh zone has been witnessed at an average of about 50 inches per year. The total area of the Park is 1,161 sq. kms. with a Core Zone of 624 Sq. kms. and a Buffer Zone of 537 Sq. kms. The Altitude ranges between 440 mts. to 810 mts. above MSL and the Rainfall is 1,175mm and the Temperature ranges from Min. 2°C to Max. 44°C.

The Forest Types are 1) Moist Peninsular low-level Sal: 3C/C2a and 2) Wet Gangetic Moist Mixed Deciduous Forest: 3C/C3a.

Flora in Bandhavgarh National Park: Bandhavgarh National Park spreads across the area of 446 sq.km. and the Madhya Pradesh Forest Department has considered it as the most vegetative part of the Umari district. The foliage in Bandhavgarh National Park is mostly of Dry Deciduous type and is the only region which is quite rich in Flora and Fauna. The area brings relatively moderate climate and of course the favourable topography that uniquely supports the growth of a rich and varied flora in the Park. Along with that, the captivating landscapes are spread over 32 hills, cliffs, plateaus and meadows. The vegetation of Bandhavgarh is specially filled with Sal forest in the valleys and Bamboo stretches on the lower slopes of the region. While half of the forest is being covered with fine trees of Sal and Bamboo, the forest also beholds the mixed species around the higher hills that also includes high grasslands which are the major specialty of the Bandhavgarh jungle. Naturally, the riverbanks of Bandhavgarh region are extremely fertile and quite lush that surely bring the reason why at least 300 species of flora can be found at both the Core and the Buffer regions of Bandhavgarh. Moreover, some perennial streams and rivulets flow at different crisscrossed zones of the Park creating scenic vistas and budding importance to the jungle. The beautiful sceneries of this Indian Wildlife Park offer a picturesque view to the tourists and Nature lovers.

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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

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Swamp Deer in Bandhavgarh T.R.



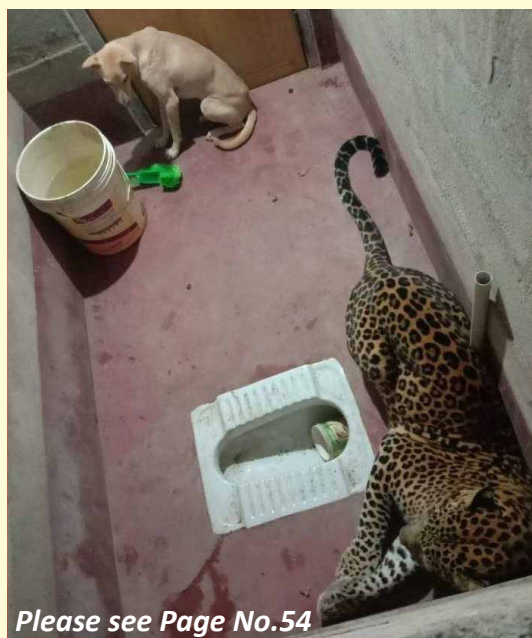
A Tiger in Bandhavgarh Tiger Reserve



Tree House in Bandhavgarh Tiger Reserve



Great One Horned Rhino in Bandhavgarh Tiger Reserve



Please see Page No.54



Murugesan with his patented Machine



*Murugesan with his
several Awards*



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Some of the most famous floral species including Sal (*Shorea robusta*) can be found in Bandhavgarh National Park are:

Saj (*Terminalia tomentosa*), Dhaora (*Anogeissus latifolia*), Tendu (*Diaspyros melanoxylon*), Arjun (*Terminalia arjuna*), Amla (*Embblica officinalis*), Palas (*Butea monosperma*, Flame of the forest), Salai (*Boswellia serrata*), Mango (*Mangifera indica*), Jamun (Blackberry-*Syzygium cumini*), Babul (*Accacia nilotica*), Banyan (*Ficus benghalensis*), Ber (*Zizyphus mauritana*), Dhok (*Anogeissus pendula*), Kadam (*Anthocephalus cadamba*), Khajur (*Phoenix sylvestris*), Khair (*Accacia catechu*), Bamboo, *Lagerstroemia*, *Boswelila*, *Pterocarpus*, *Madhuca*, Along with that the Bandhavgarh forest is also filled with lots of contrasting vegetation including: Karel (*Capparis decidua*), Mohua (*Madhuca indica*), Khejda (*Prosopis specigera*), Kakeria (*Flacourtia indica*), Neem (*Azadirachta indica*).

Fauna in Bandhavgarh National Park: Bandhavgarh National Park being a Dry Deciduous and Tropical land brings amazing dense forest trails where one can discover many glittering species of wild creatures amidst the lush surroundings. Interestingly, there are more than 22 species of Mammals and 250 species of Birds in the area with Common Langurs and Rhesus Macaques representing the Primate group. The Bandhavgarh National Park is best known as the White Tiger country where large variety of Tiger species can be found and were also being witnessed in the old state of Rewa since many years. The last one was captured by Maharaja Martand Singh in the year 1951 and today the white Tiger called 'Mohun' is on display in the palace of Maharaja of Rewa. Earlier the place Bandhavgarh reserve was being named as 'Shikargah' and was maintained as the game preserve where hunting was being proudly carried away as well as with their protection.

Some of the animals available at Bandhavgarh are

White Tigers, Bengal Tigers, Leopards, Sambar, Barking Deer, Nilgai, Wild Boar, Gaur, Chau Singha and Chinkara, the Asiatic Jackal, Bengal Fox, Sloth Bear, Ratel, Grey Mongoose, Striped Hyena, Jungle Cat etc. The Artiodactyls frequently sighted are Wild Pig, Spotted Deer, Sambar, Chau Singha, Nilgai and Chinkara and Dhole, the Small Indian Civet, Palm Squirrel and Lesser Bandicoot Rat. Birds like Little Grebe (Dab Chick), Egret, Lesser Adjutant, Sarus Crane, Black Kite, Crested Serpent Eagle, Black Vulture, Egyptian Vulture, Common Peafowl, Red Jungle Fowl, Dove, Parakeet, Indian Roller can also be found in abundance. Reptilian fauna includes Cobra, Krait, Viper, Rat Snake, Python, Turtle and a number of Lizard varieties, including Varanus. Apart from the above, the Park also boasts variety of species of Birds like Grey Hornbill, Common Teals, Red Jungle Fowl, and White Breasted Kingfisher etc.

Jeep Safari in Bandhavgarh: Jeep Safari at Bandhavgarh National Park is a delight for adventure lovers and Wildlife photographers. In fact, these Jeep Safari tours have added excitement and fun to the journey. 4 Wheel Drive open Jeep Safari is the best way to explore the Flora & Fauna of Bandhavgarh National Park. When people go on Safari in Bandhavgarh they expect to find untamed Nature and unspoiled landscapes & they are not disappointed as the Bandhavgarh National Park consists of mixed vegetations ranging from tall Grasslands to thick Sal Forest and so is the perfect habitat of variety of Animals and Birds. Jeep Safaris keep one enthralled for the adventure and provide the flexibility to explore especially those places, which are difficult to travel via any other mode of transportation.

Most visitors head for Tala & Magadhi zones of the National Park, which have some of the highest concentrations of Wildlife in Bandhavgarh. The best time to visit is during the dry season, from October to May. At Bandhavgarh Jeep Safaris can be done twice a day. The Morning Shift which starts early at

the time of Sunrise up to 4 hrs & the afternoon one starts in between 02 PM to 03 PM up to sunset. In each Open Jeep 6 passengers are allowed to travel along with one Naturalist and one Driver. Limited Jeeps are permitted to enter inside the National Park in each shift. This has been done to avoid overcrowding inside the National Park. Therefore, it is advisable to book Safari rides well in advance to avoid any chance of unavailability.

Elephant Safari in Bandhavgarh: Bandhavgarh National Park is filled with so many ranges of Wildlife species. The credit goes to the amazing landscape and the fittest topography, of course bringing up tremendous amount of tourists to witness the presence and movement of the jungle beings. Despite the dimensioned properties of the reserve and the varieties of the species, including the Bird species, the visitors yearn to this place to catch the rare glimpse of the rare and majestic animals of the jungle including the spirit of the jungle- the Tiger. The Bandhavgarh Park has earned name for the highest probability of sighting Tigers every day and this is the reason why maximum people come here to experience the “Tiger Tour” at Bandhavgarh. The “Tiger Tour” is the star attraction of Bandhavgarh and the best way to enjoy the sightseeing of this majestic animal from the back of an Elephant called the Elephant Safari which has gained immense popularity among the animal lovers who love to admire the beauty of the jungle and the glorious beasts of Bandhavgarh. It is really a rewarding experience to follow the footsteps of the Royal Tigers by sitting safely on the back of the Elephant.

The Elephant Safari in Bandhavgarh brings three major advantages- the foremost is we can get the opportunity to experience Tiger Tour in a detailed manner. The second one is that we can have a very safe tour while sitting on the back of this majestic creature and the third one is that we can enjoy the Elephant riding simultaneously with the Tiger Tour.

The special Safari can only be attained once the Park management receives the written permission from the Field Director of Bandhavgarh. The Safari guide will definitely be there to assist. An Elephant Safari at Bandhavgarh is really the perfect option for a safe and most enjoyable jungle tour.

Approaching Bandhavgarh: Situated in the Umaria district of Eastern Madhya Pradesh, Bandhavgarh is a popular tourist destination and is often regarded as the heartbeat of the State. The place is well connected to the nearby towns & cities making it easily accessible for the travellers. Those planning to visit Bandhavgarh can make it to the National Park by all the three means of transport including Airways, Railways and Roadways. Even though the region doesn't have its own airport the nearest airports would be in Jabalpur and Khajuraho which have good flight connectivity to the other major important cities of the country. However, the railway and roadway are considered to be the best way to reach Bandhavgarh. Whether travellers choose to travel by Air, Rail or Road one can avail the Taxi service to head to Bandhavgarh National Park.

Distances from Major Cities:

Umaria : 35 km/ 45 min

Khajuraho : 270 km/ 6 hrs.

Jabalpur : 190 km/ 4 hrs.

Satna : 120 km

Delhi : 978 km

Gwalior : 565 km

Katni : 102 km

By Road: Traveling to Bandhavgarh by road is convenient as the destination is accessible from the nearby cities and towns like Umaria, Jabalpur, Katni and Khajuraho. From any of these destinations, tourists can avail a cab service to reach Bandhavgarh National Park via SH 11, 22, and NH 43.

By Air: Fly from Delhi, Agra or Varanasi to Jabalpur/ Khajuraho and drive (7-8 hours) to Tala Park entrance at Bandhavgarh. Nearest airports from the Park are Jabalpur and Khajuraho.

By Rail: Nearest railway station is Umaria after Katni railway station, from there it is about 40 minutes' drive to Nature Heritage. Alternatively, take the overnight train from Delhi to Umaria and drive (30 minutes) to the Park. Only jeeps are available for transfers. Khajuraho / Bandhavgarh distance is 250 Kms, (8 hrs drive).

Seasons in Bandhavgarh:

Monsoon- Mid June to September

Winter- November to Mid-February

Summer-Mid March to Mid-June

Accommodation: There are plenty of Resorts which provide accommodation for the visiting tourists as follows:

1. Taj Mahu Kothi, formerly known as Churhat Kothi is located within the periphery of Bandhavgarh National Park, near Tala gate. Taj Mahua Kothi has 12 beautifully decorated cottage suites known as *Kutiya* (hut) having a facility of Double and twin beds.

2. Tree House Hideaway is located near Tala gate of Bandhavgarh National Park in village Vijarhia. The resort is situated in the lush green area surrounded by jungle trees within an area of more than 21 acres of forest. The accommodation as per its name is on the tree. It has 05 air-conditioned tree houses

with attached bathrooms having a facility of 24 hrs running hot & cold water,

3. Kings Lodge is situated in Ranza village of Bandhavgarh National Park and is in very close proximity to the park main entrance Tala gate. Kings Lodge, Bandhavgarh has 18 Double/ Twin sharing cottages to cater the guest requirement.

Further there are Resorts like Bandhav Vilas, Infinity Bandhavgarh Wilderness, Lemon Tree Wildlife Resort, Aranyak Resort Bandhavgarh, Nature Heritage Resort, Tiger Trails Resort, Maharaja Royal Retreat, Bandhavgarh Meadows, Mogli Jungle Resort, Salvan Resort, Hotel Tigergarh Resort, Greenwoods Resorts etc.

Best Time to Visit: -

The Park is open from 16th October till 30th June.

Website: *Bandhavgarh-National-Park.Com*

Contact Address:

Bandhavgarh Tiger Reserve,

Village & Post Office TALA,

Distt: - UMARIA, M. P. Pin: - 484 664

(24 hrs helpline) + 91 – 9212777223, 09212553107.

The Author is a Retired Dy. Conservator of Forests from Andhra Pradesh and can be contacted on Mobile: **8019722292** and e-mail ID: **vssbabu@gmail.com**.

Source: Internet & Bandhavgarh Tiger Reserve Website

Continuation from page No. 21

the skill of the personnel should be upgraded to deal with all emerging issues relating to pollution from constructions, transport, industries, power plants and stubble burning etc. Some of the pollution Control board scientists are less qualified in legal matters; they must be suitably trained. Haryana Pollution Control Board has misplaced focus of dealing with the poultry farms in the state. If they are engaged in

unnecessary matters their focus on pollution control will be lost sight off. Further Pollution Control Boards generate revenue by selling certificates to industries. This may lead to conflict of interest and polluters may go scot free. (The author is Former Principal Chief Conservator of Forests (Head of Forest Force) Karnataka)

(MADHYA PRADESH HIGH COURT)

R.S. JHA and SANJAY DWIVEDI, JJ.**W.P. No. 514 of 2019 January 16, 2019**

Between

ANIL KUMAR SHARMA and STATE OF M.P.**JUDGEMENT**

R.S. JHA and SANJAY DWIVEDI, JJ. – Shri Rajmani Mishra learned counsel for the petitioner. Smt. J. Pandit, learned Govt. Advocate for the respondent / State. Heard on the question of admission.

2. The petitioner has filed this petition being aggrieved by order dated 29.11.2018 passed by the respondent authorities rejecting the application filed by the petitioner for release of the petitioner's Truck bearing registration No. UP 65 GT 3111 which has been seized by the authority concerned for offences committed by the petitioner under the provisions of the Indian Forest Act, Wild Life Protection Act, Minor Mineral Rules, 1996 as well as the Indian Penal Code, as the petitioner was caught excavating and transporting sand and destroying the habitat of alligator / crocodile in the Sone Ghadiyal Sanctuary.

3. The learned Counsel for the petitioner submits that pursuant to the aforesaid registration of the case against the petitioner in respect of the alleged offences committed on 8.7.2018, the respondent authorities have seized the petitioner's truck and, apart from initiating criminal proceedings against the petitioner, are also proceeding with the confiscation proceedings in respect of the truck. The learned Counsel for the petitioner submits that he had filed an application seeking release of the truck during the pendency of the confiscation proceedings which has been rejected by the authorities by the impugned order on the ground that confiscation proceedings against the petitioner in respect of the offences committed by the petitioner are pending.

4. The learned Counsel for the petitioner submits that the respondent authorities have registered two cases against the petitioner in respect of one crime namely; one proceeding for confiscation and the other, criminal proceedings in respect of the alleged crime committed by the petitioner. It is submitted that in the instant case the authorities are proceeding with the confiscation during the pendency of the criminal proceedings and, therefore, the proceedings for confiscation initiated and registered against the petitioner are contrary to law. It is submitted that as both proceedings cannot run together, the impugned order passed by the authorities rejecting the petitioner's application for release of the vehicle on the ground that the confiscation proceedings are pending in respect of the truck concerned, deserves to be quashed as the same is against the law laid down by the Supreme Court in the case of *State of M.P. v. Madhukar Rao*.

We have heard the learned Counsel for the petitioner at length.

5. The provisions of section 52 of the Indian Forest Act, lays down the procedure for initiating proceedings for confiscation in respect of the tools, machines and vehicle involved in the commission of the forest offence. The provisions of the said Act also provide for taking up action for criminal prosecution and punishment of the person concerned in respect of the forest offence committed by him. Similar provisions are also contained in the Wild Life Protection Act as well as the M.P. Minor Mineral Rules, 1996.

6. It is settled law that confiscation is not a punishment as has been held by the Supreme Court in the cases of *Yogendra Kumar Jaiswal and others v. State of Bihar and others*, *State of M.P. and others v. Kallo Bai and Maqbool Hussain v. State of Bombay*, which has also been followed by this Court while interpreting the provisions of section 53 of the Minor Mineral Rules, in the cases of *Kailash Chand and another v. State of M.P. and others*.

1. 2008 (1) JLJ 427. 2. (2016) 3 SCC 183. 3. 2017 (7) FLT 603 (SC), 4. AIR 1953 SC 325. 5. AIR 1995 MP 1.

7. The reliance placed by the learned Counsel for the petitioner on the decision of the Supreme Court rendered in the case of *Madhukar Rao* (supra) is misplaced inasmuch as in the said case before the Supreme Court the provisions of section 39 of the Wild Life Protection Act, were under consideration which provided immediate *suo motu* and automatic confiscation of the property seized while committing a forest offence without undertaking full-fledged proceedings for confiscation. The observations made by the Supreme Court in the said judgment were in relation to the provisions of section 39 of the Wild Life Protection Act, which are totally different from the provisions of the Indian Forest Act, the other provisions of the Wild Life Protection Act as well as the provisions of the Minor Mineral Rules, 1996. The provisions of section 52 have also been extensively explained and dealt with by this Court in the case of *Kailash Chand and another v. State of M.P. and others*, wherein the constitutional validity of the provisions of the Indian Forest Act, providing for confiscation has been upheld.

8. The action taken by the respondent authorities is in consonance with and in accordance with the provisions of the law laid down by the Supreme Court and this Court in the aforementioned cases and in such circumstances, we do not find any substance in the submission of the learned Counsel for the petitioner that confiscation proceedings cannot be undertaken simultaneously along with criminal proceedings. The said contention is, accordingly, rejected.

9. As far as the contention of the learned Counsel for the petitioner regarding release of the vehicle during the pendency of the confiscation proceedings is concerned, the Supreme Court in the case of *State of Karnataka v. K. Krishnan*, has held that a liberal approach for release of vehicles or implements involved in forest offences should not be adopted by the Courts and the same should not normally be returned to a party till the culmination of the proceedings in respect of such offence including confiscatory proceedings except in exceptional cases, in the following terms:

“7.The liberal approach in the matter would perpetuate the commission of more offences with respect to the forest and its produce which, if not protected, is surely to affect the mother-earth and the atmosphere surrounding it. The Courts cannot shut their eyes and ignore their obligations indicated in the Act enacted for the purposes of protecting and safeguarding both the forests and their produce. The forests are not only the natural wealth of the country but also protector of human life by providing a clean and unpolluted atmosphere. *We are of the considered view that when any vehicle is seized on the allegation that it was used for committing a forest offence, the same shall not normally be returned to a party till the culmination of all the proceedings in respect of such offence, including confiscatory proceedings, if any.* Nonetheless, if for any exceptional reasons a Court is inclined to release the vehicle during such pendency, furnishing a bank guarantee should be the minimum condition. No party shall be under the impression that release of vehicle would be possible on easier terms, when

such vehicle is alleged to have been involved in commission of a forest offence. Any such easy release would tempt the forest offenders to repeat commission of such offences. Its casualty will be the forests as the same cannot be replenished for years to come."

The same view has again been reiterated and reaffirmed by the Supreme Court in the cases of *State of W.B. v. Gopal Sarkar* and *State of West Bengal and another v. Mahua Sarkar*.

10. In view of the aforesaid, we do not find any infirmity or illegality in the order passed by the authorities rejecting the application filed by the petitioner on that count. We are also of the considered opinion that there is no perversity or illegality in the impugned order warranting interference by this Court.

11. The petition, filed by the petitioner, being meritless is, accordingly, dismissed.

Petition Dismissed.

The main ingredients of the case are that:

1. As per the opinion of the Hon'ble Supreme Court in the case of *Yogendra Kumar Jaiswal and others v. State of Bihar* confiscation order issued by the Authorized Officer is not a punishment, there can be two cases one i.e., initiation of confiscation proceedings by the Authorized Officer against the vehicle or vessel involved in commission of Forest / Wild Life offences which is a civil case and another one is initiation of criminal proceedings against the accused person involved in the commission of Forest / Wild Life offences, being a criminal case.
2. As per the opinion of Hon'ble Supreme Court in the case of *State of Karnataka v. K. Krishnan* liberal approach for release of vehicles or implements involved in forest offences should not normally be released by the Hon'ble Courts to the parties till the culmination of all the proceedings including confiscation proceedings.

--- Collected by: **G. RAVINDER, DFO (Rtd.).**
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***If you don't find time for today's fitness,
you are saving that time for tomorrow's sickness.
Pay equal attention to health, wealth and spirituality.***

Continuation from page No. 25

in the Karimnagar East Division and completed in 50 interior villages.

This activity acted as a booster dose for the JFM in the District. Villagers came forward for the formation

of VSSs with greater conviction and enthusiasm; which was the guiding principle of participation. And that's how the left was won literally!! (The author can be contacted on +91 6300030519 and e-mailed at pareshvyas22@gmail.com)

Silent Valley National Park

By

Manohar A. Saindane

It is said that Kerala is the home of God and this I realized when I visited Silent Valley National Park of Kerala. Nature gifted very nice vegetation with maximum sea shore and with rich biodiversity. This state is having very good hill stations with good habitat of different wild flora and fauna. All beauty of nature and least of the people might have visited one forest place known as "silent valley National park". It is situated 43 kilometres away from Mannarkad, in Pallakkad district of Kerala state. This National park is having a total area of core zone 89.52 sq.km which is surrounded by buffer zone of 148 sq. km with rich, typical and different wild life. This park is situated on the bank of Kunti river which is locally favourite and originated from 2000' height from mean sea level. This river flows meandering through forest good and giving richness to the vegetation of the area than meets the river Bharat Puja. This is very opportunity to the nature lovers to visit Silent valley national park.

The silent valley is home of the very rare species which if not protected will become extinct. The vegetation is mainly of broad-leaved species of Nilgiris hills. The National park is one of the last undisturbed tract of south western Ghats mountain, rain forests and classified as Tropical moist evergreen forest of India. This area is recognized as World Heritage Site by UNESCO in 2007. Above 1500 mt. M.S.L. the ever-green forests begin way to stunted forest called as "Sholas". This area has never been disturbed by human settlements. Several threatened species are endemic here. New plant and new wild animal species are often discovered and invented here.

FAUNA: International listed 16 bird species in silent valley as threatened as Nilgiri wood pigeon, Malabar parakeet, White-bellied tree pie, grey headed bulbul, Broad tailed grass bird, Rufous babbler, Wynad laughing thrush, Nilgiri blue robin, Nilgiri flycatcher, crimson backed sunbird, and Nilgiri pipit etc.

Rare birds found here are Ceylon frogmouth, Great Indian hornbill, long legged buzzard. The survey 10 endangered species recorded in the IUCN red list including Red winged crusted cuckoo, Malabar pied hornbill, and pale Harrier, Black and orange flycatcher. Totally 138 species are recorded.

Mammals: There are at least 34 of mammals including the Threatened lion-tailed macaque, Nilgiri langur, Malabar giant squirrel, Nilgiri tahr, Peshwas bat, and hairy winged bat.

Mainly Tiger, leopard, leopard cat. Jungle cat, common palm civet, small Indian civet, ruddy mongoose, Dhole, clawless otter, sloth bear, small Travancore flying squirrel, Indian pangolin, Porcupine, wild boar, sambar, spotted Deer, mouse Deer, Barking Deer, Elephant and Gaur etc. are found.

Insects and other: There are 730 identified species recorded. 33 species of crickets and Grasshoppers are identified. 128 species of beetles. Over 128 species of Butterflies and 400 of moth are found here. 82 species of dragon fly are observed. 500 species of leaches and earthworms are recorded.

Flora: The flora of valley have about 1000 flowering species. 108 species of orchids, 100 ferns, 200 liverworts, 75 lichens and about 200 algae. Occurrence of lion-tailed macaque is dependent on flowering of *Cullenia exarillata* tall tree species in this forest.

Challenges: There danger of forest Fires, illegal grazing and illicit felling are the main challenges to forest. This piece of land was saved by public awareness in 1984. Due to this movement this natural gift and national heritage is saved from proposed hydel project. After visiting the site, I felt that this is heaven and Great pill grim so far visited. ✨

Arthritis in General

By Dr N. V. Jayanth Babu

(Continued from last month)

TABLE – D ... STEP -- 4

EXTERNAL APPLICATIONS -- ON PAINFUL JOINTS- FOR PAIN RELIEF

1	<i>Ricinus ommunis</i> Euphorbiaceae Castor, Aamudam	Pure seed oil + Roots extract	1 kg. 1 lit.	1 kg of castor roots powder is mixed in 4 lits. of water and to be boiled in earthen vessel and screened to get 1 lit. of concentrated solution mixed with one lit. of pure castor seed oil, again boiled to get finally 1 lit. of concentrate, cooled and applied every day on the painful joints.
2	<i>Vitex negundo</i> Verbinaceae Vaavili	Leaves		1 kg. of <i>Vitex negundo</i> leaves are to be pounded, mixed in 4 lits. of water in a earthen vessel. Boiled till 4 lits. of water become to 1 lit. and filtered. This solution is to be mixed in 1 lit. of gingelly oil in another vessel and boiled to get finally one lit of the concentrated oil. (10 to 15 grams of pepper powder + 10 to 15 grams of cloves powder are to be added to this, immediately after removing the container from fire to be applied, if the pain in joints is much more). This oil is applied every day on painful joints of Arthritis.
3	<i>Dodonea viscosa</i> Sapindaceae Bandedu	Leaves		1 kg. of <i>Dodonea viscosa</i> leaves are to be pounded, mixed in 4 lits of water in an earthen vessel. Boiled till 4 lit. of water become 1 lit. and filtered. This solution is to be mixed in 1 lit. of gingelly oil in another vessel and boiled to get finally one lit. of the concentrated oil. This is applied every day on painful joints of Arthritis. <i>Dodonea</i> leaves can also be pounded and tied around painful joints with a thin cloth.
4	<i>Celastrus paniculata</i> Celastraceae <i>Jyothishmathi/</i> <i>Malkangani</i>	Seed		Oil extracted from the seed is applied on painful joints of arthritis.
5	<i>Litsia glutinosa</i> Linaceae Naramamidi	Seed		Oil extracted from the seed is applied on painful joints of arthritis

6	<i>Simarouba glauca</i> Simaroubaceae	Seed		Oil extracted from the seed is applied on painful joints of arthritis
7	<i>Barlaria Montana</i> Acanthaceae Mulu gorinta	Leaves juice		Leaves juice is applied gently on painful joints of arthritis.
8	<i>Calophyllum inophyllum</i> Clusiaceae, ponna	Seed		Oil extracted from seed is applied gently on painful joints of Arthritis
9	<i>Allium sativum</i> liliaceae Garlic/ vellulli	Bulbs		400 gms. of garlic bulbs paste is mixed in 1 lit of gingili oil stirred thoroughly on gentle fire for 5 minutes- fire is put off, allowed to be cooled and applied daily on painful joints of arthritis.
10	<i>Ruta chalepensis</i> Rutaceae Sadapaku	Whole plant		Oil extracted from whole plant is applied externally on the painful joints.
11	<i>Pinus</i> sps Pinaceae	Resin		Resin obtained from stem bark is applied on the painful joints.
12	<i>Brassica napus</i> Brassicaceae Canola, Aavalu	Seed		A) 2 5 0 grams of Canola / Mustard oil is taken in a glass bottle and to keep it aside. B) In a separate glass bottle place and mix 100 grams of pure camphor (<i>Cinnamomum camphora</i> / karpuram) + 100 grams of Menthol crystals (<i>Mentha</i> species called pudina puvvu) + 100 grams of <i>Vaamu puvvuie.</i> , (crystals of the extract of the plant <i>Trachyspermum ammi</i>) together. A chemical reaction takes place and within 10 minutes these three solids would be converted in to a liquid/ oil. Add A+B = to get a mixture of an oil. The application of the above oil gives relief for all types of rheumatic pains. (OR) A and B can also be used separately.
13	<i>Cissus pallida</i> Vitaceae Adavigummadi	Roots	50 grams	Bruised roots are applied on swellings of arthritic joints
14	<i>Cleome viscosa</i> Cleomaceae Vaaminta	Leaves and fruits	25 grams	Leaves along with fruits are to be made into paste and applied on the painful joints

15	<i>Cleome gynandra</i> Cleomaceae Tellavaaminta	Leaves and fruits	25 grams	Leaves along with fruits are to be made into paste and applied on the painful joints
16	<i>Cuscuta reflexa</i> Convolvulaceae Bangaaruteega, chetlameeda paachi	Whole plant	50 grams	Whole plant's paste is applied and bandaged on painful joint
17	<i>Vanda cristata</i> Orchidaceae Badanika, kodi kalla chettu	Whole plant	50 grams	Whole plant's paste is applied and bandaged on painful joints
18	<i>Argyreia nervosa</i> Convolvulaceae Samudrapaala	Leaves	100 grams	Leaves are made into paste and bandaged on the painful joints.
19	<i>Merrima tridanta</i> Convolvulaceae Seethamm jada	Whole plant	100 grams	Whole plant is made into paste and applied on painful joints
20	<i>Achyranthus aspera</i> Amaranthaceae Vuttareni	Whole plant	100 grams	Whole plant is made into paste and applied on painful joints
21	<i>Cardiospermum helicacabum</i> Sapindaceae Vekkuduteega	Whole plant	100 grams	Whole plant is made into paste and applied on painful joints
22	<i>Delonix alata</i> Caesalpinaceae Sunkesula	Leaves	100 grams	Leaves paste is applied on the painful joints.
23	<i>Crateva roxburghii</i> Capparidaceae Isukaraasi	Leaves	100 grams	Leaves paste is applied on the painful joints.
24	<i>Euphorbia tirucalli</i> Euphorbiaceae kaadajemudu, sanna jemudu	Latex		Latex of this plant is applied externally on painful joints.
25	<i>Abutilon indicum</i> Malvaceae Tutturubenda	Leaves	100 grams	Leaves paste is applied externally

26	<i>Coldenia procumbens</i> Boraginaceae Chepputattaku	Leaves	100 grams	Leaves paste is applied externally
27	<i>Commifera mukul</i> Burseraceae Guggulu	Resin	5 grams	Gum resin mixed with <i>Zingiber officinalis</i> rhizome paste is applied externally on the painful joints.
28	<i>Pergularia daemia</i> Asclepiadiaceae Dustapaaku	Whole plant paste	25 grams	Whole plant's paste is mixed with turmeric powder and applied externally on painful joints of arthritis
29	<i>Nerium oleander</i> Apocynaceae Tella pula ganneru	Leaves		Leaves paste is applied externally on painful joints.
30	<i>Plumbago zeylanicum</i> Plumbaginaceae Tellachitramulam	Leaves		This plant is a Vesicant and applied in acute conditions.
31	<i>Plumbago rosea</i> Plumbaginaceae Yerrachitramulam	Leaves		Leaves of this plant are Vesicant and applied in severe/acute conditions.
32	<i>Holoptelia integrifolia</i> Ulmaceae Nemalinaara	Leaves		Leaves are vesicant. Leaf is dipped in water for a while and placed on knee/ painful joint and bandaged in severe and acute condition. You get a boil which would be healed easily.
33	<i>Sansevieria roxburghii</i> Agavaceae	Leaves juice		Leaves are gently heated on fire and squeezed to get juice and applied on painful joints.
34	<i>Pueraria tuberosa</i> Fabaceae Nela gummudu	Tuber paste	50 grams	The plant parts shown against sl. Nos. 34 and 35 are made into a paste and applied externally on painful joints of Arthritis.
35	<i>Brassica juncea</i> Brassicaceae Mustard	Seed	5 grams	
36	<i>Capparis zeylanica</i> Are-donda	Leaves	15 grams	Leaves paste is mixed with egg white yolk, poultice is prepared and applied on painful joints of Arthritis
37	<i>Phyla nodiflora</i> Verbinaceae Jalapippali/ Neetippipali	Whole plant	50 grams	Whole plant's paste is applied on painful joints of Arthritis.

TABLE – E ... STEP -- 5

PLANTS USED FOR RELIEVING PAIN THROUGH HOT WATER HERBAL BATH

The following plants provide immediate relief from all types of body pains, like pains of Arthritis, pains of all limbs of body, Back pain, Knees pain and also muscular pains caused due to lactic acid secretion, in excess, resulted from out of physical exertion. A medicated herbal bath is to be had twice in a week in the evenings i.e., at the end of the day, with the water boiled well containing the infusions of the indicated plants, (boiled water is to be mixed with normal water to get the water to a bearable temperature to have bath). This is very much effective and by this, a person can get immense relief from all types of pains for a period of 3 to 5 days, without using harmful pain killers. This herbal hot water can also be used in tub bath.

1	<i>Vitex negundo</i> verbinaceae. vaavili	Leaves	1 kg	About 20– 30 lts. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and taken hot water bath to get immediate relief.
2	<i>Bambusa</i> <i>arundinaceae/</i> <i>Dendrocalamus</i> <i>strictus.</i> poaceae	Leaves	1 kg	About 20 -30 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and taken hot water bath to get immediate relief.
3	<i>Azadirachta indica</i> Meliaceae Neem	Leaves	1 kg.	About 20-30 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and taken hot water bath to get immediate relief
4	<i>Eucalyptus</i> sps	Leaves	1 kg	About 20 lits. of water is to be boiled by mixing about 1 kg of green leaves in the water and taken hot water bath to get immediate relief
5	<i>Abutilon indicum</i> Malvaceae Tuthurubenda.Bala	Leaves	0.5 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing about 500 grams of leaves and taken bath to get immediate relief
6	<i>Senna occidentalis</i> Caesalpiniaceae Kasinda	Leaves	0.5 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing about 500 grams of leaves and taken hot water bath to get immediate relief
7	<i>Dodonaea viscosa</i> Sapindaceae Bandedu	Leaves	1 kg	About 20-30 lits.of water is to be boiled in a vessel by mixing about 1 kg of green leaves and taken hot water bath to get immediate relief
8	<i>Achyranthus aspera</i> Malvaceae Vuttareni	Whole plant	1 kg	About 20 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and taken hot water bath to get immediate relief

9	<i>Hibiscus planifolius</i> Malvaceae Konda pratti	Leaves	1 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves in the water and hot water bath is taken to get immediate relief
10	<i>Clearodendron phlomidus.</i> Verbenace-Takkali	Whole plant	1 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and hot water bath is taken to get immediate relief
11	<i>Cardiospermum helicacabum.</i> Sapindaceae. Vekkuduteega	Whole plant	0.5 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing 500 grams of green leaves and hot water bath is taken to get immediate relief
12	<i>Albizzia amara</i> Mimosaceae Cheekireni/ chigara	leaves	1 kg	About 20-30 lits. of water is to be boiled in a vessel by mixing about 1 kg of green leaves and hot water bath is taken to get immediate relief. Soap need not be used for this bath.

(Concluded)



Some Interesting Common Surnames of North India

By

Kesari J.M. Reddy

The surnames Malhotra, Arora, Kapoor, Khanna, Chopra, Nanda, Khullar, Sodhi, Bedi, Sehgal, Thapar and Mehra belong to only one broader caste "khatri".

As per the Government of India records, "Khatri" is a popular variant of the Sanskrit word Kshatriya, which was used to describe the warrior caste among the Hindus according to the Varanashram propounded by the Shastras".

According to the Britishers The Khatri were the backbone of Indian trade with central Asia. Due to the high values and good education, they survived even in the hardest times of Aurangzeb and Shahjahan.

All the Sikh gurus were Khatri. Real names of gurus are:

Guru Nanak Dev Bedi, Guru Angad Dev Trehan, Guru Amar Das Bhalla, Guru Ram Das Sodhi, Guru Arjan Dev Sodhi, Guru Har Gobind Sodhi, Guru Har Rai Sodhi, Guru Har Krishan Sodhi, Guru Tegh Bahadur Sodhi, Guru Gobind Singh Sodhi

Some of the Khatri have good history with their name and place as given below:

Arora: They belong to the Aror town (near Sukkur) situated in the Sind province of Pakistan on the banks of Indus river hence called Arora. After the partition in 1947, maximum proportion of Aroras came to India.

Khanna: They belong to a small-town Khanna in Ludhiana district of Indian Punjab. Khanna is a Punjabi word, which means one quarter ($1/4$ or 0.25). The city was named thus because it used to be very small, just a quarter of what a normal city should be. Khanna and Arora both are closely related to Khatri caste.

Kapoor: Kapoors are termed as descendants of Moon i.e., as white as moon. Camphor "Hindi Kapur" is as white as full moon so termed as Kapoor. They belong to Kapurthala state of Punjab. Kapoor or Kapur is a surname in the Kaushal Gotra of the Punjabi Khatri community of India. Kapoors are Hindus in terms of religion and tradition, and belong to the Bahari Baradari, a sub-caste of Khatri.

Malhotra: Malhotra is a surname based on the name of a clan in the Khatri community. It is a modified form of Mehrotra, which is itself an extended form of Mehra (Panjabi mehra or Mera means 'chief' or 'master'). Founder of the Malhotra clan is said to have been called Mehr Chand.

The origin of other non-khatri Indian surnames. Answer is a little lengthy yet enjoyable.

Deshpande, Deshmukh, Kulkarni & Patil: All these surnames are found predominately in Maharashtra.

Deshpande is a surname having origins in Maharashtra. The surname is also used in Karnataka. It was a title conferred on officers responsible for record keeping at Pargana level (modern equivalent of district)

The chief of the pargana were called Deshmukh.

Their equivalent at village level were Kulkarni (mainly accountants).

The persons responsible for the development and security of village were known as Patil (Village chief).

Godbole: Godbole (Marathi: गोडबोले) is a surname from Kokanastha Brahmins or Chitpavan Brahmins from Western Maharashtra (Western Coast of India), and also used by Rajapur Saraswat Brahmins.

Godbole actually means “meethi zuban bolne wale translation: sweet tongued” in Marathi.

Jain: This surname is the modified name of word jaina which was derived from Sanskrit word Jina or ‘follower of Jina’. Jina, meaning ‘triumphant’, is an epithet for a saint of the Jain religion. They are mainly distributed in the Gujarat, Rajasthan, Western MP and North west Maharashtra.

Agrawal and Agarwal: Members of the Agrawal community are known for their business acumen and have for many years been influential and prosperous in India.

Agrawal means the “children of Agrasena” or the “people of Agroha”, a city in ancient Kuru Kingdom. Now it is near to the city of Hisar in Haryana said to be founded by legendary King Agrasena. He was among one of the greatest Kings of India. He was the descendant of Solar Dynasty who later adopted Vanik Dharm.

Whereas Agarwals are slightly different from agrawals. According to a legend, earlier they were called as Agarwale means the inhabitants of the ancient city “Agar”. Agar is a small city located 65 kms from Ujjain. Agar was the most important city to the Parmar dynasty after Dhar and Avantika (Ujjain).

Sindhi: Unlike Hindus of India, who have a ‘gotra’, Sindhis often have a ‘nukh’, which means roots. Almost 90% surnames have been followed by “Ani” or “Ja” in Sindhis like Moolchandani, Bhavnani, Ramchandani, Advani, Raheja, Makhija etc. Ramchandani means the descendants of Ramchand, here Ramchand could be name of an ancestor or village. Same thing applies on the Juneja, Tuteja etc.

Khan: The ancient surname Khan is a contracted form of Khagan, from the Turkish language meaning “chief or ruler.” It was originally a hereditary title born by early Mongol leaders, such as the legendary Genghis Khan, but is now widely used as a surname

throughout the Muslim world.

There is much more to Indian Muslim surnames as caste played an important role as did vocation of the original families in surnames they were allowed to take. Khans were often Rajputs/ Kshatriyas while Darvesh were priests.

Shetty: They are Hindus and Jains from the coastal areas of Karnataka and Cauvery belt. Primarily they are farmers and pastorals but now spread in all the business domains. They are different from cognate Seth or Sethi which were basically land lords.

Brahmins: Most of the Brahmins were given their last names on the basis of knowledge they possessed.

Dwivedi/Trivedi/Chaturvedi were known for the number of Vedas they expertise. Same is true for Tripathi also.

Upadhyay were those who had special skills of teachings and were the spiritual advisors of the king.

Vyas or Byas were those who had got an expertise in the recital of Bhagvat Purana and Bhagvat Gita.

Pandey was the title given to the chief priests (pandits) and those who had expertise in post death rituals.

Mishra was the title given to those priests who had expertise in all kind of Brahmin duties.

Parashar: They are the ancestors of one of the greatest scholars of Vedic era “Parashara”. Large tracts of ancient India were controlled by northern India therefore they are mostly found in North India.

Shukla was the title given to the reciters of the Shukl Yajurveda (Yajurveda has two parts, Shukl and Krishn).

The lineage of many ancient Rishis explains their ancestry e.g., Bharadwaj, Dadhichi, Bhargava...

Verma: Verma, Varma, Burma, Barma, Vurma, Barman, Varman are the same and one and mostly the inhabitants of India and South East Asia. In ancient culture “Verma” title was given to the kshatriya warriors who were very firm, and shield like. Yadav: The term Yadav (or sometimes Yadava) has been interpreted to mean a descendant of “Yadu”, who was a mighty king.

The term “Yadav” covers many castes which initially had different names, Ahir in the UP, Haryana, Bihar, Punjab and Gujarat, Gavli in Maharashtra and MP, Gola in Andhra Pradesh and Karnataka etc. Their traditional common business was that of herdsman, cowherds and milk-sellers all over the Indian subcontinent.

Srivastava: According to one explanation, the name “Shrivastava” originates from “Shrivastu”, the former name of the Swat River, said to be the place of origin of this clan. Swat river is situated in the Khyber province of North West province. Srivastava is a common surname in Northern India, notably among Kayasthas. However, recent times have also seen this surname used in other communities. Spelling variations include Shreevastava, Shrivastav, Shrivastava, Shrivastva, Srivastav, Srivastva, Srivastava, Sriwastaw and Srivastwa

Sharma: Did a lot of research for the origin of Sharma surname but got ambiguous answers. But most common and widely known sources suggests that “ancient Sharma’s were the upper-class Brahmins who had achieved the highest level of concentrations. They were the peer Yogis who were always in joy and known as accomplished well-wishers. They were living in shelters not in the houses during the ultimate years of their lives.” Later on, due to the immense respect of Sharma surname, some non-Brahmins and undeserving people also started using Sharma.

An alternative English spelling of the name used in

the city of Varanasi and the Indian states of Assam, Andhra Pradesh and Kerala is “Sarma”. Some Assamese people also use Surma but that is due to the river “Surma” flowing in the lower Assam and Sylhet district Bangladesh.

In the messages and comments some of the readers requested me to tell, about Tendulkar surname.

Well, I will tell you about this surname but take the bonus of Ambedkar, Gavaskar, Savarkar and Mangeshkar first. “Kar” means the suffix of the village associated.

Ambedkar: The original surname Ambavadekar comes from the native village ‘Ambavade’ in Ratnagiri district. Dr Bhimrao Ambedkar’s original surname was Sakpal but his father registered his surname Ambadawekar in school. His Brahmin teacher, Krishnaji Keshav Ambedkar, who was fond of him, changed his surname ‘Ambadawekar’ to his own surname ‘Ambedkar’ to pronounce easily in the school records.

Gavaskar: They came from the Gavaswadi Village in Kudal Taluka (Kudal is a legislative seat also) in the Sindhudurg District of Maharashtra.

Mangeshkar: Earlier the surname of Deenanath ji (Father of great Lata Mangeshkar) was Hardikar but he changed it to Mangeshkar in order to identify his family with his native town Mangeshi. Mangeshi is located near Priol Ponda at Goa-Maharashtra border.

Savarkar: Vinayak Damodarji Savarkar - One of the greatest personalities of Indian history had this surname. His original surname was Bapat but his forefathers changed the surname in order to identify their family with their native village Savarwadi in Palshet village of Guhagar taluka in Konkan region. Name Savarwadi came from the plentiful trees of “Saanwari or Saavari) in the area which is used to yield a type of soft cotton Shevari.

Source: Internet

News and Notes

Boston based Hyderabad entrepreneur Praveen Tailam, elected as the Chairman of the TiE Global Board of Trustees for the year 2021: Praveen Tailam, elected as Chairman of the TiE Global Board of Trustees. He is the first-ever Hyderabad to reach that coveted post. Praveen Tailam is the son of the late Sri T. Narayan Swamy I.F.S (Rtd). Disclosing this in a press note issued in Hyderabad on 05.02.2021, TiE Hyderabad said, Praveen Tailam heads TiE (The Indus Entrepreneurs) Global, the largest entrepreneurs' not-for-profit organization dedicated to fostering entrepreneurship globally through mentoring, networking, education, funding and incubation.

Praveen is well-known in the TiE community as an entrepreneur, investor, startup advisor, speaker, mentor, and philanthropist. He was previously the Vice-Chairman of TiE Global Board in 2018. After running his own consulting company, Praveen's interest in promoting startups drove him to lead TiE Boston Angels, a successful angel group in the U.S., and becoming TiE Boston chapter president in 2016. Praveen also operates multiple dental offices in New Hampshire and Maine. Praveen advises and invests in several startups.

On being elected as Chairman, Praveen said, "The year 2020 has been a challenging one, and entrepreneurs, particularly the TiE members, reinvented themselves rapidly to the changing business landscape. TiE Global Summit in December 2020, hosted by my hometown chapter, TiE Hyderabad, was a big success with a record participation of over 30,000 attendees. It is a testimony to the strength of TiE. We will continue to boost collaboration across chapters and members worldwide. TiE is well-positioned to advise state and central governments in proposing business-friendly

policies to stimulate startup ecosystems and enable cross-border investments".

Congratulating Praveen, Manohar Reddy CEO of Feuji Inc. and President of TIE Hyderabad said, "it is a matter of great pride for us that a Hyderabad has become a Chairman of the TiE Global organization. I look forward to impactful partnerships this year and I am sure having a Hyderabad as global president will help. TIE strives to support startup founders' journey by connecting them to global entrepreneurs, mentors, access to investors and corporations that enables growth and scale that is essential for any company to leapfrog to next level".

Praveen is born and brought up in Domalguda, Hyderabad, the Capital city of Telangana State is a proud alumnus of The Hyderabad Public School, Ramanthapur from the 1986 batch and the co-founder of HPSR US Alumni Association. "Praveen was the school's cricket team captain and on the prefectorial leadership. Praveen truly represents our school's ethos of nurturing global leaders and is instrumental in launching the entrepreneurship program in collaboration with TiE for our high schoolers. We are proud of his achievements.", stated Ashwin Rao, Secretary, The HPSR Alumni Association.

The TiE Global Board comprises leaders and domain experts from around the world. Gita Dang from New Delhi, P.K. Gulati from Dubai, Pradeep Udhas from Mumbai, Smita Siddhanti from Washington D.C., Dinesh Dhamija from London, C.N. Madhusudan from Atlanta, Tariq Khan from New York, B.J. Arun (vice-chairman) from Silicon Valley. Also on the Board are Ravi Narayan, CEO T-Hub Hyderabad; Chief Innovation Officer, Govt. of Telangana; and former Global Director, Microsoft for Start-ups. Kali Prasad Gadiraju, Chairman and M.D. of Qubit A.I. is the former Managing Partner at E.Y. and served as President on TiE Hyderabad board.

TiE was founded in 1992 in the Silicon Valley by a group of successful entrepreneurs, corporate executives, and senior professionals with roots in the Indus region. TiE has 61 Chapters in 14 countries with more than 15,000 members worldwide. It is a matter of great pride for Hyderabad that its son of the soil reached such a top position. TiE's focus area is to enable the next generation of entrepreneurs. It connects the entrepreneurship ecosystem from early-stage entrepreneurs, serial entrepreneurs, and professionals at leading corporations, venture capital and angel investors

TiE Global programs include TYE (TiE Young Entrepreneurship) for high-schoolers, TiE University – for university students, TiE Global Angels and TiE India Angels funding early and growth-stage startups, TiE Women provides opportunities for women entrepreneurs and TiE Access is a program to serve underserved communities and minorities.

TiE Global has also launched ten special interest groups in various domains, including Education, Healthcare, Emerging Tech, Fintech, Gaming & Media, Hospitality & Tourism, Manufacturing, Social Entrepreneurship, and Sustainability. The TiE Global Summit conference has empowered various stakeholders in the startup community in Asia and worldwide. The TiE Global Entrepreneur Awards is a new initiative that recognizes and celebrates outstanding entrepreneurs around the world.

Award-Winning Farmer's Bullet Tractor Helps 140 Others Plough & Sow at 1/10 the Cost: Villagers of Nilanga in Latur, Maharashtra, have been troubled by water scarcity and poor rain since 2015. Inadequate rainfall has had a severe impact on farming and other agricultural activities. Besides the shortage of drinking water, the immediate visible effects were loss of labour and cattle. Agricultural activities took a backseat and the economy suffered. Like others in the area, Maqbul Shaikh, who has 3 acres of agricultural land, was in dire straits.

The 43-year-old farmer gave away his bullocks, owing to lack of fodder and drinking water. The loss, combined with shortage of labour, inhibited him from pursuing farming activities. But Maqbul turned this crisis into an opportunity, and built an innovative bullet tractor at 1/10th the cost of the one in the market.

The innovation has since become popular to the extent that 140 bullet tractors have been sold in and around the village. He was also recognised and awarded by the state government for this initiative.

Maqbul says his inspiration for the innovation came from his brother's tractor equipment workshop, named 'Agro One Trailers and Mansurbhai Tractors'. "Since childhood, I always worked as a mechanic with my elder brother, Mansukh. I did all the repair and maintenance work. But after his death a few years ago, I took charge of the workshop, as well as farming," he says.

He adds that he started working on a model with scrap material and engines. "The vehicle had to be small, but powerful enough to carry out heavy farming activities. Having worked as a mechanic at my brother's workshop, I knew the technicalities involved, and decided to make a three-wheeled vehicle with a 10 Hp engine. I used a discarded bullet motorcycle for navigation and driving," he says.

Maqbul began working on it in 2016, and it took him two years to come up with a working model. "The machine broke at least a hundred times. Many parts failed to synchronise, and making the vehicle fuel-efficient was also a challenge. It took many months of work and testing on the field before I was confident about the vehicle. I made another five and sold it to farmers in the area on a trial basis," he says.

He worked upon the feedback to make continuous improvement. "A refined version of the product was ready in 2018, and I started offering it to potential customers. The vehicle can be made within a week,

and can be used for sowing, weeding, spraying pesticides and ploughing the field,” he adds.

Maqbul says the bullet tractor comes with a range of benefits. “The normal tractor costs Rs 9 lakh at least, and with tools and equipment, the cost can increase up to Rs 14 lakh. A mini tractor costs at least Rs 3.5 lakh. But the bullet tractor is priced at Rs 1.6 lakh, or even Rs 60,000 for a smaller version,” he adds.

Multiple benefits: Several farmers have started ordering and using the vehicle, including Sudhir Kaplapure. “I have a 20-acre farm, and the bullet tractor has served all my needs without any bullocks or a powerful and expensive tractor. Unlike the big ones, this one allows the seeds to be sown in even the corners of the field. It also helps clear weeds efficiently. Attending to the sugarcane crop becomes much easier, as the tractor helps navigate narrow lanes while spraying pesticides,” he says.

Sudhir says the vehicle is also fuel-efficient. “A litre of diesel lasts for 1.5 hours in the bullet tractor. For a regular one, double the amount of fuel would be needed. Additionally, the small parts make it easier to be repaired on the fields. I have not had to hire labour in the past three years, and depend on the tractor entirely,” he adds.

Maqbul has also created a 5Hp and four-wheeled bullet tractor to sell at Rs 60,000 for those who cannot afford the 10 Hp one. His innovation has earned him the Krushi Ratna Award from the Maharashtra government, as well as the Yuva Krushi Sanshodhak Award, among others.

He says he never expected his innovation would benefit so many farmers. “I’m glad I could make a difference in their lives by making farming easier and cost-effective. I hope to continue the good work in the future as well,” he says.

Interstate forest smuggler nabbed in MP: - Bhopal, Feb 12 — In a major breakthrough, the Madhya Pradesh forest officials have arrested an interstate

forest smuggler involved in several illegal trades across various states. The accused identified as Gokul Vishnoi is a resident of Kankaria in Harda district of Madhya Pradesh.

Rajnish Kumar Singh, Deputy Conservator of Forest (Wildlife), MP, said: “Vishnoi was nabbed in a joint operation by the Special Task Strike Force (Wildlife) and Special Task Force (STF).” Singh added that the forest smuggler was wanted in multiple cases including illegal harvesting, trade and poaching while his entry has been restricted to the state capital by the District Magistrate

Vishnoi was also involved in illegal trade of Sagwan (Teak Wood) from the forests of Betul, Khandwa, Dewas, Ujjain, Sehore and Harda districts.

School Dropout Builds Patented Machine to Turn Banana Waste into Rope, Earns Crore: - I have grown up hearing about the banana plant’s versatility and that every part of it is useful. From using the leaves as serving plates to the stem, flower, and fruit, all are edible. The only waste generated from a banana farm is the two outermost layers: the sheaths of the banana stem. Typically, these are either burnt or dumped as garbage.

But PM Murugesan, a resident of Melakkal village in Madurai district, almost two decades ago, found a way to use this residual banana fibre to weave them into ropes. These could then be used to make various products like mats, bags, etc. In this exclusive interview with The Better India, Murugesan, founder of M S Ropes Production Centre, speaks about his journey, setting up a company, winning awards and accolades, and having a machine patented by him.

Finding treasure in trash; Even though Murugesan could not complete his education beyond class 8 because of his family’s poor financial conditions, his achievements are truly remarkable. “I had to be pulled out of school and join my father in the fields because we did not have the money for me to

continue studying. Mine was a traditional agricultural family and one didn't necessarily see much use in me continuing to study," he says. Murugesan grew up encountering many agriculture failures, and he mentions how even the intervention of the State Agricultural Department did not yield any good results.

It was around 2008 when Murugesan, his wife, Malarkodi, and the other family elders started discussing utilising the banana plant waste. "The idea struck me when I saw the banana thread being used to thread flowers for garlands. But it was difficult in the beginning as the rope would not stay connected, and kept splitting," he says. Early on, no machine could be used for the banana fibre, and Murugesan speaks about how most of the work was done manually or on makeshift machines.

In his native area, Murugesan says some machines are used to process coconut husk into ropes, and he first tried processing the banana fibre also in the same machine. "Unfortunately, that did not work. So, I used that as my base and modified it to work well for processing banana fibre," he says. After its success, he added a motor to it to ensure that the production could be faster.

After a series of trial-and-error, he developed a spinning machine using bicycle wheel rims and pulleys. This was a frugal innovation at its best. "What we do is braid the strands together to achieve a good tensile strength. We had to make sure that the products that we were making out of this were worth the money," he adds. Wanting to better this process, Murugesan invested close to Rs 1.5 lakhs and built and patented his own machine. "Once the machine was made, I approached the Biotechnology Industry Research Assistance Council (BIRAC) and presented the same there. I also requested for help from the institute, and after they visited and liked my machine, they recommended this machine be used by other farmers in the area as well," he says.

Building the company, one step at a time: In 2017, Murugesan developed an automated rope making machine, in which a dual function could be performed of making the rope and braiding/twining it together. Murugesan says, "I was using a hand-wheel mechanism to make rope from the banana sheath, and that took five people per wheel for the process, and each wheel yielded only around 2,500 metres of rope. With the new machine, we produce on average 15,000 metres using one machine and with just four people in all."

The process was slow, but Murugesan is extremely proud of the growth the company has witnessed.

"We started with five people, which grew to 10, then 20, and today we employ more than 350 people, many of whom are women." The job's flexibility makes it a great place for women to work in. Murugesan speaks about how many women work from home, take raw materials and make the products. "This way, they can be present for their children, while also earning a decent monthly income," he adds. On average, 500 tonnes of banana fibre waste are used by Murugesan's company annually, and these are used to create a wide range of products.

The company makes a revenue of more than Rs 1.5 crores annually, and while most of the products are for the export market, some of the state cooperatives also buy from Murugesan. "We also try and participate in exhibitions held in Tier1 and Tier 2 cities," he says. Some of the fast-moving products include their woven baskets, bags, and mats. Not just these products, Murugesan has also sold close to 40 machines to various states and organisations, including Manipur, Imphal, Vaishali district in Bihar, Kolar city in Andhra Pradesh and even Kerala.

Murugesan and his team also train the people to work on the machine. He says, "NABARD approached me to make close to 50 machines that will be sent to Africa." The recipient of seven National Awards and

several State Awards, Murugesan has received the PMEGP (Prime Minister's Employment Generation Programme) Award from Khadi and Village Industries Commission under the Ministry of Micro, Small and Medium Enterprises, National Farmer Scientist Award from Union Ministry for Agriculture and Best Entrepreneur Award from Krishi Vigyan Kendra at Jabalpur.

With all these awards in his kitty, what Murugesan is most thrilled about is having brought about wide-reaching change to his village and providing so many people with employment opportunities. "I am a satisfied man. I have managed to get ministers, foreign delegates and people from so many states to come to visit and learn from my small village," he signs off.

Climate Change May Have Had 'Key Role' in Covid-19 Pandemic, Shows Study: - Climate change may have played a "key role" in the transmission of the novel coronavirus to humans by driving several species of pathogen-carrying bats into closer contact, research showed on Friday.

The virus, which has killed more than two million people and caused unprecedented global disruption, is thought to have originated in bats in Southeast Asia.

Researchers from the University of Cambridge used temperature and rainfall data over the last 100 years to model populations of dozens of bat species based on their habitat requirements.

They found that over the last century, 40 species had relocated to southern China, Laos and Myanmar -- the area where genetic analysis suggests the virus known as SARS-CoV-2 first appeared.

Since each bat species carries an average of 2.7 coronaviruses, the researchers said 100 strains of coronavirus were now concentrated in this "hotspot" area.

"Our paper is a long way away from saying the pandemic would not have happened without climate change," lead author Robert Meyer of Cambridge's zoology department told AFP.

"But I find it difficult to see that this climate-driven increase in bats and bat-borne coronaviruses make something like this less likely to happen."

While the precise chain of SARS-CoV-2 transmission from animals to humans is yet to be determined, Beyer said the changing climate and habitat destruction in Asia had driven virus-carrying species into ever closer contact with human populations.

"It's two sides of a similar coin: we penetrate deeper into their habitat but at the same time climate change can have the effect that it pushes the pathogen in our direction," he said.

'Complex risk: The study, published in the journal *Science of the Total Environment*, urged governments to take measures including limiting urban expansion and farming, which it said would help to manage the risk of another pandemic of a disease endemic in wild animals.

It also called for greater effort to mitigate climate change to avoid large accumulations of wild species near human habitation.

"The fact that climate change can accelerate the transmission of wildlife pathogens to humans should be an urgent wake-up call to reduce global emissions," said Camilo Mora at the University of Hawaii, who contributed to the research.

Kate Jones, Professor of Ecology and Biodiversity at University College London, said Friday's research was interesting but that the pandemic was a result of a variety of factors.

"Climate change certainly has a role to play in changing species distributions to increase ecological hazard," said Jones, who was not involved in the study.

“However, spill over risk is a complex interplay of not only ecological hazard but human exposure and vulnerability.”

Habitat loss, for example, has also been a major driver in pushing wild animal species closer to human populations.

Karnataka: Dog survives night in a toilet with leopard: -

The big cat had its own success story: it slunk beneath the very nets cast to trap it and returned to the forests. If the encounter was video-worthy, so was the discovery. Jayalakshmi, the owner of the house, was at her relative's on Tuesday night, when the leopard likely strayed in from the adjacent.

Early Wednesday morning, a family member saw the stout tail of the leopard through the toilet door.

Leopard & dog had marked territory in small toilet; Without skipping a beat, she locked the door and went on to call forest officials. What bystanders captured through the toilet window was intriguing: the leopard curled into a corner, and diagonally opposite was Bollu, each apparently having marked their territory in captivity. The house belongs to late Venkappa Gowda of Moolemane in Kaikamba.

“It is located adjacent to Kombaru forest. The leopard may have entered human habitation chasing the dog at night. And while the dog took shelter in the toilet, the leopard probably followed it,” said Subrahmanyam Range RFO HT Raghavendra. The two remained closeted, in a space barely 3 feet by four feet, until 1.45pm on Wednesday when the big cat made a dash for it. Through the morning, forest officials placed two layers of nets on the asbestos sheets that served as the toilet roof and got permission to dart the animal.

“We realised it was a risky operation since the

asbestos sheet was merely placed on top of the bathroom and wasn't secured to anything. For a 100kg leopard, escaping through it was not an impossible task.”

And that was what happened. The leopard shot through a hole in the asbestos sheet and ran beneath the nets to freedom. “No injury was caused to anyone in the house. The leopard was below five years of age and weighed 80-100kg,” the RFO said.

Under Debt of Rs 10 Lakh 23 Years Ago, This Bamboo Farmer Now Earns Rs 1 Crore a Year:

- If you Google the name Raj Shekhar Patil, the first prompt of the search engine states ‘Raj Shekhar Patil bamboo’. What follows is a range of articles on bamboo farming mentioning him. The same search on YouTube takes you to his channel, which has about 1,000 videos on his farming technique, and over 7.6k subscribers.

At the age of 50, Raj Shekhar from Nipani village of Osmanabad district is earning in crores from bamboo farming. He has won around 40 awards for his achievements in the field and has been hailed by the Central and state governments. But the story of this man, who hails from the drought-prone state of Maharashtra, did not always read the same.

Around 23 years ago, Raj Shekhar, the son of a farmer, was indebted to the sum of Rs 10 lakh and termed as a failure by the villagers and even people close to him. It took him years of toiling and working with a meagre income to hone his skills enough to transform his life into what it is today.

In 1992, Raj Shekhar completed his graduation in agriculture and faced a debt of loans that his father had accumulated over the years. “My father suffered from paralysis, and the debts kept piling up during my years of education. I thought it was difficult to repay the debts only through farming,” he says.

He adds that the name of the village, Nipani, means

'without water'. "Resources like water and electricity were always an issue here. With no intentions of pursuing farming, I started preparing for the civil service and other competitive government examinations. But I failed in all," Raj Shekhar tells **The Better India**, adding that he faced criticism and was disrespected among his folks in the village for the same.

An initial life of struggle; During his struggling years, the farmer learned about social crusader Anna Hazare from Ralegan Siddhi, about 350 km away from his village. "I knew that the person who reformed his village made it tanker-free and implemented the best practices of water conservation. Having no hope elsewhere, I decided to work with him. Anna agreed to pay me Rs 2,000 a month for all the rural development work," he says.

Rajshekhar says he continued working on various water conservation projects, village development works and implementing other initiatives until 1999, with an increased pay of Rs 6,000. "I was 27 years old when my family demanded me to return, get married and accept familial responsibilities. I started working on my 16-acre family farm growing vegetables and fruits," he adds.

He started by farming on a one-acre patch of the total land, and slowly increased the cultivated area to grow mango, chikoo, gooseberry, jamun and other fruits. The arrangement earned him between Rs 5,000 to Rs 10,000 daily. He realised growing fruits was a more feasible alternative as compared to vegetables, and that enabled him to avoid hectic trips to the vegetable market, labour costs, and delays in cash payments from vendors.

Around 2002, he learned that a person in the village was throwing away his 40,000 bamboo saplings. "A farmer tried to start a business by selling bamboo saplings, but since there were no buyers, he wanted to free his 2.5-acre land for cultivation. He agreed

to give them away at zero cost. With no specific intention in mind, I agreed to take and plant the saplings around the farm. I thought it would serve as a natural protective wall for the fruit trees growing between them," he says.

For the plantation, Raj Shekhar even dug a 10-km trench to serve for irrigation.

The eureka moment; In 2005, Raj Shekhar found customers who bought the now fully grown bamboo plants, earning him Rs 20 lakh a year. "It was an enlightening moment for me. I realised the crop fetches good money in the market. Soon, I started travelling to different parts of the country to identify varieties of bamboo and planted them in my farm," Raj Shekhar says, adding that some varieties survived the weather, while others were lost.

He then created nurseries for the 50-odd bamboo varieties that survived and started earning money out of it. Since then, Raj Shekhar has three lakh bamboo root stems and one crore saplings.

The government's push to promote bamboo further boosted his income. The change in government policies in 2017 declassified bamboo as a tree and categorised it as grass. The Central government in November 2017 amended the Indian Forest Act of 1927, and made bamboo legal to grow, cut and sell without requiring permissions.

"More customers across India have approached me since, seeking guidance on growing bamboo and how to earn from it. Bamboo is useful for making paper, incense sticks, toothpicks, charcoal, ethanol, methanol, plywood, ice-cream candy sticks, furniture and much more. Classifying bamboo as grass made the business more lucrative, and the demand for it has skyrocketed," Raj Shekhar says. He adds that the business earns him Rs 1 crore a year. "I spend about Rs 40 lakh in paying the cost to 100 labourers, who work on the now 54-acre land, which has since extended from 16 acres over the years," he adds. ✱

Legal Notes

Suresh Lohiya Vs. State of Maharashtra

Before the amendment of the Indian Forest Act 1927 by Act No. 5 of 2018, some cases had come up before courts for adjudication of the disputed facts, whether or not the finished products of bamboo are 'forest produce'. Courts have expressed opinions which are at variance with each other. With the decision in the above case by the Supreme Court, the divergent opinions come to an end. The details are as follows:

In *Fatesang Gimba Vasava & Ors Vs. State of Gujarat* (AIR 1987 Guj 9), a Division Bench of the Gujarat High Court held that if bamboos as a whole is forest produce every part thereof including chips would fall within the definition but once chips cease to be a 'produce' of the nature and get merged into a 'product' brought about by human labour and the product so made is commercially new and distinct known to the business community as a totally different commodity having a distinct character, such an article ceases to be a forest produce.

In *Divisional Forest Officer, Nandyal & Ors Vs. Co-Operative Labour Contract Society, Kurnool district* (1991) II ALT 553, a Division Bench of the High Court of A.P. discussed the implication of the word 'forest produce' and expressed the view on the word 'bamboo' and its 'finished product'. The Court held that there is no controversy over the proposition of law and fact that the term forest produce does not include articles which have attained the shape of 'finished product'.

In *State of Maharashtra & Ors Vs. Kisan etc.* (1992 FLT 3), the Bombay High Court supported the Circular orders of the Government issued in 1946 and held that crude forms of finished product made out of bamboo is forest produce.

In the present case of appeal before the Supreme Court, the question for decision was whether 'bamboo mat' can be treated as 'forest produce' and, that would decide the status of the order of confiscation of bamboo mats belonging to the appellant. The Additional Sessions Judge, on appeal against the order of confiscation, directed release of the bamboo mats. Against this order, the State filed a revision petition in the Bombay High Court and the High Court had reversed the order, holding the view that the product confiscated was 'forest produce'. Aggrieved by the decision of the High Court, the owner of the bamboo mat filed appeal in the Supreme Court.

The Supreme Court examined the case with reference to the definition of 'forest produce', 'timber' and felt that the High Court's decision is principally based on a conjoint reading of a definition of 'timber' and 'tree'. Tree includes bamboo and timber includes tree. Forest Produce is defined as any produce of a tree. Bamboo mat is not forest produce.

It is argued on behalf of the appellant that the High Court erred in holding that a product like bamboo mat would be forest produce by relying on the definition of timber: because that definition is in two parts and the second part which speaks of 'all woodfashionedor not has no application so far as trees are concerned which have been dealt in the first part of the definition. It was urged that the bamboo mat being a separate commercial product. What was stated by the Gujarat High Court in *Fatesang's* case merits Hon'ble Court's acceptance.

On the other hand, the counsel for the respondent urged that if bamboo mat is not held as forest produce, the object of the Act would be frustrated inasmuch as it would debar the forest authorities about the removal of such goods from the forest, which would be used as a handle by unscrupulous dealers to denude the country of its forest wealth. He quoted the definition of 'produce' in Stroud's Judicial Dictionary which reads: 'the expression produce of mines or minerals does not necessarily mean produce in its native state; coke may be such produce, although by combustion its chemical nature is changed'.

Their Lordships agreed with the view taken by the Gujarat High court in Fatesang's case. It was held that the definition of forest produce leaves nothing to doubt that it would not take within its fold an article or thing which is totally different from forest produce having distinct character. Therefore, where a product from bamboo is commercially different from bamboo and in common parlance taken as a distinct product, the same would be encompassed within the expression forest produce. Bamboo mat is taken as a product distinct from bamboo in the commercial world has not been disputed.

In view of the circumstances it is held that the bamboo mat is not forest produce. The appeal is therefore allowed and the impugned judgment of the High Court and the order of confiscation passed by the Conservator of Forests were set aside as they were not in accordance with law.

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K.B.R



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