# People in Conservation

## Biodiversity Conservation and Livelihood Security

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*Special Issue on Energy Alternatives*

## *Opening word*

*Humanity stands at the brink of a civilizational and ecological collapse. We are a wounded civilization, and the natural habitat and ecosystems that have sustained us and other sentient species so far, are under threat like never before. The present geological epoch, marked by multiple crises – the most obvious of which are energy and climate crisis – has been characterized by worried people as* ***Anthropocene*** *- a geological epoch dating from the commencement of significant human impact on Earth's geology and ecosystems, including, but not limited to, anthropogenic, as the period during which human activity has become so dominant as to create a crisis of the climate and environment; and by others who dispute this explanation of the crisis by instead calling it* ***Capitalocene*** *- as the epoch of unbridled over-accumulation, which has brought about an "irreparable rift" in the metabolic interaction between humanity and the rest of nature... a distinct geological epoch in which the capitalist formula of "accumulation for accumulation's sake" has penetrated into every nook and cranny of the planet's biophysical environment, to the point where the survival of the capitalist system has come to constitute an existential threat to the survival of humanity as a whole.*

*In this atmosphere of gloom & despair, it is difficult to hold on to hope. But hold on we must!*

*This special issue is dedicated to those who refuse to give way to defeat.*

*milind*

## 1. In News

### A milestone: India to regulate real driving emissions from new vehicles

By Anumita Roychowdhury

India meets yet another milestone in the internal combustion engine (ICE) technology trajectory today. All cars, SUVs and goods vehicles with maximum weight not exceeding 3.5 tonnes to be sold from April 1, 2023 onwards, are to be tested for real driving emissions (RDE).

This is a critical step forward to check gaps between emissions performance during certification in laboratory and in the real world driving conditions. This is needed to make emissions control systems more effective, durable and prevent use of defeat devices or a software code in the vehicle that deactivates emissions control systems under certain operating conditions in the real world.

The RDE regulations simply mean thatvehicles will also get tested in real traffic conditions based on speed, acceleration, and braking as per our real-world usage patterns. Also, after vehicles are sold, a random sample will be picked up from the market for testing in real world driving conditions to establish compliance with norms when in service.

This is a dramatic departure from the conventional practice of testing vehicles only in laboratories where a driving pattern or test cycle is simulated under controlled laboratory conditions. That cannot capture the full range of emissions from vehicles when driven on the roads.

**Making of RDE regulations**

The Union Ministry of Road Transport and Highways (MoRTH) had set up a committee in December 2016 to develop the RDE regulations and it was steered by the International Centre for Automotive Technology (ICAT).

The RDE regulations were included in the original Bharat State 6 emissions standards (BS6) in 2020. But industry and vehicle certification agencies were given three years to generate and collect data to decide some critical parameters for testing and enforcement. All the RDE rules have been detailed out in Automotive Indian Standard (AIS) 137 (chapter 20).

Subsequently, the MoRTH issued a notification on February 17, 2023 that makes RDE enforceable from April 1, 2023 onwards. RDE is a much tougher testing system. The real world emissions are usually influenced by highly variable factors that cannot be controlled.

These include ambient temperature, pressure, humidity, road conditions, altitude, fuel composition, engine technology among others. Within these boundary conditions, the overall emissions cannot exceed a specified limit on road. This makes the system even stronger and ensures durable emissions performance.

To develop these regulations, ICAT has tested vehicles in different parts of the country covering more than 10,000 km to generate data. For this purpose test routes were also identified in selected cities to include urban, rural and highway stretches for representative driving conditions.

**Industry proves it can do better**

RDE is a big leap from the early years when there was a lot of hesitation among the industry players about the adoption of real world driving emissions testing as part of the BS6 regulations.

There was uncertainty about the conformity factor (CF) or the margin that is allowed between the tested norms in the laboratory and the real world emissions results.

The extra margin is considered to account for the measurement uncertainties in the testing with portable emission measurement equipment (PEMS). This factor is simply a multiplier of the emissions standards. But this should not be too lax.

It is encouraging that the conformity factor of 1.5 (1.5 CF) that has been finally adopted for testing of all gaseous pollutants andparticle number has been notified by the MoRTH on February 17, 2023. This also aligns with Europe.

This is certainly an improvement over a more lenient margin of 2.1 that was originally considered.It may be recalled that theAIS 137 Part 3 draft had originally provided for— a "presumption of confirmatory with requirement of 2.1— to be assessed by additional RDE test." 2.1 is a more relaxed margin for RDE compliance.

This improvement has been possible because the analysis of test data showed that the Indian industry has done batter already.

It is evident from the ICAT's assessment of the test data that as many as 93 per cent of the generated data for nitrogen oxides (NOx) was at a level less than 1.43 CF and 99.61 per cent for particle number was less than 1.5 CF. This on-ground assessment has helped to tighten the original presumption.

However, it may be noted that Europe is moving quickly towards tighter CF to reduce the margin further to as low as 1.32 CF and 1.23 CF.

Overall, the Indian regulations have aligned with the package 3 of RDE regulations of Europe adopted around 2018. However, some parameters have been modified to suit the Indian conditions.

These include lowering the speed range for urban, rural and highway driving compared to the European range. Also the temperature range has been taken on a higher side compared to Europe.

**What RDE means for vehicles**

Compliance with new RDE regulations will require much more effective, complex and durable emission control systems particularly for NOx and particle numbers in diesel vehicles.

Complex systems like selective catalytic reducing systems and lean NOX traps for NOx control and particulate filters in diesel vehicles will be more expensive and more difficult to maintain. Their usage may also result in some fuel penalty that may have to be addressed.

Also while RDE regulations are getting enforced, simultaneously tighter fuel economy norms and onboard diagnostic stage II norms are also kicking in. Overall the costs are expected to increase especially for the diesel vehicles.

Already, the media is abuzz on how diesel cars especially smaller and mid segments are threatened and several popular models will exit. As reported in media, these includeHyundai's i20 Diesel, Skoda's Octavia, Superb, Maruti Suzuki's Alto 800, Honda's City 5th Gen Diesel, Amaze Diesel, Jazz etc, Mahindra: Marazzo, Alturas G4, KUV100, Tata' Altroz Diesel, Renault's Kwid 800, Toyota Innova Crysta Petrol among others. SUVs are comparatively less affected than the smaller diesel cars.

**RDE needed to avert diesel gate**

Not a very long time ago, the diesel gate scandal involving several manufacturers across the US and Europe had shaken the world.

Following this, a spate of reforms including successive 4 packages including RDE regulations were implemented in Europe.

These regulatory reforms had even helped to lower the gap between the certification tests and real world emissions performance in several models.

But recently the US based non-profit International Council on Clean Transportation (ICCT) has released its findings from the review of the existing vehicle testing results from various sources including remote sensing measurements in Europe.

They have found NOx emission levels too high indicating possible use of defeat devices. They have identified vehicle models that are above the identified threshold and have asked for further investigation of these vehicle models.

ICCT has found that about 85 per cent for Euro 5 and 77 per cent for Euro 6 diesel cars have "suspicious" excess NOx emissions while many show "extreme" emission levels— as per the threshold defined in the study. "Extreme" emission levels were found in at least 40 per cent of official tests of diesel cars, indicating "the presence of a calibration strategy that may now be considered a prohibited defeat device", states ICCT.

This is a learning curve for India.

**Real world emissions matters: need to get better**

The BS6 version 2— including RDE and in-use compliance requirements that are rolling out today, set the stage for more stringent scrutiny of real driving emissions for durable real world emissions performance.

RDE regulations will only get tighter now with further reforms in the anvil including adoption of a more improved testing cycle for certification— Worldwide Harmonized Light Vehicles Test Procedure(WLTP) that is closer to real world driving patterns. RDE testing linked with WLTP will be a stronger measure.

Moreover, India has already started to frame the BS 7 mass emissions standards that will not only be more stringent, fully fuel neutral, but will also regulate greenhouse gases. Europe is expected to implement Euro 7 in 2025.

Clearly, the ICE trajectory is poised for a transformation that needs to be taken forward to bridge the gap with the global good practice. Regulation of real world emissions performance can maximise air quality and public health benefits.

**Source: h**ttps://www.downtoearth.org.in/blog/air/a-milestone-india-to-regulate-real-driving-emissions-from-new-vehicles-today-onwards-88578

**Climate justice takes centre stage at UN, top European court in historic firsts**

**By Rajat Ghai**


***The hearing at Strasbourg. Photo: @ECHR_CEDH / Twitter***

March 29, 2023, was a historic day for climate justice as the concept featured in sessions of two top global institutions — the United Nations General Assembly in New York City and the European Court of Human Rights (ECHR) in Strasbourg, France.

The ECHR witnessed the first-ever public hearing addressing the duty of states to reduce greenhouse gas emissions, including a case brought by the Swiss Senior Women for Climate Protection against Switzerland, a statement by the Center for International Environmental Law (CIEL) noted.

Across the Atlantic, the UN General Assembly adopted a resolution calling upon the world's highest court, the International Court of Justice, to issue an opinion on state legal responsibilities to protect the climate system for present and future generations and the consequences of failing to do so.

The resolution was spearheaded through an initiative by the Pacific Island nation of Vanuatu, a Small Island Developing State. It enjoyed the support of over 120 co-sponsoring countries, according to the CIEL statement.

In Strasbourg, a packed courtroom listened to the case — Vere in **Klima Seniorinnen Schweiz and Others v. Switzerland—**where 2,038 elderly women have claimed that the Swiss government's climate change policy is violating their right to health.

Human-induced climate change has caused intense heatwaves which are especially lethal for the elderly, the women have said.

Anne Mahrer, co-president of Senior Women for Climate Protection Switzerland, was quoted as saying in a statement by Greenpeace, the international environmental organisation:

We have filed a lawsuit because Switzerland is doing far too little to contain the climate catastrophe. Rising temperatures are already having serious impacts on our physical and mental health. The big spike in heat waves is making us older women sick.

"The case (**Verein KlimaSeniorinnen Schweiz and Others v. Switzerland**, Application no. 53600/20) will set a precedent for all 46 states of the Council

of Europe, and decide whether and to what extent a country such as Switzerland must reduce its greenhouse gas emissions more stringently to protect human rights," Greenpeace added in the statement.

The development come just 10 days after the Intergovernmental Panel on Climate Change (IPCC) released the Sixth Synthesis Report.

That report collated five years of research in climate science and policy and presented a clear roadmap to a livable future.

**Source:** https://www.downtoearth.org.in/news/climate-change/climate-justice-takes-centrestage-at-un-top-european-court-in-historic-firsts-88534

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## 2. Perspectives

### IPCC author Aditi Mukherjo on Energy transition in agriculture and water security

**By Sahana Ghosh**

***Aditi Mukherji interacting with farmers during her visit in northern Bangladesh. Photo by IWMI.***

'Climate-driven food and water insecurity is expected to increase with increased warming, reiterates the latest Intergovernmental Panel on Climate Change (IPCC) report. Water scientist Aditi Mukherji and one of the report authors, in conversation with Mongabay-India, states that 'just' energy transitions in agriculture are vital in speeding up climate action to limit warming to 1.5°C above pre-industrial levels.

Highlighting an 'implementation gap' in adaptation and mitigation actions, the IPCC 6$^{th}$Assessment CycleSynthesis Report(AR6), that concludes the update of the state of knowledge on climate science and the end of the IPCC AR6 cycle, underlines that climate-resilient development action is "more urgent than previously assessed" in the IPCC's 5$^{th}$Assessment Report (AR5).

Climate-resilient development integrates adaptation and greenhouse gas mitigation to advance sustainable development for all, it says.

"It's not as if we have to compromise on our development needs. We have to consciously follow a low emissions pathway. And for that, there needs to be technological support, there needs to be financing. So, we are talking in terms of a just energy transition," Mukherji, Director, Climate Change Impact Platform, CGIAR and a Synthesis Report author explains.

***Food and water insecurity is expected to increase due to climate-driven changes, says the recent IPCC report. Photo by India Water Portal/Flickr.***

**Energy transition in the context of agriculture**

Mukherji opines that we need to talk more about just energy transition in the context of agriculture. "Right now we are talking about energy transition only in the context of mining," she adds.

For monsoon-dependent India, just energy transitions in agriculture and lowering agriculture's carbon footprint link up to agro-ecological suitability — growing crops where it's suitable, and shifting to clean energy for irrigation.

The AR6 makes it clear that every additional fraction of warming will lead to intensification of the global water cycle and larger extremes – likely intensifying water-related risks that will impact food security.

***To enable just energy transition in agriculture, India needs to grow climate-resilient crops and move to clean energy in irrigation. Photo by Achuthan K V/Wikimedia Commons.***

"We also know that we are not managing our water very well. We are very much focused on supply side interventions such as interlinking of rivers; a lot of supply driven and infrastructure-driven interventions but we are not talking enough about the demand side management. For India, the demand side management of water relates to growing appropriate crops in appropriate places given that agriculture is a major user of water–which means we do not grow water-intensive crops in dry areas."

"And when we grow appropriate crops and we need irrigation, there is a very good case for moving to clean energy, we can easily shift to solar-powered sources for our irrigation needs," Mukherji adds.

**Prioritising justice**

Aditi Mukherji's research has shown that it is mainly the smallholder farmers who are bearing the main cost of solar-powered irrigation. "So, they are not responsible for a large part of the GHG emission and they should not be the ones bearing the cost of this just transition either," Mukherji says echoing the Synthesis Report's message on climate-resilient development that prioritises risk reduction, equity and justice.

For climate action, correction of policies and institutions will go a long way.

In a2006 paper, Mukherji described, using contrasting case studies of the water-abundant state of West Bengal and the water-scarce Gujarat, that groundwater-related policies in India "have very little to do with the scarcity, depletion or quality of groundwater" and "more to do with rural politics manifested, among other things, in terms of the presence or absence of farmer lobbies."

"There is also the food affordability factor–the need to keep the food prices low. If you have to keep the food prices low, you have to keep the cost of cultivation low so when you want to keep the cost of cultivation low, then you have to provide subsidies to the input subsidy, that's fertiliser or electricity."

"With the advent of the Green Revolution, historical Green Revolution technologies were mostly

propagated in northwest India which are naturally water-scarce regions so that has led to a kind of imbalance (Green Revolution further worsened the water scarcity). And farmers in places which enjoyed the Green Revolution at the very beginning also became more wealthy or better off and in the process, they also developed strong lobbies. So, obviously it becomes harder now to take away some of those important messages that they are getting," she says.

**Managing water**

Expanding on the nuances of water management and misperceptions, she says context specificity is also vital.

"For example, water-saving technologies may not necessarily save water in absolute terms. It may save water in relative terms, but what do we do with the saved water is the important part– does it remain in the aquifer or is the same water also extracted and put in another part of the land? In our research on eastern India and Bangladesh we have shown that it is not always the case that irrigation everywhere will lead to negative impacts on groundwater. If you have high recharge, and if you have a certain kind of aquifer, even continuous irrigation will not necessarily lead to lowering of water."

***Sugarcane, a water-intensive crop is grown in some of the drought-prone regions of Maharashtra. To address the demand side management issues related to water, India must grow the right crops in the right regions, says water expert Aditi Mukherji. Photo by Manish Kumar/Mongabay.***

In South Asia, especially through her work in India, Bangladesh and Nepal, Mukherji remarks that these countries in the region are similar in lacking groundwater governance.

"No governance happens... that's the part that's left to the farmers, which is not such a bad thing. Whatever governance happens is indirect governance through electricity tariffs. India, of course, because it's a larger country has a larger variation in how some places have free electricity versus metered tariff so that affects water use; in other places there is a lot of groundwater dependence and diesel dependence," she highlights.

**The need for a better land-use plan**

As far as the implications of glacier melt on water security in India are concerned, Mukherji says there are three ways to look at it: impacts on regions directly depending on glacial melt, downstream impacts and localised disasters.

At the heart of the problem, in addition to climate change, is infrastructure development without considering the ecology of the region, which puts communities at risk in the Indian Himalayan region. "So, that's where I think the policies that can be relevant, you know, how to decide our hydropower; should we be making as much hydropower as we have when we know that those hydropower (sites) are at risk? With springs, one of the things that we do is build a road and, in the process, we cut out the spring recharge area, which may be on the top of a hill.

"With the spring discharge area, which may be towards the bottom and when you cut it off, then the springs automatically dry. I think there is a need for a lot more caution and land-use plan," she concludes.

First published by **Mongabay** on 22 March 2023.

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## 3. Signs of hope

### This unique mud hotel harves rain, has no Acs & runs on the sun

**By Roshini Muthukumar**

***Lokesh Gunjanur, the founder of Sunyata hotel***

Welcome to the 21st year of the 21st century, where many businesses and individuals are focusing on operating buildings in an eco-friendly manner by using solar energy or reducing water usage through Rainwater Harvesting (RWH) systems. However, only a few are focused on following sustainable construction practices. According to reports, construction amounts to 30 per cent of air pollutionin India.

But, an eight-month-old Chikmagalur-based Sunyata Hotel is a building that has both — sustainable construction while its residents also use eco-friendly practices.

Spread across 6,000 square feet, the hotel was built using eco-friendly bricks made from scratch with minimal cement and concrete. They have installed solar panels to provide electricity, RWH systems to supply water, and earth tunnels to keep their premises cool.

"Most of the construction materials were sourced locally. The bricks for the structure were made on the site using mud sourced on our property, and from other places within a 15-mile radius. We also ensured that not one drop of water used on the premises went to waste," says Lokesh Gunjugnur (43), the owner of the hotel in an interview with The Better India.

**Starting from scratch**

Several years ago, Lokesh purchased an empty land in Chikmagalur, the town where he grew up, as an investment. Until 2017, he did not have a plan on what to do with it. But after learning about the town's tourism booming, he decided to start a resort.

"I wanted my hotel to be unique and in favour of the environment — not only in terms of the way it operated but also in terms of construction. I wanted to use materials that were not harmful to the environment. In the future, even if the building is being demolished, I wanted to ensure that the materials would become one with the earth again," says Lokesh, who is a software engineer based in Miami, USA.

To do this, he approached Design Kacheri, an architecture firm in Bengaluru and a young civil engineer named Punit Y, who was trained in Auroville. With their help, Lokesh was able to execute his dream project. The team designed the hotel and gave him suggestions on what would work on his site.

At first, the team began with making the bricks for the structure. This involved using the soil that was removed to level the ground, as well as gathering soil from locations within a 15-mile radius of his property.

"This was mixed along with less than 5 per cent each of limestone and cement, which was later baked into bricks. All the work was done on the property itself. To power the mixer and other equipment, we had solar panels installed to generate electricity. The work was done over the sunny months to ensure there was ample sunlight," says Lokesh.

***Hotel Sunyata under construction***

To avoid the use of steel that raises and supports the structure, the team used load-bearing structures. Lokesh says this was a technique that was popular among older buildings when steel was not prevalent.

He also opted for coconut shells and pot fillers for the ceiling, which acts as sturdy flooring for the next floor, adds aesthetic value to the rooms, and keeps the rooms cooler.

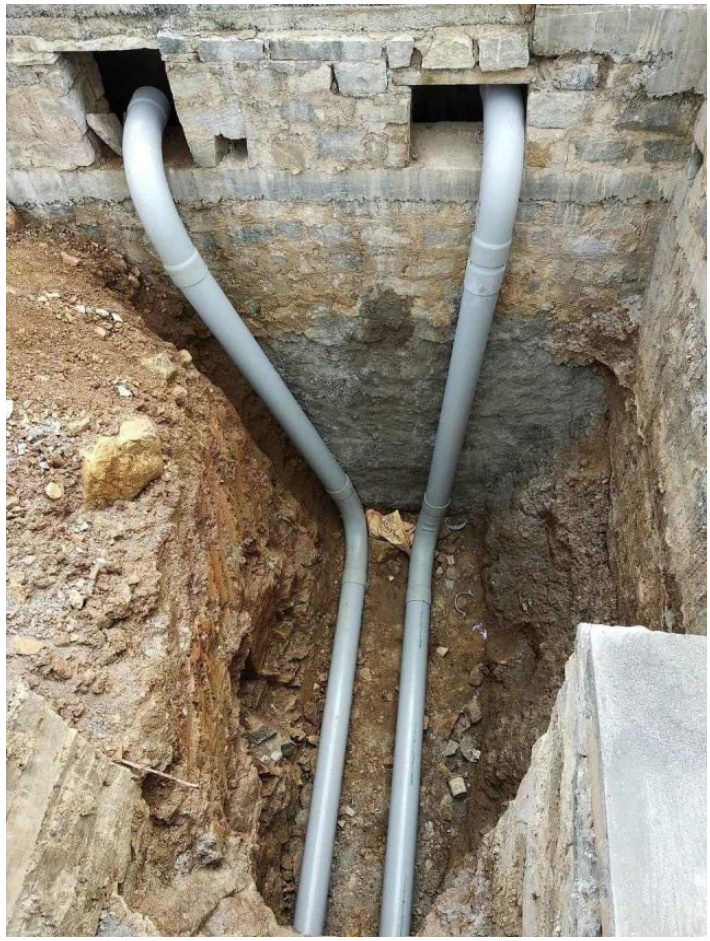
### Natural cooling

Being a hotel, another important aspect was ensuring the premises were suitable for his guests. As Chikmagalur got warm during the summers and the ambient temperature would be up to 30° Celsius, he had to ensure that the rooms were kept cool in a sustainable manner.

***Rooms with aesthetic ceilings at Hotel Sunyata***

"Instead of air conditioning, we chose a natural cooling technique. In this system, a large PVC pipe is installed 10 feet under the building. This acts as a coolant pipe for outside air. It works by sucking in air from the environment, and as the air passes through the pipe it cools down, which is then expelled through various outlets into the 11 rooms in the premises," says Lokesh.

The rooms also have a chimney on the ceilings, to expel warm air. This system ensures that the rooms stay at a temperature between 18° C and 25° C, no matter what the temperature is on the outside.



***Natural cooling systems***

### Saving every drop of water

The entire premise is supplied with rainwater, stored in a 50,000-litre tank, which is installed underground. This water is treated and supplied as drinking water to the guests and is used for cooking.

"The tank was placed underground to prevent the growth of bacteria or algae. We also conduct regular checks on the tank to maintain cleanliness. Guests are given an unlimited supply of water, and the same is served only in steel bottles," says Lokesh.

A well was also constructed on the premises to store excess rainwater and to improve groundwater levels. The rainwater falling on common areas like the parking or courtyard is also directed to the water table with the help of special pavement bricks.

*An open well on the premises of Hotel Sunyata*

"These bricks, laid on the side of the pathways, are made with holes within them to allow water to seep through it," says Lokesh.

Even the greywater generated from the bathrooms is not discarded. With the help of a Bengaluru-based startup namedECOSTP, the hotel installed a system to purify the greywater.

"This purified water is supplied to toilet flush tanks and is used to water the garden," says Lokesh. With 11 rooms, a quaint courtyard and a local cafe, Sunyata hotel was opened to guests in January 2021. They also have a small shop on their premises where guests can purchase handmade sustainable products by local artisans. Lokesh says he hopes to partner with more local businesses and artisans to help them promote their businesses.

*(Edited by Divya Sethu)*

First Published by **The Better India** in December 2021.

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## Case Study

### Ranchi shows how india's Biggest cycling lessons lie in its smaller cities

**By Swarna Dutt, Azra Khano**

***At least 18% of the total work-based trips in smaller cities are on bicycles. | Chartered Bike, Ranchi.***

It is a common sight to see cyclists, pedestrians and vehicles jostling for space on the narrow streets of small Indian cities. While there is a popular notion that these cities are trying to replicate the mobility pattern of bigger cities, data tells a different story.

While global cities are aiming to increase cycle share to 10%-15%, smaller Indian cities have already achieved it. However, their efforts go largely unrecognised. Compared to cities like Mumbai, Bengaluru and Delhi, where non-motorised transport accounts for 35%-37% of the total trips, the non-motorised transport share in Indore and Ranchi is close to 50% of the total trips by the working-class population.

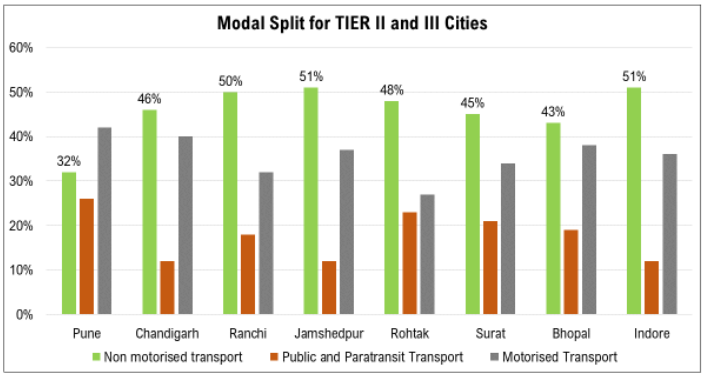
Smaller cities, with a smaller spread, see shorter trip lengths that mostly get covered on foot, on a cycle or on a two-wheeler. In contrast, bigger cities are more reliant on two-wheelers, four-wheelers and public transport. One example of a small city getting it right is Ranchi – making for an interesting case study that other cities can emulate.

#### Who cycles in Ranchi?

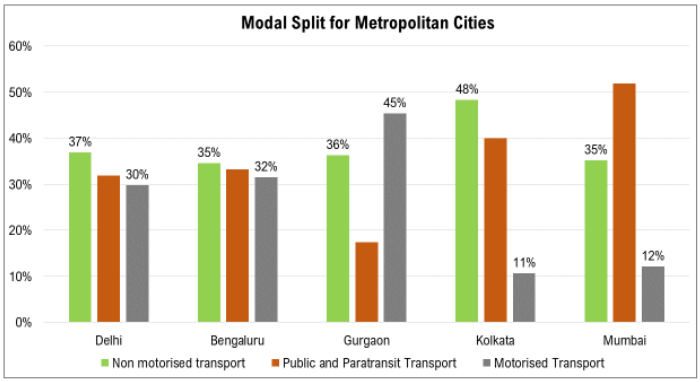
Ranchi is the economic, educational and administrative hub of Jharkhand, attracting job seekers from the nearby towns and villages. For

over two decades, this floating crowd, constrained by their pocket and lack of choice, has mostly been pedalling in and around the city.

The census data shows that50%of the households in the city owned a bicycle in 2011. Add to this the new-age range of recreational cyclists seeking to get fit and/or explore the city on the saddle and the numbers only get further boosted. Furthermore, the pandemic has also seen a renewed interest in cycling in the city – as is the case across cities in India.




***Source: Census of India, 2011. Visualisation: WRI India***




***Source: Census of India, 2011. Visualisation: WRI India***

### Initiatives accelerated change

Ranchi did not witness any significant infrastructural additions for the city's cyclists up till recently. In 2016, the dialogue around active mobility changed following Ranchi's inclusion in theSmart CitiesChallenge. Ranchi's gradual, but efficient, infrastructure building over the last five years has allowed it to better understand the demands of its citizens.

Some key initiatives adopted by the city include:

- **Raahgiri Day:**Amonthly "Vehicle Free Day" or "Raahgiri Day" held between 2017-'19, provided a space for bicycle enthusiasts to get back on the saddle. The initiative looked at thepromotion of sustainable transport, encouragingphysical activities,social inclusionandroad safety awareness.Sanjeev Vijayvargia, deputy mayor of Ranchi, who initiated Raahgiri Day here said, "The campaign worked to motivate and inspire people, and the result is evident even today as we see people cycling in the morning to keep themselves healthy. The city administration's resolve is to take this campaign forward."

- **Public bicycle sharing system:**Raahgiri Day was followed by the launch of apublic bicycle sharingsystem in 2019 as part of the city's Smart City project. To avoid the hassle of maintaining a cycle, the city launched the public bicycle sharing system with 600 cycles and 60 docking stations in phase 1. The system has been designed to provide first and last-mile solutions, or the modes of transport available for the first and last leg of a commuter's journey. This year, the city will launch phase 2 – which includes providing another 600 bicycles across 60 new dock stations.

- **National programs and local campaigns:**Ranchi was identified under theNational Clean Air Programmeas one of the 122 non-attainment cities that are required to create anaction planto reduce air pollution by 20% in 2024. The Ranchi Municipal Corporation and Ranchi Smart City Limited, thus, launched a weekly campaign,#ShanivarNoCar(No car on Saturdays) on March 15. Ranchi Municipal Commissioner,Mukesh Kumarsaid, "Ditching vehicles for a day gives people the chance to experience cycling, and promote sustainable mobility. With just three weeks into the campaign, PBS ridership increased rapidly."

*Public bicycle sharing system has been picking up in Ranchi. Photo credit: Chartered bike, Ranchi*


*The #ShanivarNoCar poster. Photo credit: Chartered bike, Ranchi*

According to data accessed by the authors, public bicycle sharing rentals increased by 56% in March 2021 as compared to March 2020. The city also saw a 33% increase in rentals between February-March this year.

Cycles are now more noticeable on the streets of Ranchi than ever before. The incremental infrastructural development around cycling has been supported by local leaders and bureaucrats. Furthermore, different non-government organisations and cycling clubs have been promoting cycling in the city. Also, local food delivery partners have provided the flexibility ofcycle-based deliveryin the city.

**Supporting local champions**

Along with providing an array of options to support cycling, Tier II and Tier III cities are offering space for experimentation and inclusion. At least18% -20% of the total work-based trips in smaller cities are on bicycles, making their inclusion in the city's development process a necessity. This can beachieved bymodifying thecity's urban planning and transportation policy frameworkwith an emphasis on advocacy. The city can also consider incorporating global best practices such as mapping weather patterns, user type, street type and urban form appealing to a larger spectrum of potential bicycle users.

Smaller cities like Ranchi, Indore, Pimpri Chinchwad, Bhopal, Surat, Jaipur and Guwahati have bicycling advocates at all levels, but their efforts go unnoticed. In the last few years, Ranchi has taken critical and innovative steps that can be adopted locally by the bigger cities that are looking at turning to cycling for transport. It is important to leverage this momentum towards cycling and embrace it for the myriad benefits it offers.

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**Website: kalpavriksh.org**

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Phone: 91-20-25675450, 91-20-25654239

Email: kvoutreach@gmail.com

Website: www.kalpavriksh.org

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