



# STORIES TO WATCH INDIA 2022

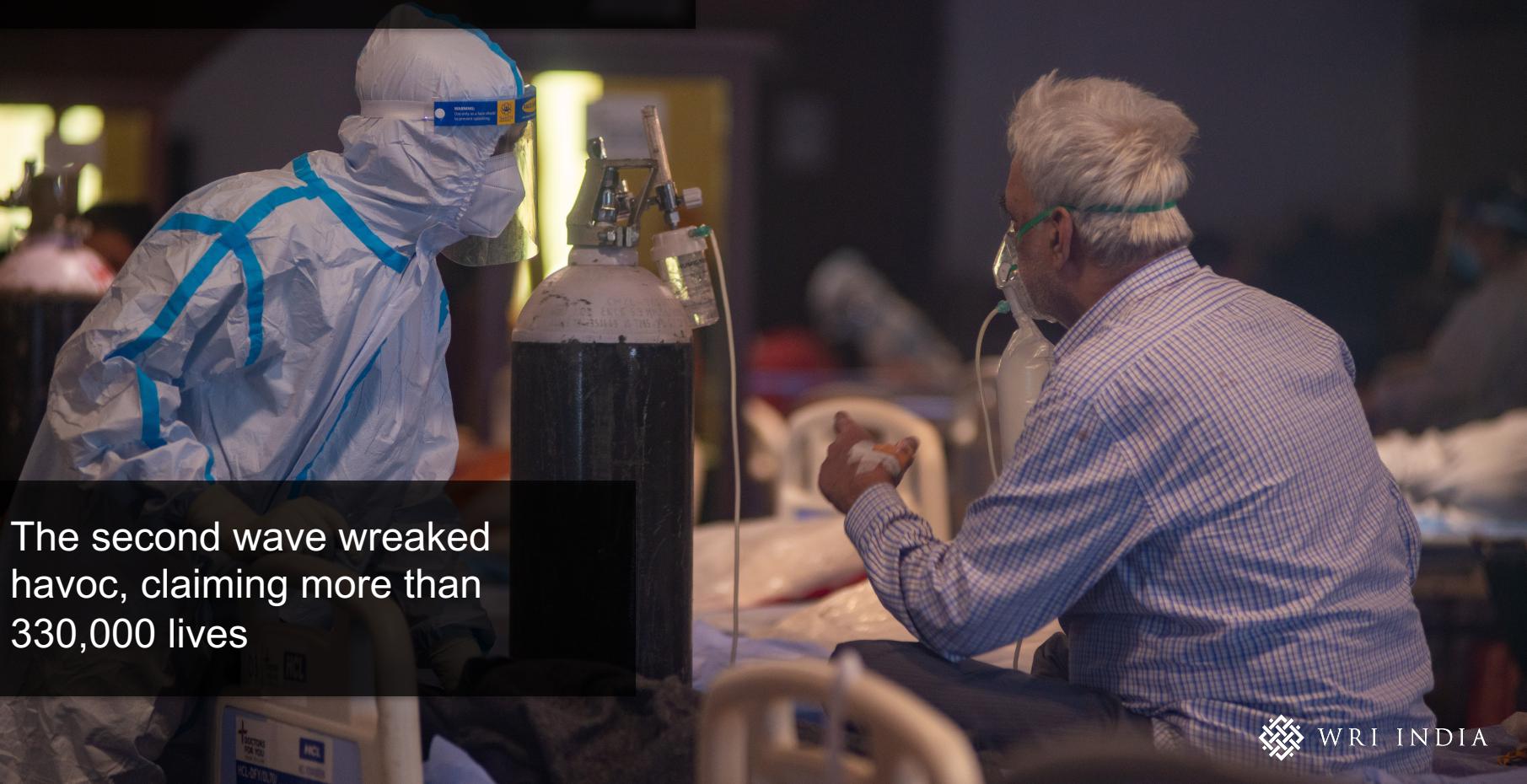
**Dr. O.P. Agarwal**  
CEO, WRI India



2021

A Year of Loss and Recovery

# A traumatic second wave



The second wave wreaked havoc, claiming more than 330,000 lives

# Overwhelmed Infrastructure



WRI INDIA

# Overwhelmed Infrastructure



Medical, para-medical personnel and other frontline workers rose to the occasion

# Help from community



# Extreme weather events





Cyclone Tauktae



Cyclone Gulab



Destruction in Odisha,  
West Bengal, Andhra,  
Assam, Goa, Maharashtra,  
Uttarakhand and more

# Impacts of climate change



**Net Zero Commitment**

**31 OCT - 12 NOV 2021**

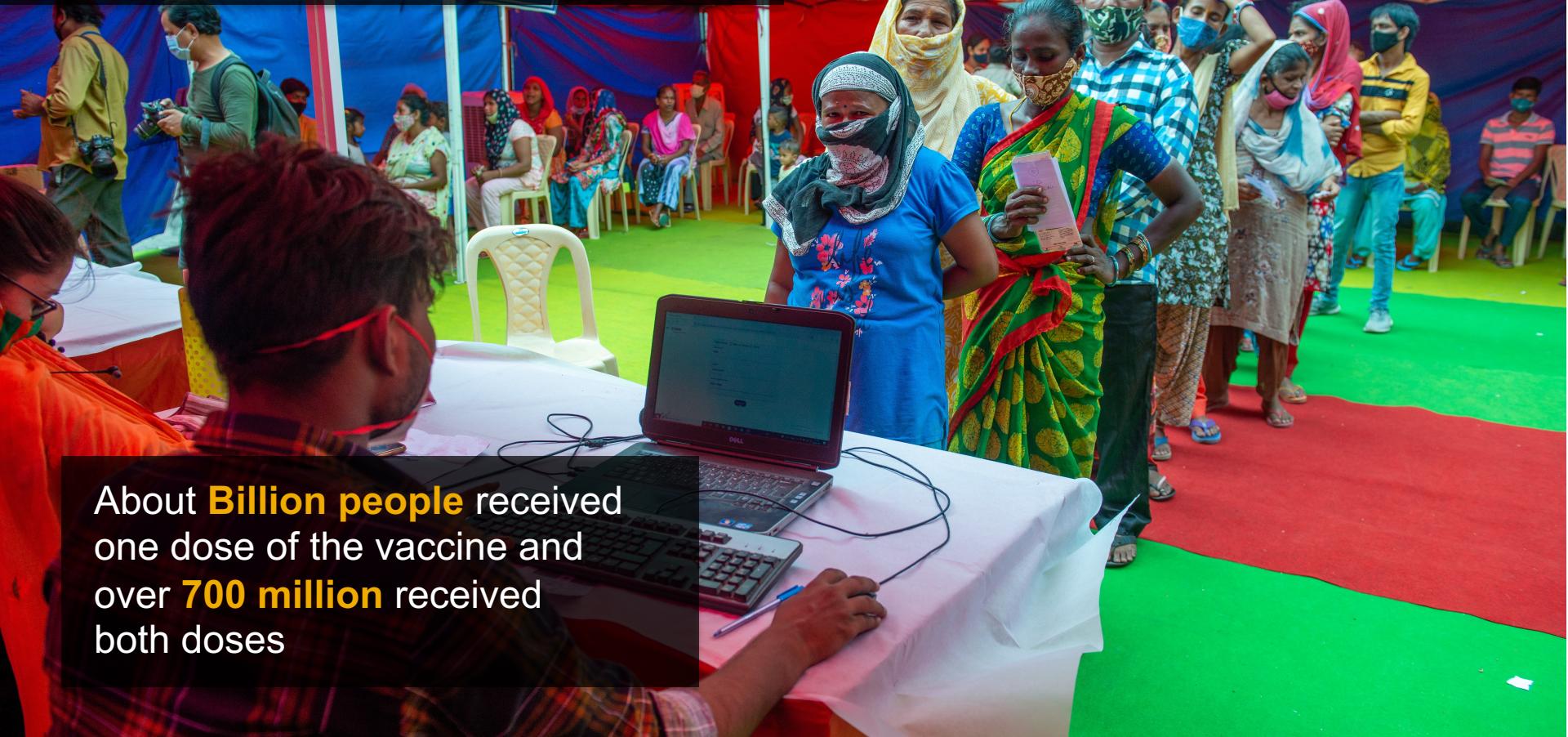
**GLASGOW**

**COP26**

**IN PARTNERSHIP WITH ITALY**



# Largest vaccination drive



About **Billion people** received one dose of the vaccine and over **700 million** received both doses

A photograph showing a woman with dark hair tied back, wearing a red floral face mask and a red floral sari, receiving a vaccine injection in her upper arm. A man in a white lab coat and a green surgical mask is performing the injection. The background is a blurred indoor setting.

Extended vaccination program to:

- teenagers
- start booster doses, and
- send vaccines to South Asia and Africa

# Assembly elections



# Repeal of farm laws



A photograph showing a man in a white shirt and cap working on a smartphone assembly line. He is focused on a task, likely quality control or assembly, on a green conveyor belt. The background is blurred, showing other workers and industrial equipment. The lighting is bright, typical of a factory environment.

Unicorn hub

India third largest  
unicorn hub after  
US and China

# Growth in Economy





INDIA'S **NET ZERO** COMMITMENT

Net Zero by 2070



United Nations  
Climate Change



UN CLIMATE CHANGE  
CONFERENCE UK 2021

IN PARTNERSHIP WITH ITALY



# Net Zero by 2070

Targets for 2030 include:

- Installing generation capacity of **500 GW** for non-fossil fuel energy,
- **50% electricity** requirement from Renewable energy
- Reducing **1 billion tons** of projected emissions
- Reduction of **45% carbon intensity** compared to 2005 levels.





A change by everyone,  
for everyone



# Greater sensitivity to ensuring justice



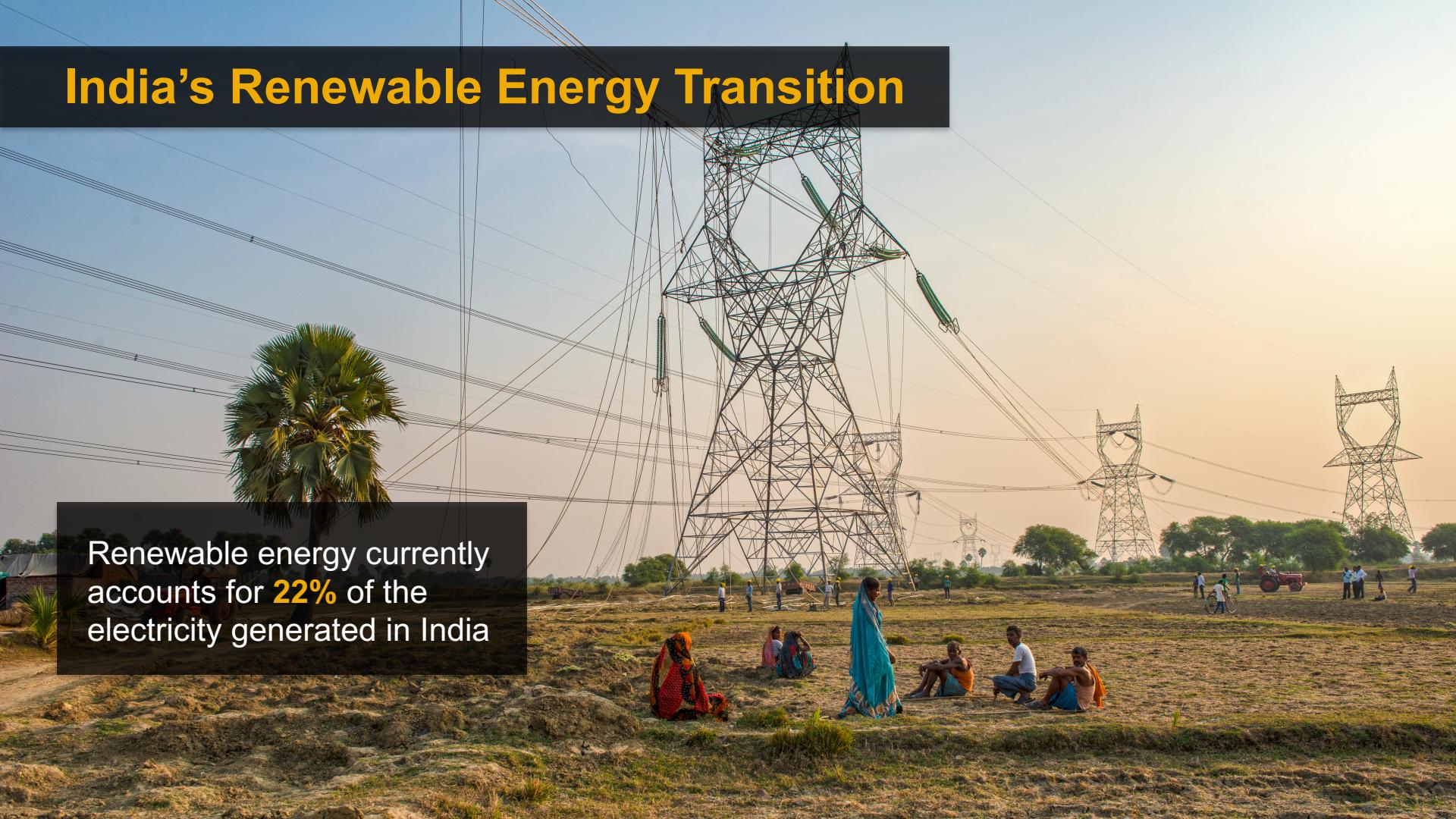
A high-angle, aerial photograph of a large industrial building with a curved, corrugated metal roof. Several workers in orange safety vests and hard hats are visible, working on the roof. Some are standing on the metal deck, while others are on the roof itself, installing large blue solar panels. The surrounding area is lush green trees.

# RENEWABLE ENERGY

Transition At An Unprecedented Scale

# India's Renewable Energy Transition

Renewable energy currently accounts for **22%** of the electricity generated in India



# India's Renewable Energy Transition

The goal is to reach **50%** of installed renewable energy capacity by 2030.



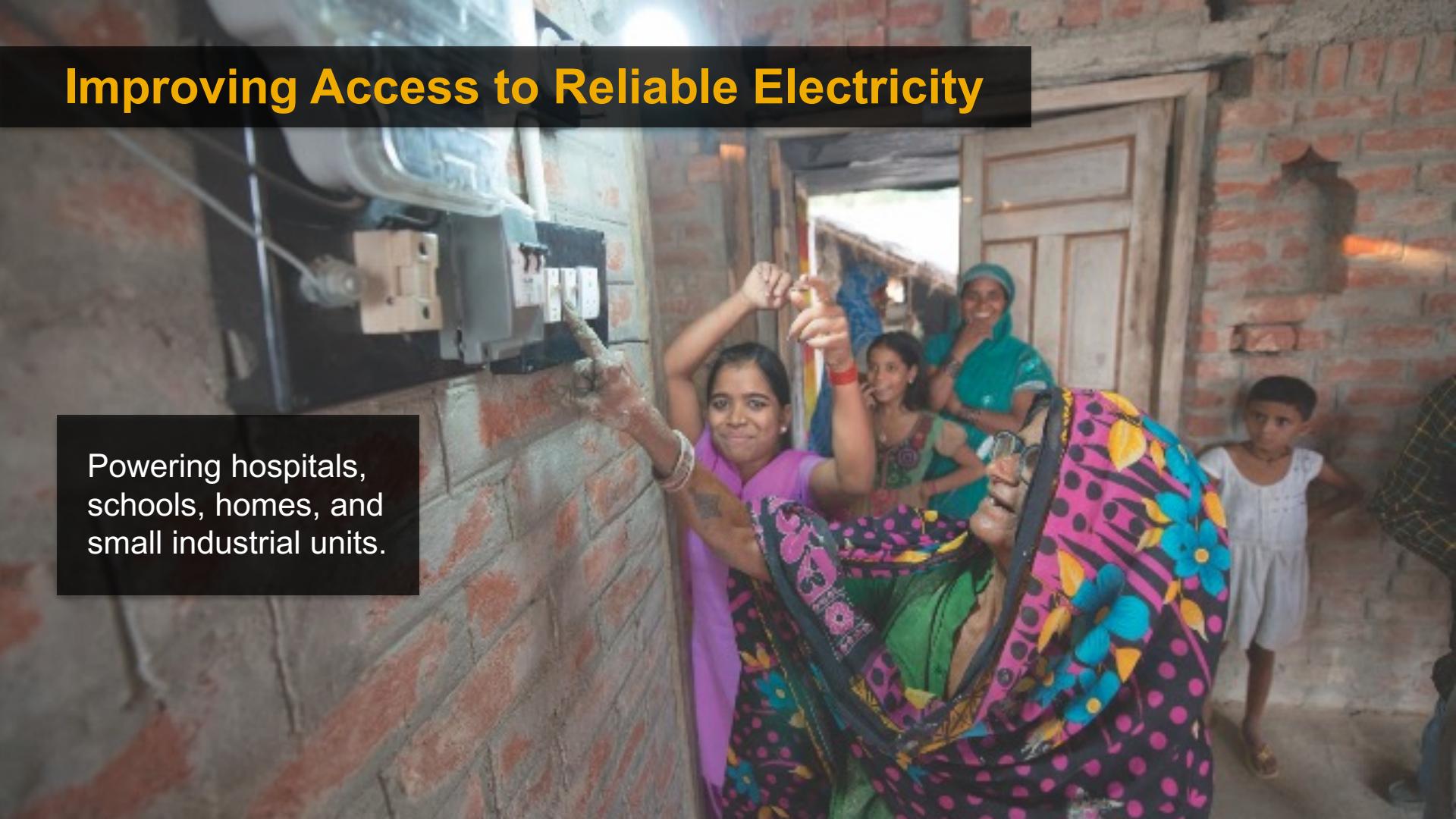
A photograph of a sunset over a calm sea. The sky is filled with warm, orange and yellow hues, with scattered clouds reflecting the light. In the foreground, the dark silhouette of a wind farm is visible, consisting of several wind turbines with three blades each. The sun is partially visible on the right horizon, casting a bright reflection on the water. The overall scene is peaceful and suggests a renewable energy source.

India has offshore wind energy potential with a **coastline of 7,600 kms.**

Decentralized generation  
and possible use of  
smaller **local grids**



# Improving Access to Reliable Electricity



Powering hospitals,  
schools, homes, and  
small industrial units.

A man with a beard and mustache, wearing a white button-down shirt and an orange towel around his neck, is kneeling in a greenhouse. He is focused on a large, striped watermelon he is holding in his hands. The greenhouse has a white translucent covering and a metal frame. In the foreground, large green leaves of a plant are visible. The background shows more of the greenhouse structure and some hanging plants.

# AGRICULTURE

## Food Biodiversity and the Restoration Economy

# Most Climate Vulnerable Sector



# Three broad issues

Farmer's  
Income

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Nutritional  
Security

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Resource efficiency  
and environment  
friendly

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Production  
Distribution  
Consumption  
Ecosystem for food

# Diversifying the Food Basket



Can **minimum support prices** be an effective mechanism to boost crop diversity?

# International Year of Millets, 2023

A photograph of a man in a field, viewed from behind, examining millet plants. He is wearing a light blue shirt and a white dhoti. He is holding a magnifying glass over a millet plant, looking closely at the grain. The field is filled with millet plants, and power lines are visible in the background under a clear blue sky.

Will we see more states adopting policies that **alter food habits** and improve consumer support for **sustainable agriculture**?

# Landscape Restoration

How will utility-scale solar, and plantations for sequestration take into consideration the **livelihoods of people who own, or depend on the land?**



# Agroforestry

How will the governments initiatives to promote agroforestry take shape, and what will their impact be?



# Organic Farming



# Food Loss and Waste

- What levers can be used **across the supply chain** to achieve this?
- What measures can be implemented, beyond the use of clean energy, **for farm-level processing, storage, and transport?**
- How can India encourage **investment and entrepreneurship** to tackle food loss?



A wide-angle, aerial photograph of a city at dusk or night. In the foreground, a modern metro train with blue and grey carriages is moving along an elevated track. Below the track, a highway with red and white streaks from moving vehicles is visible. In the background, the city skyline is lit up with numerous buildings and streetlights, creating a vibrant urban atmosphere.

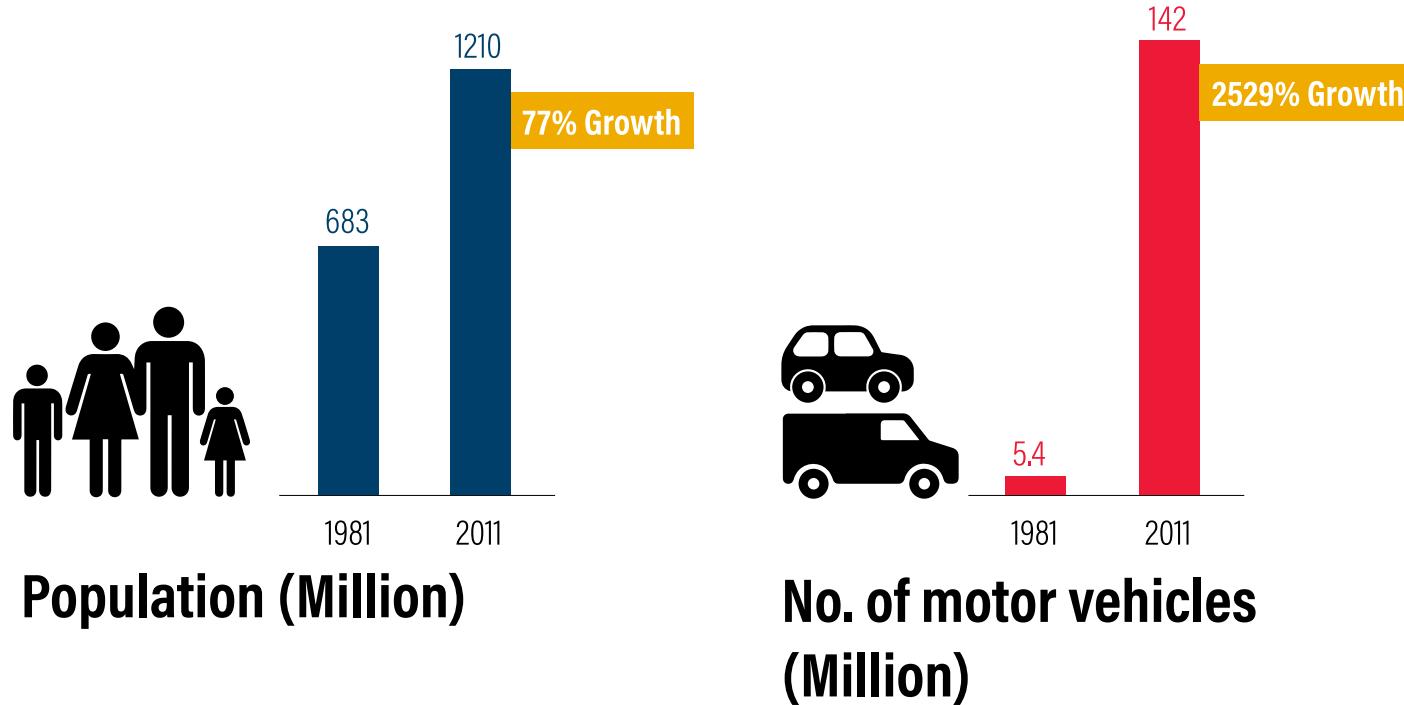
# TRANSPORT

## A Case for Integration and Technology Shifts



Transport contributes around  
**13.5%** of the energy-related  
**GHG emissions** in the country

## Growth of Motorisation is outpacing population growth



# Policies Decided across 5 National Ministries

Road

Transport and  
Highways

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Railways

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Ports and  
Shipping

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Civil  
Aviation

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Housing and  
Urban Affairs

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90% emissions from  
**road transport** sector and  
demand must be channelled  
towards cleaner options like  
rail and water

# ***'Gati Shakti'* program for integrated approach**





# GROWING CITIES

At the Center of Climate Action



Urban population to grow  
from **400 million** to over 800  
million by 2050

Towards a  
10 trillion dollar  
economy

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Most of  
future GHG  
emissions  
in cities

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COVID  
demonstrated  
challenge of high  
density population

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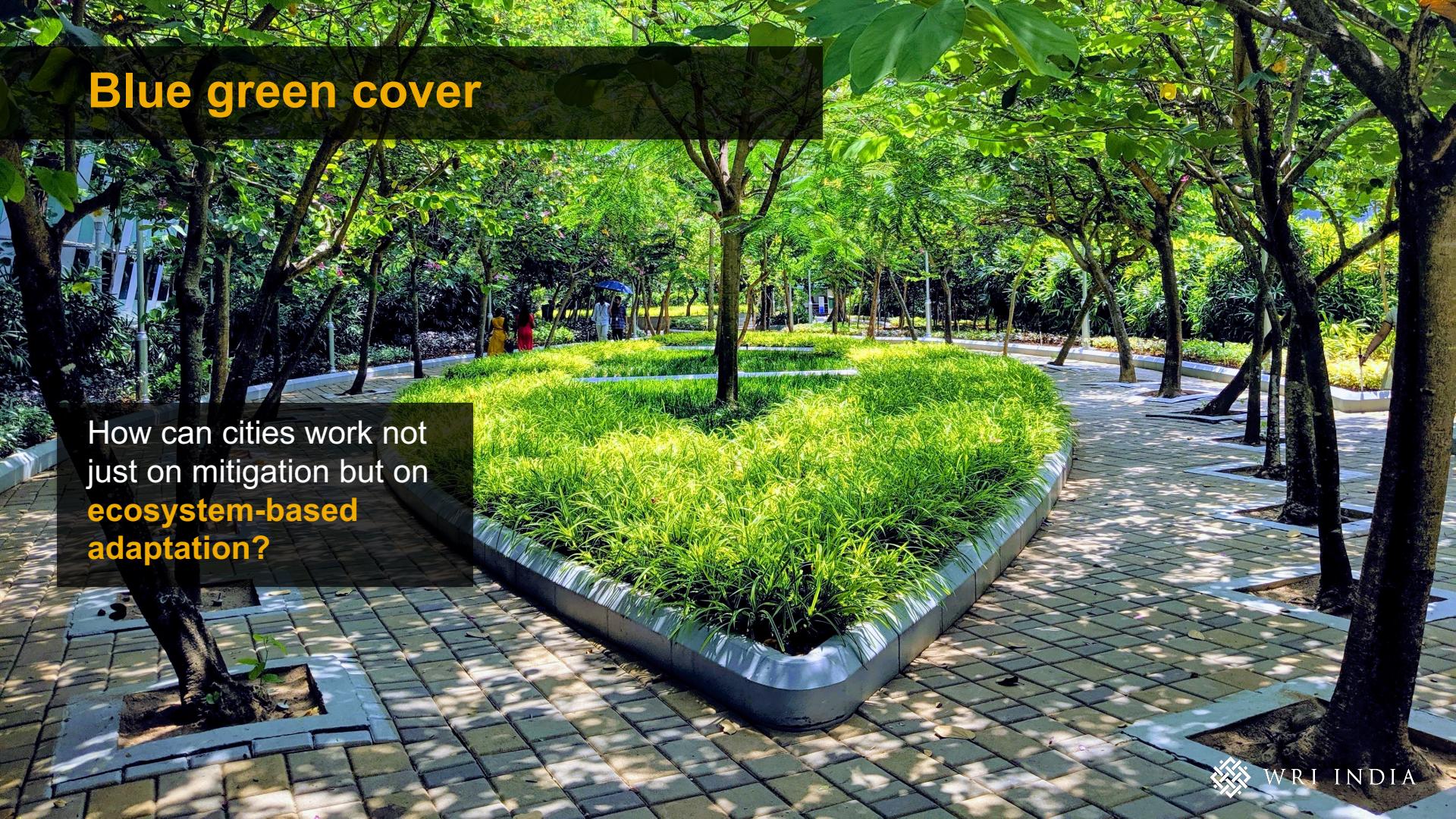
# New approach to planning

- High level committee for urban planning
- Integrated land-use
- Green bonds for urban infrastructure



# Blue green cover

How can cities work not just on mitigation but on **ecosystem-based adaptation?**



A photograph of a man walking on a bridge over a river at dusk. The sky is a deep blue, and the river reflects the light. In the background, there is a city skyline with several buildings. The man is walking away from the camera, towards the right side of the frame.

**WATER**

The Most Urgent Climate Crisis

# Rapidly emerging water crisis



If climate change  
were a shark, water  
problems are the  
teeth of that shark.

# Code Red for Humanity

Extreme rainfall will intensify by **7%** for each additional degree of global heating.





Chennai floods

# Implications on vulnerable population



## Implications on vulnerable population

4% of the freshwater resources, despite having 18% of the world's population, efficient water management will be a critical need.



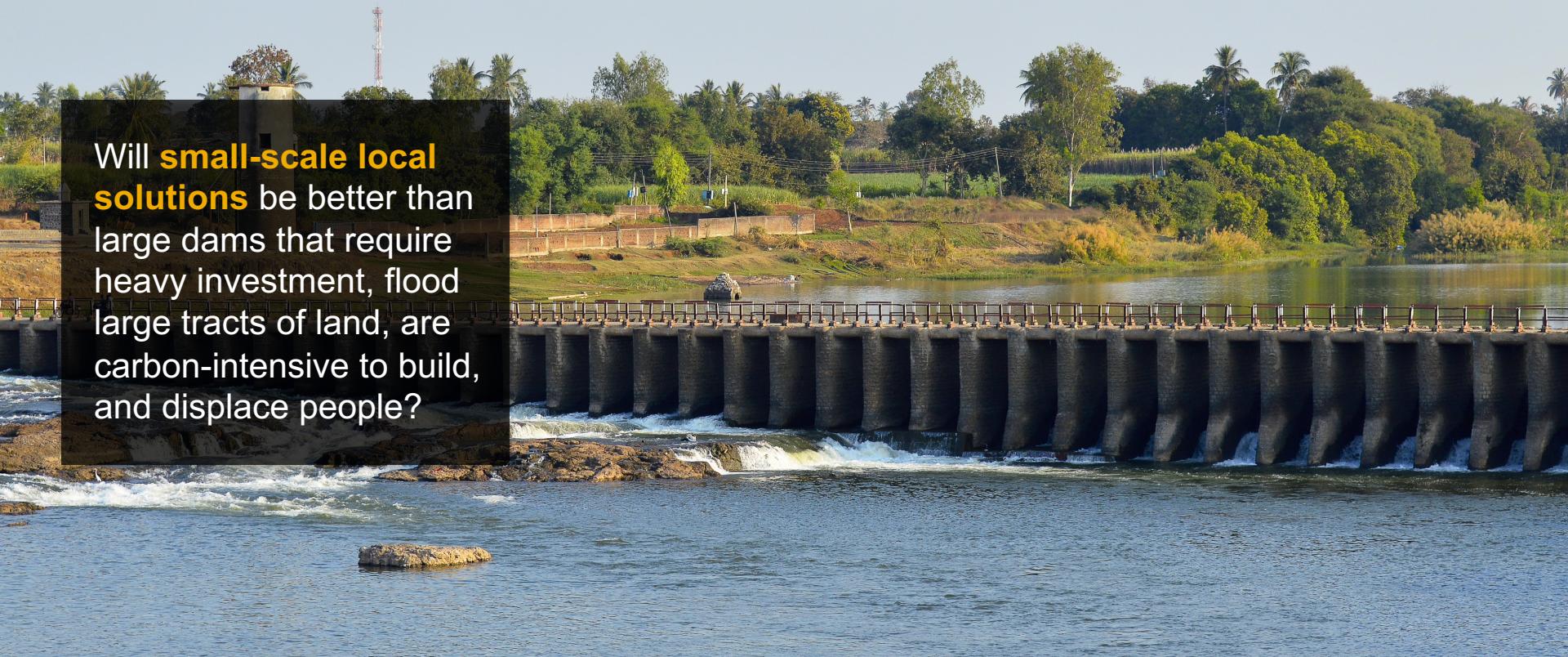
What will it take to make  
water and sanitation  
services more accessible  
to communities that are  
facing the brunt of these  
challenges?

# Access to water and sanitation

- The 15th Finance Commission recommended **Rs 1.4-trillion grant** to rural bodies over the next five years.
- **AMRUT 2.0 mission** to increase access to clean water and sanitation for urban households.



Will **small-scale local solutions** be better than large dams that require heavy investment, flood large tracts of land, are carbon-intensive to build, and displace people?



# AIR QUALITY

## The Need for an Airshed Approach



# Re-occurring challenge

Acute situation  
in New Delhi



# Re-occurring challenge



Stubble burning  
not the only  
reason

# Need for Air-shed Approach



An airshed approach will  
**recognise political and  
administrative boundaries.**  
Will we see a scaling up of  
efforts?

# ELECTRIC MOBILITY

Accelerating the Shift



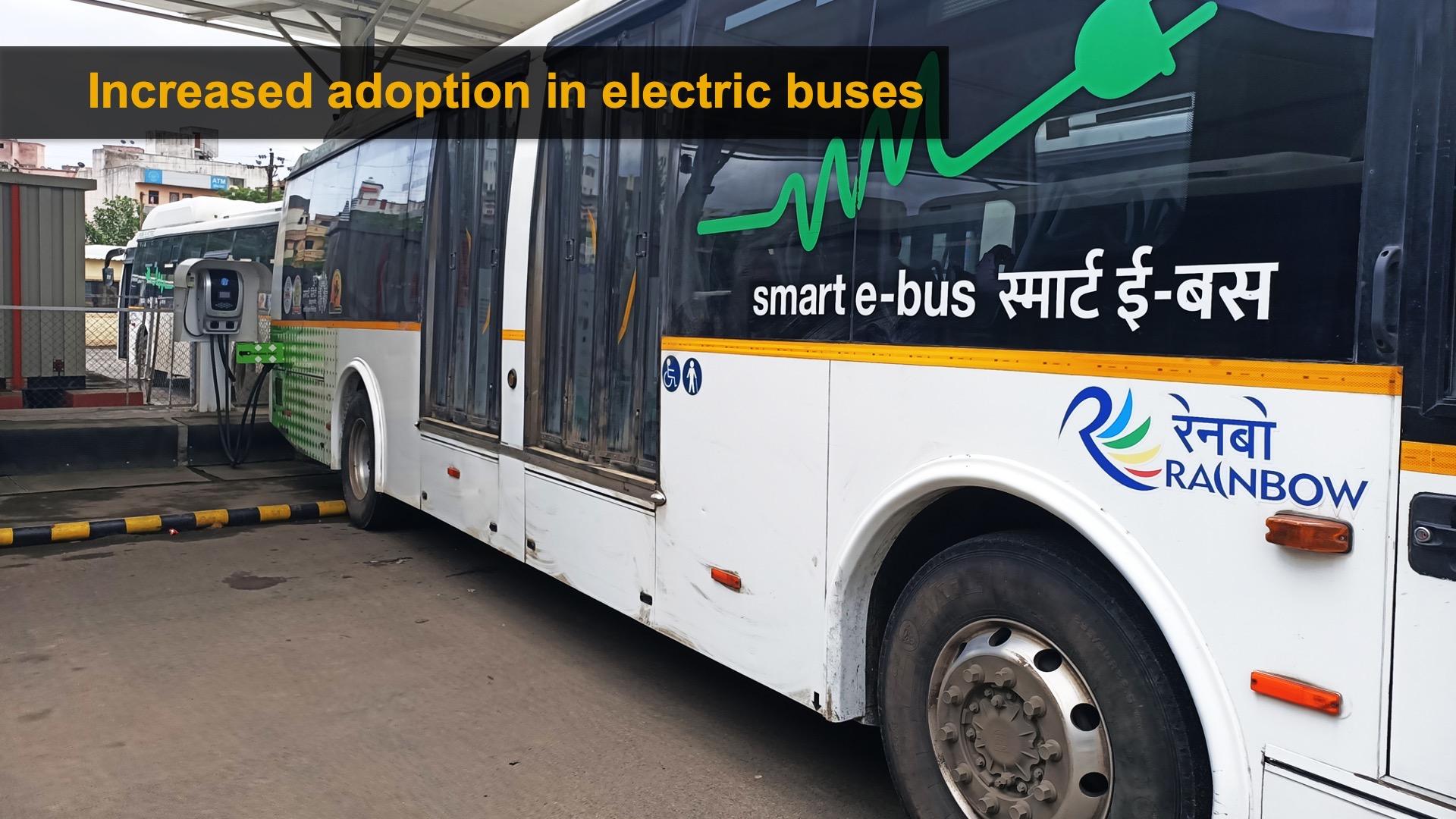
# Boost in EV manufacturing and sales

Billions of dollars invested in  
EV start-ups

18 manufacturers of electric  
2-wheeler and 3-wheeler



# Increased adoption in electric buses



# Charging infrastructure network



Will a growing charging infrastructure network **boost** consumer demand for EVs?

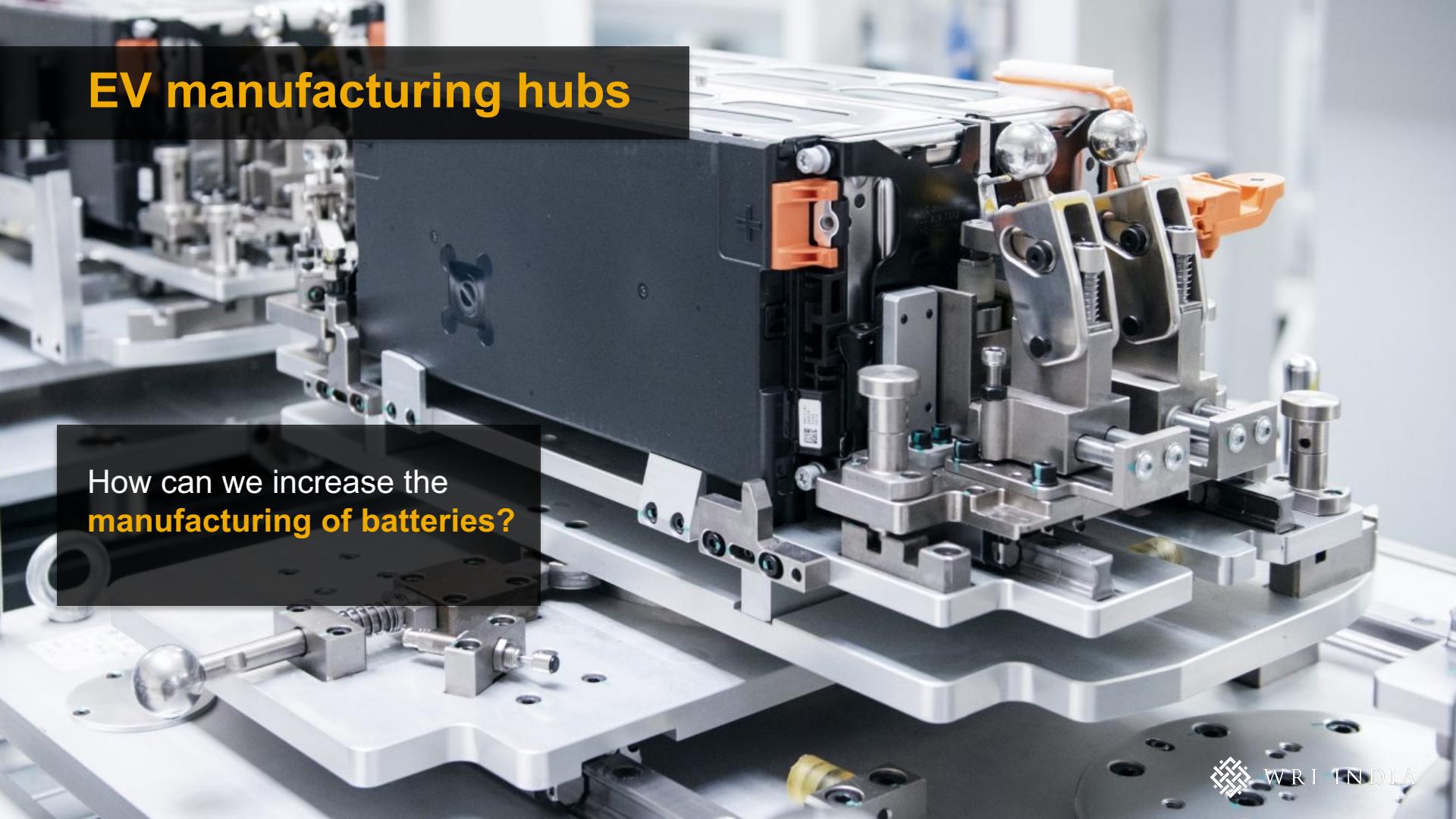
# Battery swapping

Plan for a battery swapping policy included in the recent budget



# EV manufacturing hubs

How can we increase the  
**manufacturing of batteries?**



## New job opportunities



There needs to be planning for workforce transition to address the loss of jobs in the auto-industry



# HYDROGEN

From Grey to Green

# Green Hydrogen for transport

On 15<sup>th</sup> August 2021, the PM announced a **National Hydrogen Mission**



# India's first Hydrogen electrolyzer gigafactory

Is India on its way to becoming a global **manufacturing hub for green hydrogen?**

