



# POWERING CHANGE WITH EACH PEDAL

Could cycling help bridge the gender gap on Indian streets?



**GREENPEACE**  
ग्रीनपीस



## FIND YOUR LANE

- 02 GENDER INEQUALITY IN TRANSPORT
- 03 WOMEN MOVE SLOWER THAN MEN
- 04 CYCLING LEVELS IN INDIAN CITIES
- 06 PEDALING TO LEAD BY EXAMPLE: BIHAR
- 08 CYCLING TO EARN A LIVELIHOOD
- 10 CYCLING FOR FREEDOM OF MOVEMENT
- 13 FASTER THAN WALKING AND CHEAPER THAN A PRIVATE VEHICLE
- 14 TO AMP UP: SAFETY AND INFRASTRUCTURE FOR POWERING CYCLISTS
- 15 10 WAYS TO #PowerThePedal
- 17 REFERENCES THAT POWER THIS REPORT



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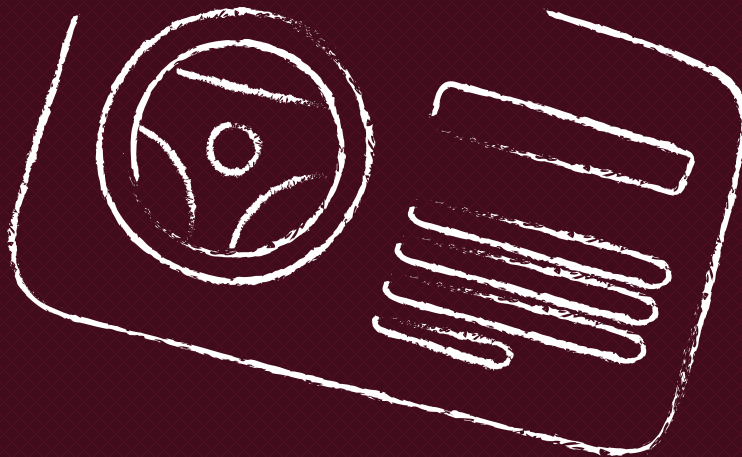
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## **GENDER INEQUALITY IN TRANSPORT**

Mobility across the world is often gendered. Men and women have different travel patterns. This is partly because women often have greater household and childcare responsibility than men<sup>1</sup>. Their travel needs are often dominated by accompanying children to school or going to the market for household needs. Women also tend to use different modes of transport than men. These gender differences are much greater in India where gender inequality<sup>2</sup> is among the highest in the world.

**just 10%** OF INDIAN LICENSE  
HOLDERS ARE WOMEN

As an indicator of gender inequality, women's work participation rate in India is among the lowest in the world with a wide gender gap<sup>3</sup>. The work participation rate is the percentage of women that are working<sup>4</sup>. Many women in India who work, do so from home (such as handloom or textile), depriving them of a social network and independent income. Those who work outside home depend greatly on walking and public transport<sup>5</sup>. On the other hand, men have access to a greater range of transport modes including cycles, motorcycles, and cars. The ownership of motorized two-wheelers and cars have grown rapidly in the last couple of decades. However, this has hardly improved independent mobility among women, as only 10% of all license holders are women<sup>6</sup>.

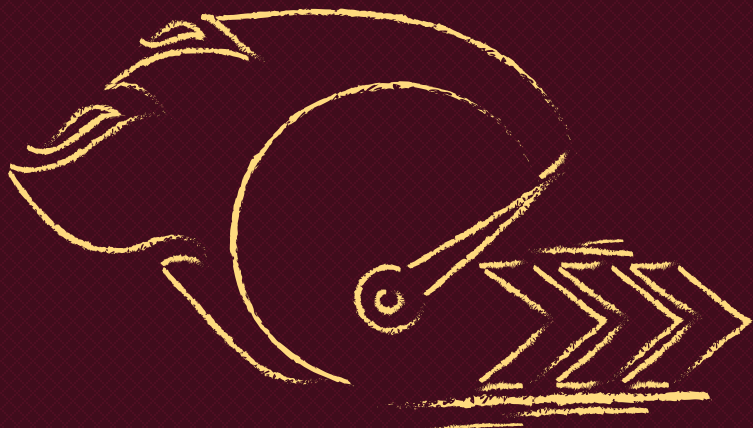
# WOMEN MOVE SLOWER THAN MEN

By that, we mean women don't have access to the faster modes of transport which men do (we fully believe in women-power). This gives men greater ability to access jobs and other destinations that are far from where they live. Women, on the other hand, often take employment that is closer to their homes, which greatly limits their choices of jobs.

The dependence of women on slower modes of transport also worsens their time poverty. Since women have far greater household responsibilities (thanks no thanks to patriarchy), when they work outside the home, they are not left with time for any other activities such as relaxing, recreation, or self-care. With a faster mode of transport, they can reach their destinations quicker and help save time and energy spent on transport. Cycling can provide these benefits.

## 3X SPEED BOOST

Cycling is about three times faster than walking— a 30-minute trip by walking will take just 10 minutes by cycling. For shorter distances, cycling can even be faster than public transport<sup>7</sup>. To use a bus, for example, a lot of time is spent besides travelling in the vehicle. This includes the time involved in walking to the stop, waiting for the bus, and then walking to the destination. Cycling saves all this additional time and can also navigate faster through crowded streets. While saving time, it also saves money. In comparison to a motorcycle or a car, it is much more affordable to buy, use and maintain a cycle.





## ZERO POLLUTION

The other obvious benefits are that cycling has zero direct emissions of air pollutants and greenhouse gases. It generates almost no noise—compare this to other modes of transport that make Indian streets unbearably loud.



## HEALTH BUFF

The health of cyclists also improves because of the physical activity benefits that prevent many chronic diseases such as type-2 diabetes, heart diseases, cancers, and depression.



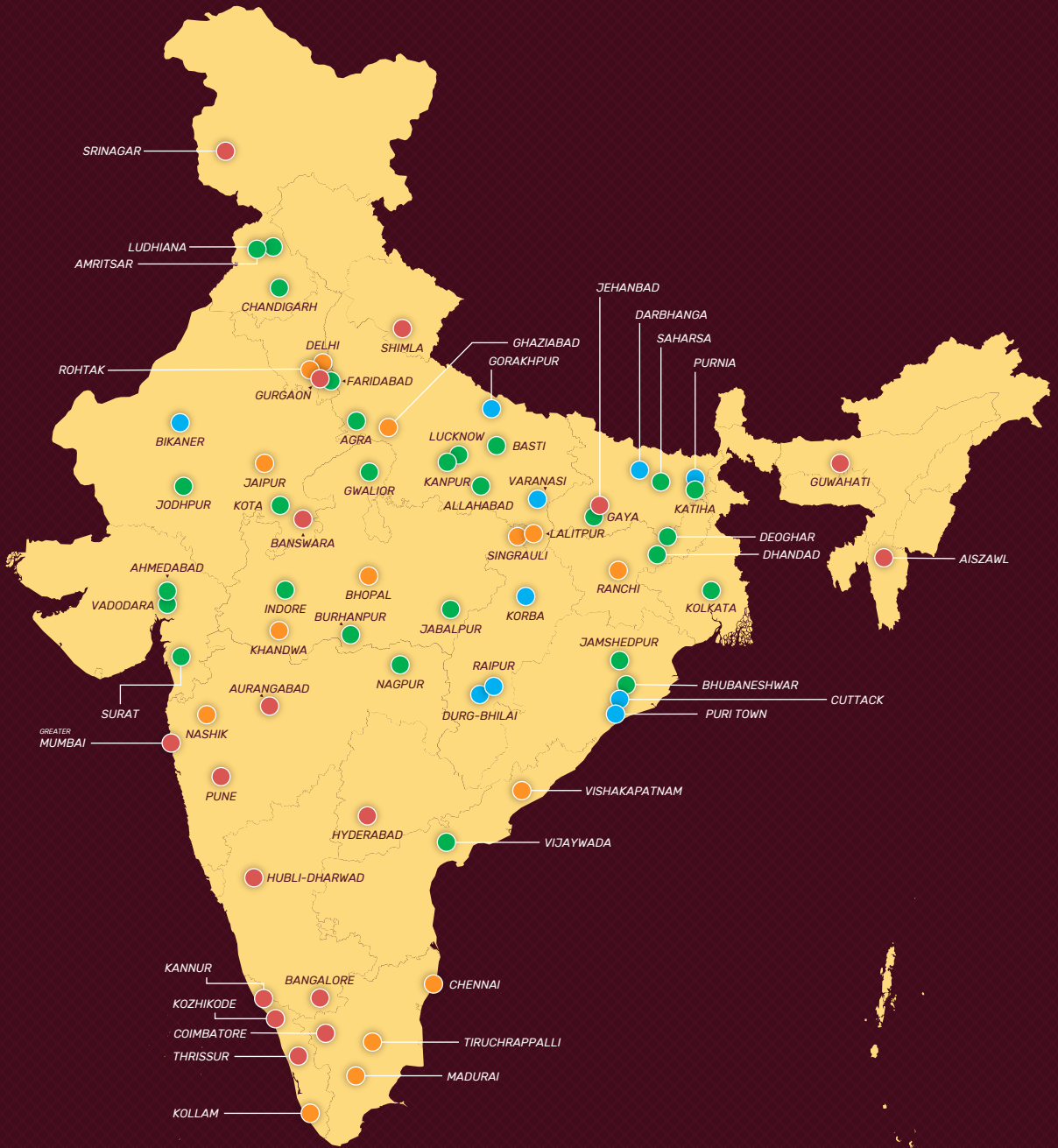
## UNLOCKS PATHS

Among the societal benefits, cycling is also empowering for women. It gives them the freedom to travel on their own and at the time of their choosing. They can also explore places that they previously could not access because of long-distance or because there was no public transport.

## CYCLING LEVELS IN INDIAN CITIES

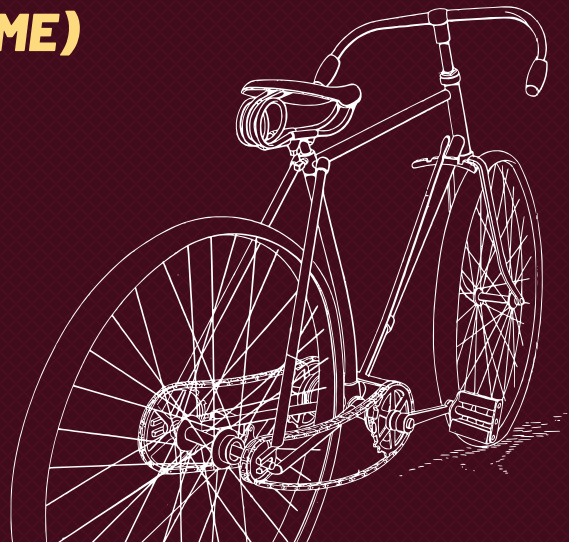
It is for these reasons that cycling remains popular in India. According to the data reported by Census of India in 2011<sup>8</sup>, in many cities such as Chandigarh, Kanpur, Cuttack and Raipur, 30 to 35% of the workers used cycles to go to work. In large cities like Delhi and Chennai cycling use is low but even there 10% of all workers used to cycle. While cycling use is high in India, it is mostly men who use this mode of transport. Among all the workers who reported using cycle in the Census, only 4% were women and the rest (96%) were men. Furthermore, of those women, many are likely to be passengers and not riders. It is this gender gap in cycling use that needs to be addressed so that women can also enjoy many benefits of cycling mentioned above.

See next page to see how prevalent is cycling in some of India's major cities ⚡



## RATE OF CYCLING IN (SOME) INDIA'S MAJOR CITIES

- Less than 10%
- From 11 to 20%
- From 21 to 30%
- Above 31%



## **PEDALING TO LEAD BY EXAMPLE: BIHAR**

In India, we have strong evidence of the measures that can be used to encourage cycling among girls and the many benefits achieved from such a transformation. Interestingly, this evidence comes from a highly patriarchal state<sup>9</sup>. In 2006, the Bihar government started a new conditional cash transfer scheme under which girls enrolled in secondary school were given cash to buy bicycles. The objective was to improve accessibility to schools for students. This is important in a context when schools are not available close to villages.



According to a study conducted led by researchers at the University of San Diego<sup>10</sup>, this cycle distribution scheme was successful in improving school enrolment among girls. The difference in the enrolment rate of boys and girls was reduced. Importantly, these benefits were greater among girls who lived further away from schools. The other alternative of walking is not only slower and consumes a lot more energy, it also exposes girls to harassment on the streets. Access to cycling saves time and ensures safety. This is a great example of the potential of cycling to bring social change.

Besides providing immediate educational benefits, there were other long-term benefits among the beneficiaries of the cycle distribution scheme. Another study led by researcher at the IIM Ahmedabad, found that the scheme beneficiaries were more likely to complete their education. More education also made them aspirational, and they were more likely to look for employment outside agriculture and to delay their marriage. Lack of college education and employment opportunities meant that these aspirations often remain unfulfilled.

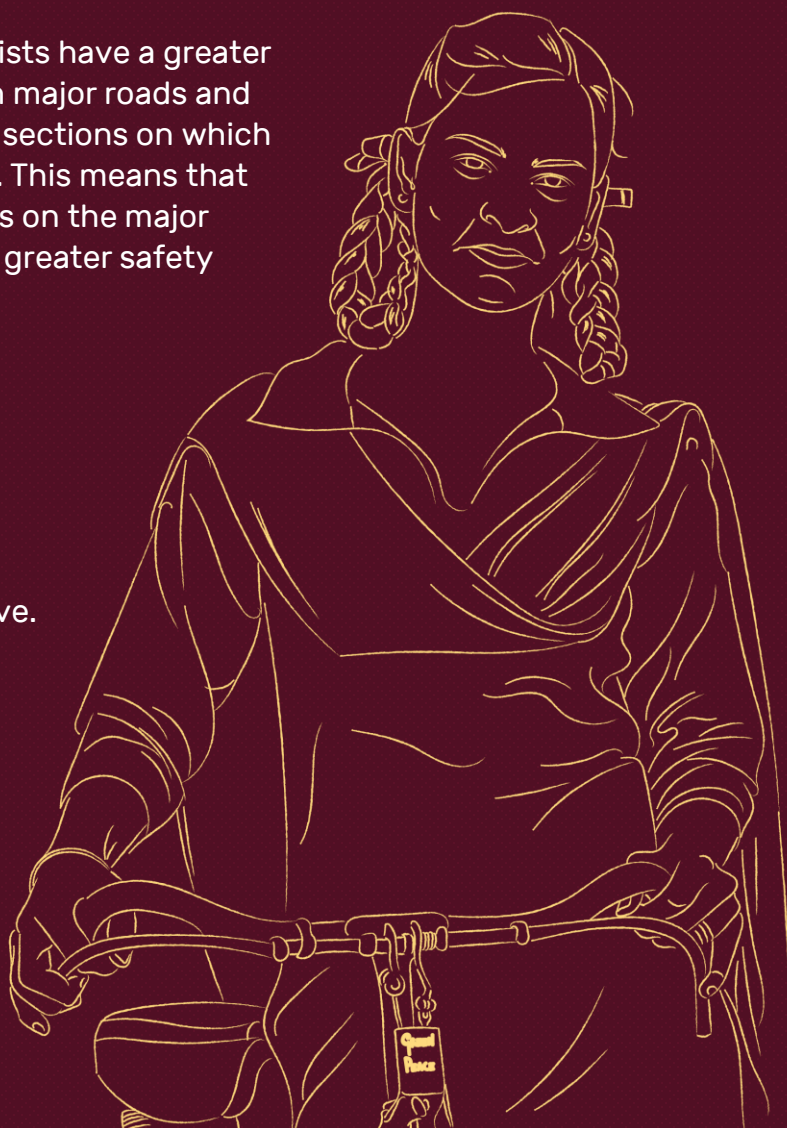
## **HOW CYCLISTS CAN HAVE SAFER ROADS**

At the Transportation Research and Injury Prevention Centre at the Indian Institute of Technology Delhi, we investigated 150 cycle deaths over a period of three years (2016 to 2018). We found that 70% of all crashes in which cyclists died, included a vehicle hitting them from behind while travelling in the same direction. These kinds of crashes can be drastically reduced with the provision of segregated cycle tracks, thus separating cyclists from the stream of motorized vehicles.

We also found that cyclists have a greater likelihood to be killed on major roads and that there are few road sections on which most crashes occurred. This means that provision of cycle tracks on the major roads alone can ensure greater safety among cyclists.

Our conversations with women cyclists in Delhi and its neighbouring cities highlight some of the benefits and concerns as raised above.

Zip to the next page to read them!





## **CYCLING TO EARN A LIVELIHOOD**

The same pair of wheels that could be used for leisure by some of us, often help people avoid hunger and sustain families as a lone source of income.

On the next page you will see Nandi (48) and her husband Amarkant (54), who are from Bhilwara, Rajasthan, residing in one of the slums in south Delhi. They both cycle 20-25 km every day to sell balloons in different markets across the national capital. From Amarkant's account below, the exclusionary nature of public transport i.e., catering to the privileged while sidelining the people relying on it the most is evident.

“We don't have any other option. Over the years, the city has got fancy air-conditioned buses and metro. But I never felt they were meant for people like me. They don't even allow us to travel with these balloons.”

**AMARKANT, 54**

*CYCLES 20-25 KM EACH DAY AS A BALLOON SELLER*



**[ NANDI AND HER HUSBAND AMARKANT ]**



# CYCLING FOR FREEDOM OF MOVEMENT

Turns out, that feeling of having wind rush past your hair as your cycle down the streets is universal.

Neelu (26) lives in the urban village of Ramghad in Gurgaon. She works as a housekeeper in a nearby high-rise apartment. Every day her husband drops her at work on a cycle. She herself rides a cycle every day to the market. What she likes the most is to take her kids to different places on cycle on Sunday. (#WeekendGoals)

But recently there was an accident in her community in which one woman lost her life while she was coming back from work on a cycle. Neelu wonders if there is a better safety measure for cycle riders in the city. And so do we.





[ SHABNAM ]

Shabnam works as domestic help in different houses in Gurgaon. For her cycling is the only way she can commute in different houses in colonies. She likes to cycle every day, but she is also very concerned about increased traffic on the streets. She always avoids travelling during peak hours. She has been cycling for the past five years, but her fear of cycling in traffic still remains. Note how both women we talked to, share their worry of safety?



**FROM THE TALKS WE HAD  
WITH WOMEN ON CYCLING,  
THE NEED FOR SAFER AND  
INCLUSIVE ROADS IS AS  
SIMPLE TO UNDERSTAND AS  
IT IS TO PEDAL A CYCLE**



25-year-old Luxina works as a housekeeper in Gurgaon and lives in the nearby village Badshah Pur. She travels 12-15 km every day on a cycle to work. She said with a cycle she can go anywhere. She doesn't have to wait for buses or auto or ask her husband to travel to different places. Sometimes she cycles to weekly markets and for leisure nearby gardens and parks with her family. Initially, she was very afraid of cycling because of traffic, but now with experience, she got the confidence to cycle anywhere.



[ LUXINA ]



## **FASTER THAN WALKING AND CHEAPER THAN PRIVATE VEHICLE**

41-year-old Pavitra is from Nepal. She has been living in Zamrudpur in South Delhi for many years. She walked two kilometers every day to reach her workplace in Kailash Colony where she works as a domestic worker. But for the last two months, she has started riding cycle. Pavitra is part of the group of women who want to reclaim the city space by riding bicycles.

*"I had to walk every day because I can't afford to have my own private transport. I am hardly making money to get necessities like food."*

**PAVITRA, 41**

*WORKS AS A DOMESTIC WORKER IN SOUTH DELHI*



Here's some good news! Greenpeace India's **Power The Pedal** campaign is bringing them together to ride the cycle. Pavitra told us, "In the beginning, it was difficult to ride the cycle. While practicing I fell as well, but now I like to use cycle to go to work and other activities. It is making my life easy." But Pavitra takes it slow while cycling on the roads. She also felt unsafe because of high-speed cars and adequate streetlights. "Sometimes I even go for a walk in the park by bicycle. Now my time is also saved."

## TO AMP UP: SAFETY & INFRASTRUCTURE FOR POWERING CYCLISTS

Sita, 35-year-old, also lives in Jamrudpur and has recently learnt to ride a bicycle. She is afraid of riding a bicycle on the road, fearing motorcycles more than the cars on the road. Sita says there is no safe place to cycle in their settlement. Nor is there any stand where she can put the cycle.

“When every locality of Delhi can have car parking, then why can't there be a stand for cycles?”

**SITA, 35**

RECENTLY LEARNT HOW TO CYCLE



Geeta of the Jamrudpur colony has also been riding a bicycle for the past two months. She says, “Now apart from going to our work, we go to our friend’s house by bicycle. My friend works in a parlour. Earlier I could not go to her. But now whenever I want, I pick up the cycle and go to her place. Although cycling in traffic is difficult and sometimes, I feel nervous too.” Obviously, these cycling women are now able to commute in the city better for their work as well as for recreational purposes.





# 10

## WAYS TO #PowerThePedal

**#01** Transport planning should acknowledge high levels of gender inequality in Indian cities and its impact on travel patterns. The investment in transport should be aimed at narrowing the gender gap in mobility.

**#02** Roads should be safer for cyclists, and, for that, roads should be made safe for all.

**#03** There should be an interconnected network of segregated cycle tracks that should at least cover all the arterial and major arterial roads. These tracks must be built next to the carriageway used by motorized vehicles and not on the edge of the right-of-way where parked vehicles may use it instead.

**#04** Traffic enforcement should discourage motorcyclists to use these tracks or car drivers to park their vehicles.

**#05** There should be space allocated to cycle repair shops and there should be incentives for women running those shops.







**#06** The junctions should be designed to accommodate cyclists. The approach to the junction should be designed to slow down the vehicles (e.g., using rumble strips) for cyclists to maneuver safely across the lanes (e.g., for cyclists from the left lane waiting to turn right on a junction).

**#07** The medians at the mid-block crossing or at the junctions should be wide enough for a cyclist to be safely accommodated in that space while waiting to cross the road.

**#08** All the streets should be adequately illuminated at night. Attention should be paid to the high mast streetlights that are obstructed by trees resulting in dark spots on the streets.

**#09** All the market and commercial places should have secure cycle stands with cover from rains. These stands should have adequate lighting at night-time to prevent theft. At least ten cycles can be fitted in the same amount of space as a car.

**#10** Traffic police and other law enforcement personnel should be sensitized about the importance and need of cycling in the transport system.

# REFERENCES THAT POWER THIS REPORT

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<sup>3</sup><https://thewire.in/labour/indias-female-labour-participation-rate-falls-to-16-1-as-pandemic-hits-job-sector>

<sup>4</sup>[https://censusindia.gov.in/data\\_products/library/post\\_enumeration\\_link/e\\_c16\\_page3.html](https://censusindia.gov.in/data_products/library/post_enumeration_link/e_c16_page3.html)

<sup>5</sup><https://theconversation.com/indian-women-confined-to-the-home-in-cities-designed-for-men-101750>

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<sup>7</sup><https://www.bikecitizens.net/the-concept-of-effective-speed/>

<sup>8</sup><https://www.sciencedirect.com/science/article/pii/S026427511831031X>

<sup>9</sup><https://www.ideasforindia.in/topics/human-development/cycling-to-school-increasing-high-school-enrolment-for-girls-in-bihar.html>

<sup>10</sup><https://www.ideasforindia.in/topics/social-identity/wheels-of-power-long-term-effects-of-the-bihar-cycle-programme.html>



Greenpeace India is an independent campaigning organization that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.



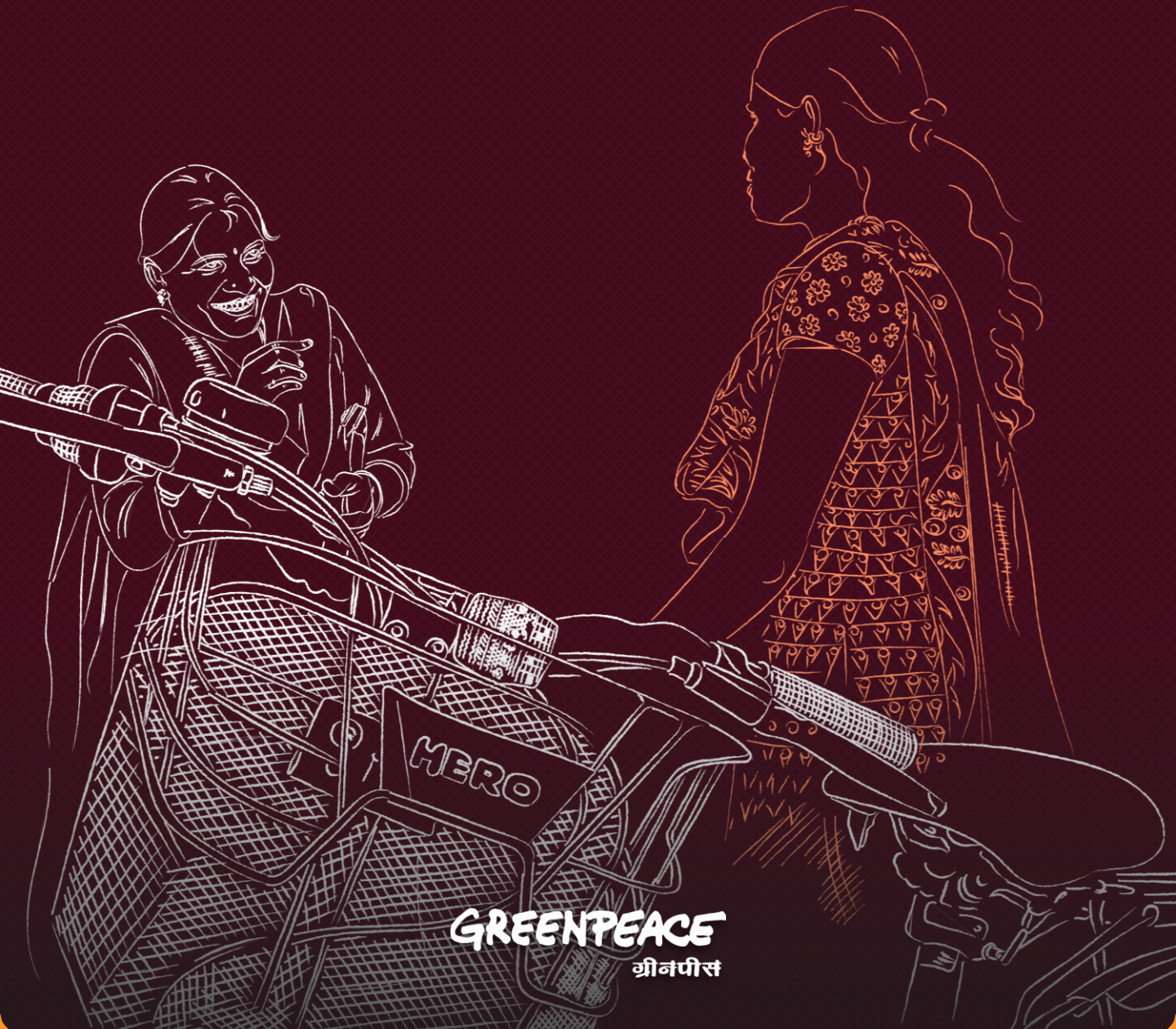
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