



**The Himalayas are not insulated from IGP pollution. Our trajectory analysis shows that what is emitted in Punjab or Bihar does not stay there — it travels into the mountains**

— Soumen Raul, co-researcher Bose Institute, Kolkata

## pollution FROM INDO-GANGETIC PLAINS TRAVELLING TO HIMALAYAS

JITENDRA CHOUBEY @ New Delhi

A recent study using satellite data has revealed concerning trends in air pollution over a 25-year period in the Indo-Gangetic Plain (IGP), the Himalayan region and North-East India. The findings showed levels of harmful particulate matter (PM) increased by more than 20 per cent from 2010 to 2019 compared to the previous decade, prompting researchers to call for India's National Clean Air Programme (NCAP) to be expanded to include rural areas.

The study, 'Decadal shifts in aerosol hotspots and source attribution over IGP, north-east India and Himalayas: A 25-year (2000–2024) study' led by Professor Abhijit Chatterjee from the Bose Institute in Kolkata, tracked how pollution sources and levels changed over three decades. It tracked emissions patterns from this region affecting air quality in the Himalayas. For example, pollution from states like Punjab, Haryana, and Delhi is reaching the western and central Himalayas, while emissions from Bihar and West Bengal are impacting the eastern Himalayas.

The highest levels of PM were found in the eastern part of the Indo-Gangetic Plain, especially in areas like Bihar, southern West Bengal, and large parts of Bangladesh. Between 2010 and 2019,

pollution levels rose by 10-40% across the Indo-Gangetic Plain, the Himalayan region, and North-East India compared to the earlier ten years. In North-East India, two specific components of PM, related to burning biomass, increased by nearly 50%.

Professor Chatterjee noted that the eastern Indo-Gangetic Plain and North-East India are facing a particularly heavy burden of pollution, mainly caused by biomass burning, which was a major finding of the research. The study published in *Atmospheric Environment* journal also showed a shift in the types of pollutants found in the air over the years. For instance, pollution from burning materials like crop waste and wood has become more common, especially in eastern areas, while dust pollution has decreased overall in the region.

The study strongly suggested interventions to reduce pollution which should include rural areas in India's updated NCAP 2.0, which has previously been effective in tackling pollution in urban regions. The researchers argued that NCAP 2.0 must expand its scope beyond non-attainment cities to include rural regions and ecologically sensitive areas. The study specifically named the Sundarbans mangrove ecosystem, North-East India's biosphere-rich areas and the biodiversity-dense Himalayan regions as zones that warrant inclusion in India's Clean Air Mission.

USHA PERI @ Visakhapatnam

CREATING buffer zones with crops elephants avoid such as chilli, ginger, garlic and citrus, restoring fragmented forest corridors, and introducing real-time elephant alert systems could significantly reduce deadly encounters between humans and elephants in Assam, says a new 23-year study on human-elephant conflict (HEC) that analysed 1,806 conflict incidents across the north eastern state.

The researchers found that rapid habitat fragmentation, expanding settlements and disrupted elephant movement routes are increasingly pushing elephants into villages and farmlands, intensifying conflict in several districts. The study, titled 'Landscape determinants of human-elephant conflict in Assam, India: insights from two decades of spatial analysis,' examined 1,806 conflict incidents recorded between 2000 and 2023 across 21 forest divisions in Assam. The incidents included 1,468 human deaths and 337 injuries.

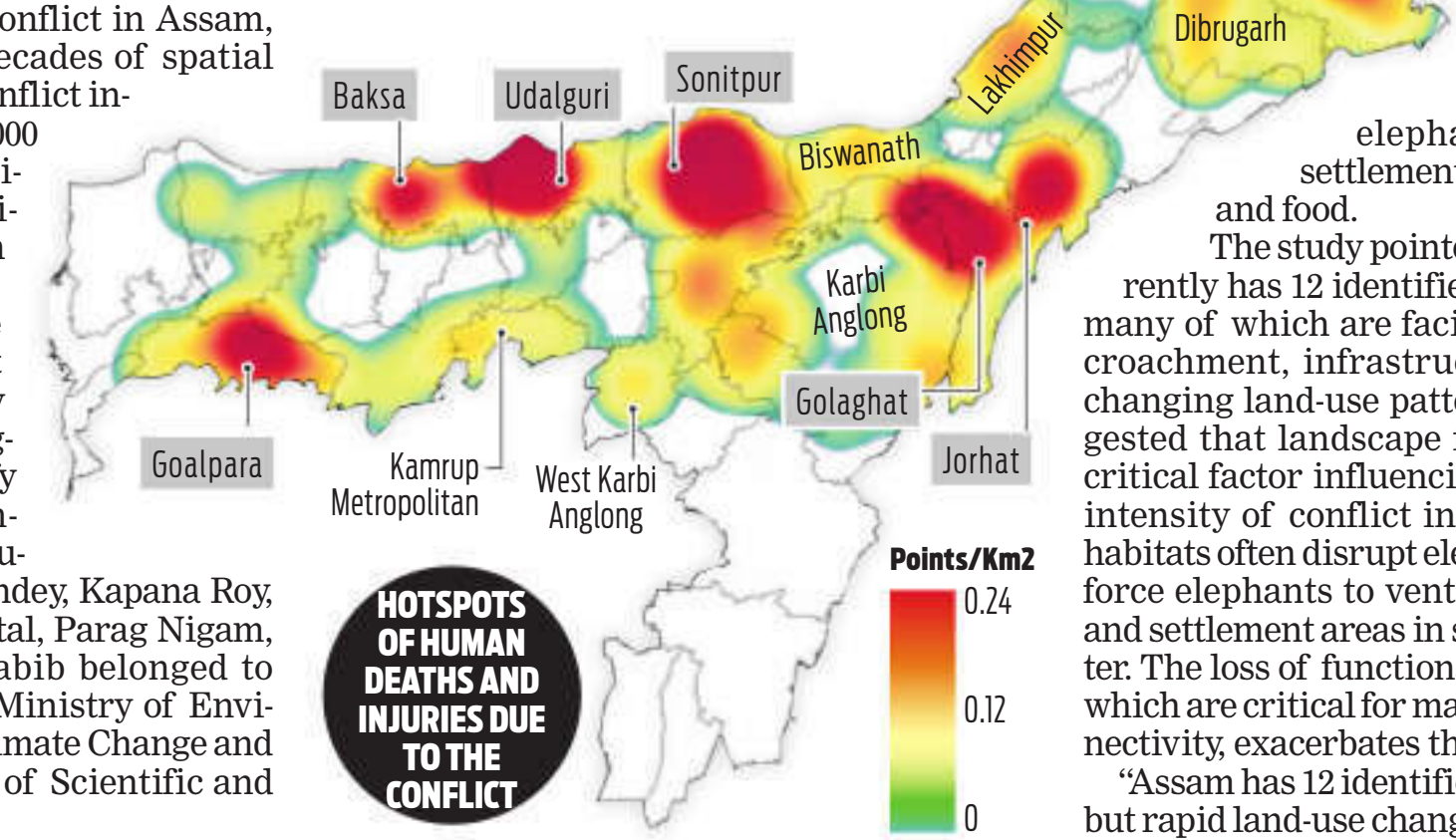
The study used satellite imagery, spatial hotspot mapping, kernel density analysis and landscape fragmentation models to identify ecological and human-induced drivers of conflict. Authors Athira N, Ramesh Pandey, Kapana Roy, Ananya Dutta, Dheeraj Mittal, Parag Nigam, Anukul Nath and Bilal Habib belonged to Wildlife Institute of India, Ministry of Environment and Forests and Climate Change and Ghaziabad-based Academy of Scientific and Innovative Research.

Researchers found that conflict hotspots were concentrated near fragmented forests, elephant reserves, tea gardens and croplands adjoining forest areas. Sonitpur West, Goalpara, Udalguri, Sonitpur East and Golaghat emerged as the most affected forest divisions. Goalpara recorded the highest number of human deaths at 175, while Sonitpur West reported 110 deaths and 92 injuries. Udalguri recorded 168 deaths and 34 injuries, while Sonitpur East reported 156 deaths and 21 injuries. In total, 527 villages across Assam were affected by human-elephant conflict during the study period, with Goalpara alone accounting for 80 affected villages. At the village level, Likhak Gaon recorded the highest number of incidents at 73, followed by Jorhat with 41 incidents, Ambari with 40, Uttar Dimakuchi and Jogigaon with 30 each, Gor Mara Gaon with 28, and Golampatty and Nagaon with 26 each.

Researchers also observed strong seasonal variation, with the monsoon season witnessing the highest number of incidents. According to the study, the overlap between peak agricultural activity and elephant movement during the rainy season increases the chances of en-

23-YR STUDY

## ASSAM'S FRAGMENTED ELEPHANT HABITATS ESCALATING CONFLICT



Human-elephant conflict in Assam (2000-2023)

counters between humans and elephants. Male victims accounted for a higher proportion of casualties across all seasons. The study noted that Assam, which supports an estimated 5,828 Asian elephants, has witnessed rapid land-use changes over the past few decades. Forests have increasingly been cleared for urbanisation, infrastructure projects, agriculture and monoculture plantations such as tea gardens, leading to the disruption of elephant habitats and traditional movement corridors.

Researchers found that fragmented forest patches with high edge density and patch density were strongly associated with increased conflict frequency. Villages with limited forest connectivity and expanding built-up areas recorded higher conflict intensity compared to villages with contiguous forest cover. Tea gardens were identified as important conflict zones because they often function as transitional spaces between forests and human set-

lements. Although tea estates provide temporary cover and forage for elephants, they also increase encounters with people.

The study also highlighted the role of roads and railway lines in intensifying conflict. Transport infrastructure cutting across elephant habitats has restricted elephant movement and contributed to accidental deaths and increased encounters. Assam and neighbouring West Bengal continue to report some of the highest railway-related elephant deaths in India. Researchers observed that proximity to water bodies, forests, croplands and elephant reserves significantly increased the probability of conflict. Villages with lower water availability were found to experience greater conflict intensity, as elephants entered human settlements searching for water and food.

The study pointed out that Assam currently has 12 identified elephant corridors, many of which are facing pressure from encroachment, infrastructure expansion and changing land-use patterns. The report suggested that landscape fragmentation was a critical factor influencing the frequency and intensity of conflict in Assam. Fragmented habitats often disrupt elephant movement and force elephants to venture into agricultural and settlement areas in search of food and water. The loss of functional elephant corridors, which are critical for maintaining habitat connectivity, exacerbates this issue, it said.

"Assam has 12 identified elephant corridors, but rapid land-use changes and infrastructure development threaten their effectiveness, forcing elephants into human-dominated areas and increasing human mortality rates. These corridors, if protected, could reduce conflict by allowing safe movement between habitats," the authors said.

Districts such as Sonitpur East and Goalpara, exhibiting protected areas, agricultural fields, and fragmented forests, were identified as major conflict zones. These results align with previous studies that have emphasised the role of habitat fragmentation in exacerbating HEC. To reduce conflict, the researchers recommended restoring forest connectivity and protecting elephant corridors to ensure safer elephant movement between habitats. The study also called for regulated urban expansion and infrastructure development in ecologically sensitive areas. Among the mitigation measures suggested were low-voltage elephant-friendly hanging electric fences around vulnerable villages, early warning systems using infrared trip alarms, mobile-based elephant alert applications and radio messaging systems to warn communities about elephant movement in real time.

## Discipline of compassion: Keep the dogs away from the tigers, please



INDIA'S tiger story is one of the great conservation achievements of our time. From 1,411 in 2006, the national estimate rose to 3,682 in 2022, with the country holding nearly three-fourths of the world's wild tigers.

This is not merely a wildlife statistic; it is proof that a large, crowded democracy can still protect an apex predator when science, law, field staff and the public come together.

But success has created a new challenge. As tiger numbers rise in strongholds, young animals disperse in search of territory. They move through buffer zones, territorial forests, village edges, grazing patches, sugarcane fields, roads, tourism zones and human settlements. The tiger does not recognize the neat administrative line between a protected core and a human-dominated landscape. Increasingly, its future depends not only on what happens inside reserves, but also on what circulates around them. One of the least discussed risks in this wider landscape is the free-ranging dog. This is not an argument against dogs; rather, it is an argument against abandonment disguised as compassion. A vaccinated, sterilized and cared-for dog inside a home or accountable shelter is a companion animal. A free-ranging dog moving between garbage dumps, village streets, carcass sites, forest trails and reserve buffers is part of an ecological and epidemiological network. It can carry pathogens into landscapes where endangered species have little defense.

The scale itself should worry us. The official 20th Livestock Census placed India's stray dog population at about 15.3 million in 2019; independent estimates have placed the number of free-ranging dogs much higher, in the range of tens of millions. The public health signal is already visible. India remains endemic for rabies, and the WHO has stated that the country accounts for a large share of global rabies deaths.

The ecological concern goes beyond rabies. Domestic dogs can

maintain or amplify multi-host pathogens such as canine distemper virus (CDV), canine parvovirus, canine adenovirus and the rabies virus. CDV is especially serious because it can affect many carnivores, including wild felids. Canine parvovirus is particularly concerning because it can persist in the environment for long periods under favorable conditions.

Field evidence from Central India has shown high exposure among free-ranging dogs to viral pathogens, as well as exposure among sympatric wild canids such as Indian foxes. A buffer-zone study in Chitwan, Nepal, in a tiger-bearing landscape, found high CDV seroprevalence in free-ranging dogs. These findings do not mean every infected dog will infect a tiger. Although Nepal is not India, the ecological setting — dogs, buffer villages, wild carnivores and tiger habitat — is highly relevant to South Asia. The study clearly shows that free-ranging dogs are not merely a civic nuisance; they are also a health risk to wildlife.

In 2018, the Gir landscape witnessed an unusual mortality event among Asiatic lions, with scientific investigations reporting CDV infection. That episode should have permanently changed how India thinks about dog-associated disease risks in rare carnivore populations. Recent reports from tiger landscapes such as Kanha and Tadoba have further sharpened concerns, with authorities discussing bio-surveillance, dog vaccination, sterilization and serological studies around protected areas. Such reports should be treated carefully until fully confirmed, but they show that the risk is now being taken seriously by wildlife managers.

Leopards widen the concern. India's 2022 leopard estimate was 13,874 in sampled habitats. Unlike tigers, leopards are even more comfortable

in human-dominated landscapes — ravines, farms, plantations, scrublands, city fringes and village edges. They encounter dogs more often. Wild canids such as wolves, jackals, foxes and dholes are also vulnerable, though their suffering rarely receives the public attention reserved for tigers.

That is why the question must be reframed. It is not 'dogs versus tigers'. That is a crude and emotionally charged formulation. The real choice is between responsible dog guardianship and irresponsible free-ranging dog populations.

Vaccination is essential, but it cannot be the whole answer. Campaigns face the hard arithmetic of scale: millions of dogs, continuous puppy births, uneven revaccination, migration across ward and village boundaries, unclear ownership and weak field records. Around tiger reserves, leopard habitats, wolf grasslands and wildlife corridors, vaccination must be combined with sterilization, waste control, responsible ownership, dog-free ecological zones, regulated feeding spaces, sheltering and adoption.

The policy pathway is clear. Every tiger reserve and high-risk wildlife landscape needs a dog census, a vaccination and sterilization schedule, a disease surveillance system and a rapid response protocol. Forest departments, local bodies, veterinary universities and public health agencies must work together. Garbage dumps, slaughter waste and carcass disposal near forest edges must be regulated because they subsidize dog populations. Tourism zones and reserve buffers should not become open dog habitats. Dedicated feeding spaces, where permitted, must be away from wildlife corridors and public-risk zones.

Above all, India needs a cultural shift. We must stop romanticizing the lives of dogs on streets and forest fringes. For when disease reaches a vulnerable wild carnivore population, the loss can be sudden, painful and irreversible. Tigers are not ornaments of the forest. They are working ecological forces. They shape prey behavior; influence food webs, affect scavenger dynamics and help maintain the structure of ecosystems. A landscape without tigers is not merely less beautiful; it is less complete.

(Views are personal)

**AMARAVATI DEVELOPMENT CORPORATION LIMITED (ADCL)**  
E-PROCUREMENT - REQUEST FOR PROPOSAL  
NIT No. 414/IPD/ADCL/2026 Date: 29.05.2026  
Name of Assignment: Request for Proposal for Engagement of PMC for Construction Supervision and Project Management of Lump Sum Contract (Tender) Works including DLP of 2 Years for works of: (1) Package XXXVII: Flood Protection and Strengthening of Inspection Right Bank of River Krishna E1 Road (Karakatta) from Ch.0+300 to Ch.2+480; (2) Package XXXVIII: Flood Protection and Strengthening of Inspection Right Bank of River Krishna E1 Road (Karakatta) from Ch.2+480 to Ch.4+990; (3) Package XXXIX: Flood Protection and Strengthening of Inspection Right Bank of River Krishna E1 Road (Karakatta) from Ch.4+990 to Ch.7+200; (4) Package XXXX: Flood Pumping Station-2 (8400 Cusec Capacity) at Undavalli Village; (5) Package XXXXIII: 2 Lane Bridge including Shiplock & Regulator for Kondaveetiugu and Guntur Channel; and (6) Package XXXXIV: Construction of Roads, Drains, Water Supply, Sewerage, Utility Ducts for Power & ICT, Reuse Waterline, STP & Avenue Plantation compatible with Trunk Infrastructure Layouts for Land Pooling Scheme Layout in Zone-11 at Undavalli Village in Amaravati, Capital City of Andhra Pradesh.  
The above bid can be downloaded on AP e-procurement portal from DL 30.05.2026 @18:00 Hrs to DL 22.06.2026 @15:00 Hrs. Due date for submission of Bid is DL 22.06.2026 @16:00 Hrs, Technical Bid opening is on DL 22.06.2026 @16:00 Hrs. For further details please refer to 'Tender' section of www.approcurement.gov.in and www.adcl.in  
Sd/- Chairperson & Managing Director

## CLASSIFIEDS

**PUBLIC NOTICE:**  
**CHANGE OF NAME**  
I, MANOHARAN Father of Service No. 2624732Y Sep SMITH N, R/o. Thayil House, Cherikkal Pinarayi-PO, Kannur Dist, Kerala-670741 have changed my name from MANOHARAN KP to MANOHARAN VIDE Affidavit dt:28-5-2026 before G.Shobha, Advocate and Notary, Brahmanwadi, Begumpet, Hyderabad.

**CHANGE OF NAME**  
I, Service No. 16116949F Hav MARISELVAMP, R/o.648, Kalimathu Nagar, Sivakasi Virudhunagar Road, Vill & PO:Thiruthangal, Teh:Sivakasi, Dist:Virudhunagar, Tamilnadu-626130 that my daughter name is changed from AARTHI HARI SRI to AARTHI HARI SRI M vide affidavit dt:29-5-2026 before G.Shobha, Advocate and Notary, Hyderabad.

**CHANGE OF NAME**  
I, NALLAKANDY ANITHA Mother of Service No. 2624732Y Sep SMITH N, R/o.Thayil House, Cherikkal Pinarayi-PO, Kannur Dist, Kerala-670741 have changed my name from ANITHA N to NALLAKANDY ANITHA vide Affidavit dt:28-5-2026 before G.Shobha, Advocate and Notary, Brahmanwadi, Begumpet, Hyderabad.

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Raj.Sarnadwaj/26/3708 RVUN/PR-4401 Addl. Chief Engineer (Proc.)

**PRASADITYA ARC LIMITED**  
formerly Prithvi Asset Reconstruction and Securitisation Company Limited (PARAS)  
SALE NOTICE FOR SALE OF SECURED ASSET OF M/s. TOURISM AND TRAVEL MEDIA ENTERTAINMENT PVT LTD.  
E-auction Sale Notice for Sale of Immovable Assets under the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 read with proviso to Rule 8(6) and 9(1) of the Security Interest (Enforcement) rules, 2002.  
Notice is hereby given to the public that the following secured asset will be sold by the undersigned under the provisions of SARFAESI Act by way of Sealed Tenders cum E-AUCTION on "AS IS WHERE IS", "AS IS WHAT IS" and "WHATSOEVER THERE IS" basis on the date, time and at the place mentioned hereunder for recovery of dues to M/s. Prasaditya ARC Limited (PARC) (formerly Prithvi Asset Reconstruction and Securitisation Company Limited) amounting to Rs.88,93,58,779/- (Rupees Sixty eight crores ninety three lakhs fifty eight thousand seven hundred seventy nine Only) as on 30.04.2026 with further interest and costs thereon from M/s. Tourism and Travel Media Entertainment Pvt. Ltd.  
DESCRIPTION OF THE IMMOVABLE SECURED ASSET  
Reserve Price: Rs.7,50,00,000/- Earnest Money Deposit: Rs.75,00,000  
All that the portion of House bearing No.8-2-608/1/4 and 8-2-608/1/5 forming part of survey Nos.120 and 121 of Shaikpet Village, Shaikpet Revenue Mandal, administering 357.5 Square Yards or 298.80 Square Meters, situated at Road No.10, Banjara Hills, Hyderabad, A.P. belonging to M/s. Time and Media and bounded by North: H.No.8-2-608/1/6; South: Neighbour's House, East: 40'-0" Wide Road, West: Portion of H.No.8-2-608/1/4 & 5

For detailed terms and conditions of the Sale, please refer to the link provided in M/s. Prasaditya ARC Limited website i.e., [www.paras.in/tenders](http://www.paras.in/tenders)  
Sale of Schedule properties will be held by adopting "Online-Auction" through the website <http://www.bank.auctions.com> of the service provider. The details of date of E-Auction, last date of submission of Bid form, Reserve Price, Earnest Money Deposit, Bid increase amount and time of E-Auction are mentioned hereunder.  
Date of E-Auction: 30.06.2026  
Last Date for submission of Bid: 29.06.2026 (05.00 PM)

Reserve Price	Earnest Money Deposit	Bid Increase Amount	Time of E-Auction Between
Rs.7,50,00,000/-	Rs. 75,00,000/-	Rs.5,00,000/-	11:00 AM to 12:00 Noon

\* Time of E-Auction — with an auto extension clause of 5 minutes each i.e., e-auction end time will be extended by 5 minutes each, if bid is made before closure of auction.  
At the sale, the public are invited to participate in "online e-auction" through the website <http://www.bank.auctions.com> of the service provider. The address details of Service Provider are: - M/s. C1 India Pvt. Ltd, Contact Person: (1) Mr. Dharani Krishna, Contact No.9948182222, E-mail: (1) [dharami.prasadi@paras.in](mailto:dharami.prasadi@paras.in) & (2) [anandika@paras.in](mailto:anandika@paras.in).  
The intending participants/bidders are advised to go through the website <http://www.bank.auctions.com> for detailed terms and conditions of e-auction sale and are also required to contact the Service Provider for online registration, user ID, Password, help, procedure, online training about e-auction etc., for submitting their Bid Forms and for taking part in e-auction sale proceedings.  
The intending participants shall deposit EMD amount by RTGS/NEFT/Funds Transfer to the credit of E-Auction collection below mentioned Account of secured creditor:  
Account No. 10063110000229  
Secured Creditor: M/s. Prasaditya ARC Limited  
Bank: Union Bank of India  
Branch: Mahatma Gandhi Branch - Punjagutta Hyderabad  
IFSC Code: UBIN0719121

The intending bidders are advised to submit the Bid Forms online with requisite details viz. proof of deposit of EMD, PAN Card, Aadhaar, Address & ID Proof on or before the last date mentioned in the above auction table.  
The intending bidders shall send hard copy of Bid Form duly filled in along with self-attested copies of above documents by Registered Post/Speed Post/ Courier to the undersigned so as to reach on or before 29.06.2026 by 05.00 P.M. at the following address:  
Mr. K.V. Ramakrishna Prasad, Authorized Officer, M/s. Prasaditya ARC Limited (formerly Prithvi Asset Reconstruction and Securitisation Company Limited), Door No. 1-55, 4' Floor, Raja Prasadu, Majaji Banda Road, Kondapur, Hyderabad - 500 084. Postal delays are not entertained. The intending bidders are also advised to visit the property and fully satisfy themselves about the details of the property before participating in the e-auction.  
Date & Time of inspection of the property: 20.06.2026 between 11.00 A.M to 3.00 P.M. only.  
The intending participants are also advised to contact Mr. K.V. Ramakrishna Prasad, Vice President (Legal & Resolutions), (contact Mobile No. 91-9652250044 - Office Land line No. 040-41413314 (E-mail: [kramakrishna@paras.in](mailto:kramakrishna@paras.in)), detailed queries, terms and conditions, queries, guidance, inspection of schedule property, pursuit of copies of title deeds and latest encumbrance certificates to exercise due diligence and satisfy themselves about the title property under E-auction sale.  
In the event the auction scheduled herein above fails for any reason whatsoever, PARAS has the right to sell the secured assets under auction through this notice by way of PRIVATE TREATY under the provisions of the SARFAESI Act, 2002. This is also a notice to the borrower/mortgagor/guarantors of M/s. Tourism and Travel Media Entertainment Private Limited, about holding of the sale on the above-mentioned date and other details.  
Date: 26.05.2026  
Place: Hyderabad  
Authorised Officer