GREEN365

A YEAR OF CITIZEN-LED CLIMATE ACTION

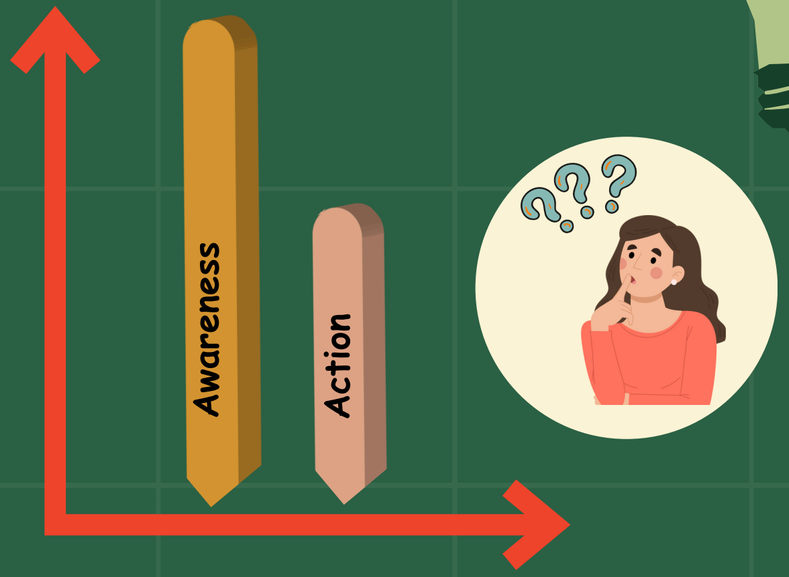
World Green Growth Forum – Green Growth Idea Hackathon 2025

THE CORE PROBLEM

THE CLIMATE PARADOX: GLOBAL AWARENESS, LOCAL INACTION

We are living in the most climate-aware generation in history — yet, carbon emissions continue to rise.

WHY ??



Because climate action is still framed as a global responsibility, leaving individuals unsure of their role. The result?

A DANGEROUS GAP BETWEEN KNOWING AND DOING.

THE CORE PROBLEM

THE CLIMATE PARADOX: GLOBAL AWARENESS, LOCAL INACTION

Even when people want to help, they face three invisible barriers:

🔍 Lack of Clarity

"What can I do that actually helps?"

🏗️ Lack of Structure

No ongoing system to guide consistent action

📉 Lack of Feedback

No visible way to measure personal impact

Without clarity, structure, and feedback, even motivated citizens fall into inaction.

WHAT'S NEEDED? A FRAMEWORK THAT TURNS AWARENESS INTO MEASURABLE ACTION!

BACKGROUND SUMMARY

Climate awareness is high, but consistent **individual action** is lacking.

People need **clear, achievable steps** to **contribute** meaningfully.

Phase **1**

Pilot Launch

Phase **2**

Expand Locally

Phase **3**

National Scale

Phase **4**

Global Replication

OUR APPROACH

- ✅ **Structured Action Plan** – Daily Green Transformation habits for sustainable living.
- ✅ **Community-Driven** – Schools, workplaces, and neighborhoods lead local adoption.
- ✅ **Behavioral Change Model** – One action per month to ensure long-term impact.
- ✅ **Low-Cost, High-Impact** – Minimum action required; leverages existing communication channels.
- ✅ **Measurable & Scalable** – Progress tracked via self-reports, QR pledges, and community validation.

OUR VISION

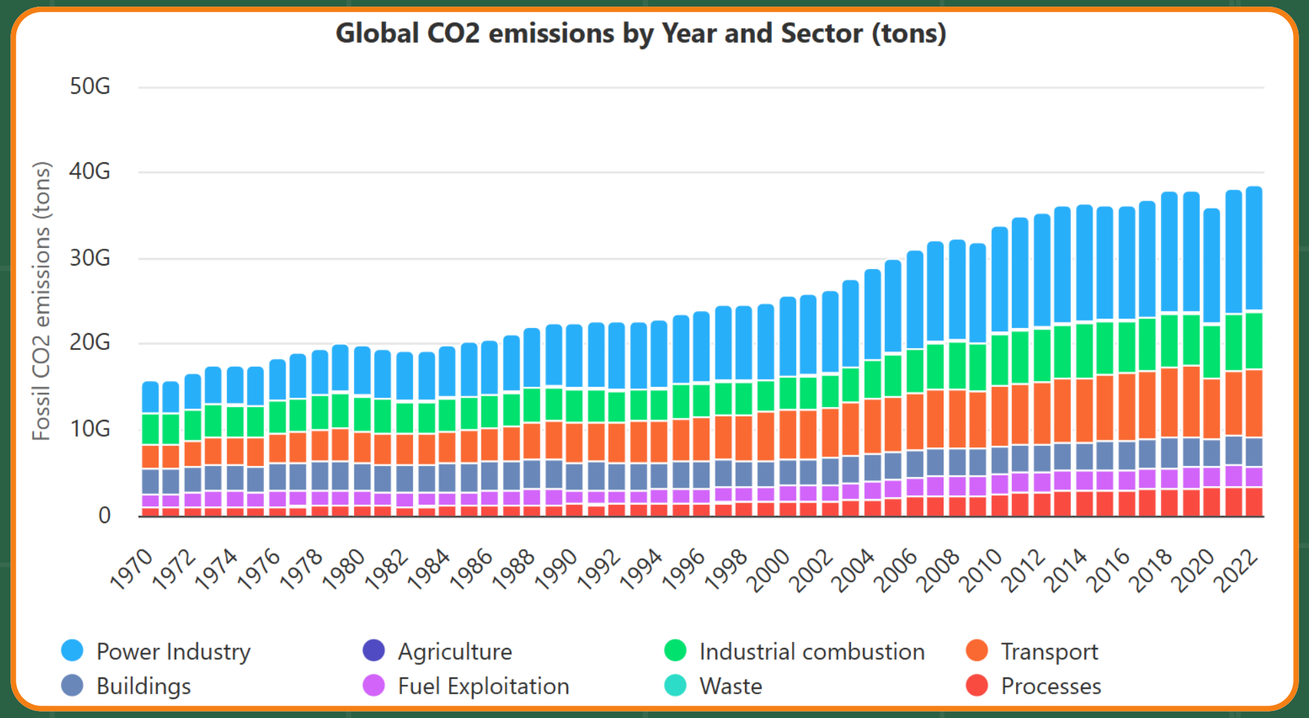
A WORLD WHERE CLIMATE ACTION IS SECOND NATURE.

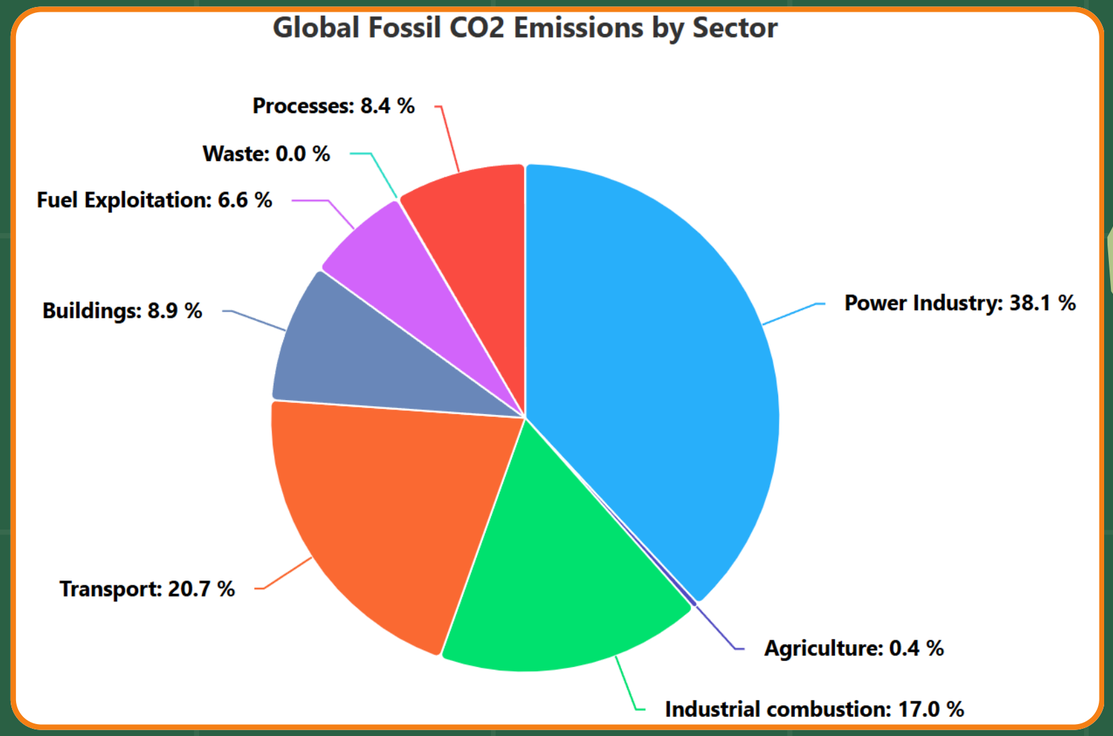
- To build a culture where every citizen plays an active role in reducing carbon emissions.
- To create a global movement of small, collective actions that lead to massive environmental impact.
- To simplify sustainability—making green habits effortless, rewarding, and widely adopted.
- To empower cities, schools, and workplaces to drive long-term behavioral change.

🌍 STATISTICS - WORLD

🌍 Global CO_2 Emissions Are Rising, Not Falling

- Despite **years of awareness**, global fossil CO_2 emissions hit a record **38.5 billion tons in 2022**, rising by **+1.15%** from the previous year.
- On average, **each person** emits **4.8 tons of CO_2 annually** enough to **melt 13 m² of Arctic ice** per person, every year.

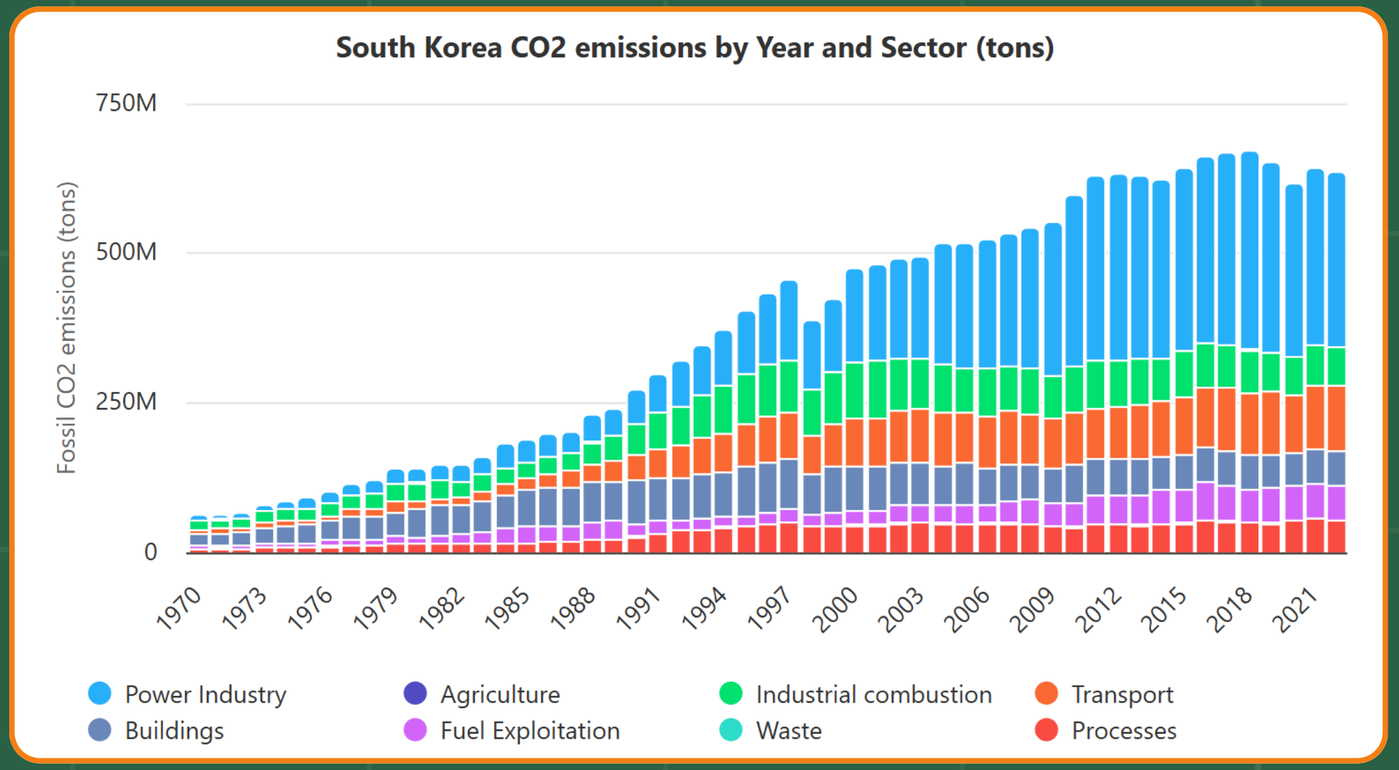




Fact	Why It Matters
🌡️ Global warming has already exceeded **1.1°C**	We're nearing the 1.5°C danger threshold set by the Paris Agreement.
🌳 1 mature tree absorbs only **22 kg of CO_2/year**	So it takes **~220 trees** to absorb **1 person's annual emissions.**
🚗 Driving 1 km = ~0.25 kg of CO_2	Simple reference to help people connect habits to impact.
📈 At this pace, emissions may exceed **40 billion tons/year by 2030**	Shows urgency and future risk.
🔁 72% of global emissions come from energy use (heating, cooling, lighting, mobility)	Makes your energy-centric sectors even more relevant.

CO2 Emissions Data - https://www.worldometers.info/co2-emissions/

🌍 STATISTICS - SOUTH KOREA



Metric	Value
Total Emissions (2022)	**635.5 million tons** of CO_2
Year-on-Year Change	**–1.15%** (a decrease of ~7.4 million tons)
Share of Global CO_2 Emissions	**1.65%**
Population (2022)	**51.78 million**
Per Capita CO_2 Emissions	**12.27 tons/person**

📈 SECTOR-WISE EMISSIONS BREAKDOWN

📈 Sector-Wise Emissions Breakdown

- **Power Industry** dominates emissions
- **Transport and Industrial Combustion** are consistently rising
- Buildings still emit significantly due to heating/cooling demands

🌱 WHY THIS MATTERS FOR OUR PROPOSAL

- 🧍 **Every citizen contributes to these sectors daily (electricity, travel, purchases, waste)**
- 🛠️ Even **small actions in high-emitting sectors** like power, transport, and industry can significantly reduce the country's overall emissions
- 📉 If each person reduces just **2 tons/year**, South Korea can avoid **~100 million tons/year**

CO2 Emissions Data - https://www.worldometers.info/co2-emissions/

SOLUTION #1

POWER INDUSTRY

PROBLEMS

- In South Korea, the power sector is the largest contributor to energy-related CO_2 emissions, accounting for approximately 46% of the total emissions in 2022.
- This significant reliance on fossil fuels for electricity generation underscores the urgent need for systemic changes to achieve carbon neutrality.

CITIZEN-LEVEL SOLUTIONS

1. **Adopt Energy-Efficient Appliances**: Upgrade to appliances with high energy efficiency ratings to reduce electricity consumption.
2. **Implement Smart Plugs and Power Strips:** Use smart devices to eliminate standby power consumption from electronics.
3. **Transition to LED Lighting:** Replace incandescent bulbs with LED alternatives to lower energy use.
4. **Engage in 'Power-Free Hour':** Dedicate one hour daily to minimize electricity usage by turning off non-essential devices.
5. **Install Rooftop Solar Panels:** Generate renewable energy to power your home and reduce dependence on the grid.

QUANTITATIVE IMPACT

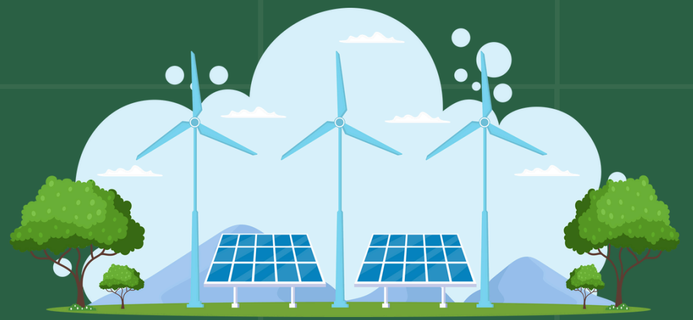
Action	Electricity Saved (kWh/year)	CO_2 Reduction (kg CO_2/year)
Adopt Energy-Efficient Appliances	500–700	85–119
Use Smart Plugs and Power Strips	200–300	34–51
Replace Incandescent Bulbs with LEDs	250–300	42.5–51
'Power-Free Hour' (1 hr/day)	365	62.05
Install Rooftop Solar Panels	3,600–4,800	612–816

Estimates based on EPA/IEA data, adapted for urban household use

Total potential CO_2 reduction:

~ 835.55

tons/year per 1000 people



SOLUTION #2

INDUSTRIAL COMBUSTION

PROBLEMS

- In South Korea, the industrial sector is a significant contributor to greenhouse gas emissions.
- In 2022, emissions from 675 entities in the manufacturing industry totaled approximately 65.2 million tons of CO_2 equivalent, representing 10% of the sector's total emissions.
- This substantial carbon footprint underscores the need for both systemic changes and individual actions to reduce emissions associated with industrial combustion.

CITIZEN-LEVEL SOLUTIONS

1. ✅ **Support Eco-Friendly Products:** Choose products manufactured using sustainable practices, encouraging industries to adopt greener technologies.
2. ✅ **Reduce Consumption:** Adopt a minimalist lifestyle to decrease the demand for mass-produced goods, thereby reducing industrial output and emissions.
3. ✅ **Recycle and Reuse:** Engage in recycling programs and prioritize second-hand products to minimize the need for new manufacturing.
4. ✅ **Advocate for Green Policies:** Participate in community initiatives and support policies that promote industrial energy efficiency and the use of renewable energy sources.
5. ✅ **Educate and Raise Awareness:** Inform peers about the environmental impact of industrial combustion and the importance of sustainable consumption.

QUANTITATIVE IMPACT

Action	CO_2 Reduction (kg CO_2/year)
Support Eco-Friendly Products	100–150
Reduce Consumption	150–200
Recycle and Reuse	100–150
Advocate for Green Policies	Impact varies
Educate and Raise Awareness	Impact varies

Estimates based on EPA/IEA data, adapted for urban household use

Total potential CO_2 reduction: ~ 350 tons/year per 1000 people

SOLUTION #3

AGRICULTURE

🌍 PROBLEMS

- The agricultural sector contributes 2.9% of South Korea's total greenhouse gas emissions.
- Breakdown of emissions:
  - Rice Cultivation – 29.7%
  - Agricultural Soils – 25.8%
  - Livestock Manure Management – 23.1%
  - Enteric Fermentation (Livestock Digestion) – 21.2%

📊 QUANTITATIVE IMPACT

Action	CO_2 Reduction (kg CO_2/year)
Adopt Plant-Based Diets	500–1,000
Support Local and Seasonal Produce	150–300
Minimize Food Waste	200–400
Choose Organic Products	100–200
Engage in Community Gardening	150–250

Estimates based on EPA/IEA data, adapted for urban household use

🌱 CITIZEN-LEVEL SOLUTIONS

1. ✅ **Adopt Plant-Based Diets** – Reducing meat consumption lowers emissions from livestock farming.
2. ✅ **Support Local & Seasonal Produce** – Buying local reduces emissions from transportation and storage.
3. ✅ **Minimize Food Waste** – Proper meal planning reduces waste-related emissions.
4. ✅ **Choose Organic Products** – Organic farming practices have a lower carbon footprint.
5. ✅ **Engage in Community Gardening** – Growing your own produce cuts reliance on commercial farming.

Total potential CO_2 reduction: **~ 1,100 tons/year per 1000 people**

SOLUTION #4

WASTE MANAGEMENT

PROBLEMS

As of 2016, Gyeonggi-do, a province in South Korea, generated approximately 12,070 tons of waste per day, with 22.4% treated by incineration. This incineration process was estimated to emit about 1,397 kilotons of CO_2 equivalent annually.

CITIZEN-LEVEL SOLUTIONS

1. **Compost Organic Waste** - Diverting food scraps from landfills to composting reduces methane emissions.
2. **Reduce Single-Use Plastics** - Utilizing reusable bags, bottles, and containers decreases plastic waste.
3. **Participate in Recycling Programs** - Properly sorting recyclables ensures materials are processed efficiently
4. **Support Zero-Waste Initiatives** - Engaging in community programs aimed at waste reduction promotes sustainable practices.
5. **Advocate for Sustainable Packaging** - Encouraging businesses to adopt eco-friendly packaging reduces waste generation.

QUANTITATIVE IMPACT

Action	Waste Reduced (kg/year)	CO_2 Reduction (kg CO_2/year)
Compost Organic Waste	150–200	60–80
Reduce Single-Use Plastics	50–100	20–40
Participate in Recycling Programs	100–150	40–60
Support Zero-Waste Initiatives	Impact varies	Impact varies
Advocate for Sustainable Packaging	Impact varies	Impact varies

Estimates based on EPA/IEA data, adapted for urban household use

Total potential CO_2 reduction:

~ 120

tons/year per 1000 people

SOLUTION #5

TRANSPORTATION

PROBLEMS

In 2023, transport CO_2 emissions rose by **4% to 8.24 billion** metric tons, with SUVs making up **50% of new car sales** and driving **20%** of the global CO_2 increase.

In 2022, South Korea's transport sector emitted **107.365 million tonnes** of CO_2, up from **105.130 million tonnes** in 2021.

CITIZEN-LEVEL SOLUTIONS

1. **Utilize Public Transportation:** Opt for buses, subways, and trains instead of personal vehicles to reduce individual carbon footprints.
2. **Adopt Carpooling Practices:** Share rides with colleagues or friends to decrease the number of vehicles on the road.
3. **Transition to Electric Vehicles (EVs):** Invest in EVs to reduce emissions associated with traditional internal combustion engine vehicles.
4. **Embrace Active Transportation:** Choose walking or cycling for short distances, promoting both health and environmental benefits.
5. **Limit Air Travel:** Opt for alternative modes of transportation or reduce the frequency of flights to decrease aviation-related emissions.

QUANTITATIVE IMPACT

Action	CO_2 Reduction (kg CO_2/year)
Utilize Public Transportation	1,500–2,000
Adopt Carpooling Practices	1,000–1,500
Transition to Electric Vehicles	2,500–3,000
Embrace Active Transportation	500–1,000
Limit Air Travel	1,000–2,000

Estimates based on EPA/IEA data, adapted for urban household use

Total potential CO_2 reduction:

~ 6,500

tons/year per 1000 people

SOLUTION #6

BUILDINGS

PROBLEMS

- In South Korea, the building sector is a significant contributor to energy-related CO_2 emissions.
- **Direct emissions** account for **9%** of the total energy-related CO_2 emissions.
- Per capita emissions from the building sector are nearly double the G20 average, reflecting high energy consumption in both residential and commercial buildings.

CITIZEN-LEVEL SOLUTIONS

1. ✅ **Upgrade to Energy-Efficient Appliances** – Replacing old appliances with energy-efficient models reduces electricity consumption.
2. ✅ **Enhance Insulation and Weatherproofing** – BImproving home insulation decreases the need for heating and cooling, leading to energy savings.
3. ✅ **Install Smart Thermostats** – Utilizing smart thermostats optimizes indoor temperatures, reducing unnecessary energy use.
4. ✅ **Adopt LED Lighting** – Switching to LED bulbs lowers electricity usage due to their higher efficiency.
5. ✅ **Participate in Renewable Energy Programs** - Engaging in programs that support renewable energy adoption contributes to reducing reliance on fossil fuel.

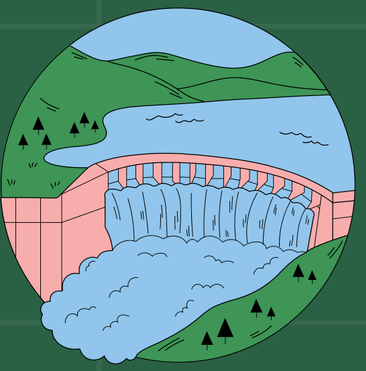
QUANTITATIVE IMPACT

Action	Energy Saved (kWh/year)	CO_2 Reduction (kg CO_2/year)
Upgrade to Energy-Efficient Appliances	300–500	51–85
Enhance Insulation and Weatherproofing	400–600	68–102
Install Smart Thermostats	150–250	26–43
Adopt LED Lighting	100–200	17–34
Participate in Renewable Energy Programs	Impact varies	Impact varies

Estimates based on EPA/IEA data, adapted for urban household use

Total potential CO_2 reduction: **~ 162** **tons/year per 1000 people**

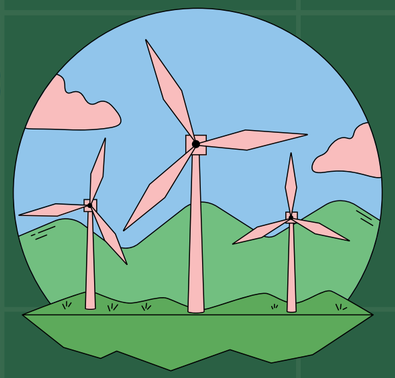
RENEWABLE SOLUTIONS



Massive investment in solar, wind, hydro, and nuclear energy.

- China reached 1,200 GW of installed solar and wind capacity – six years ahead of schedule.

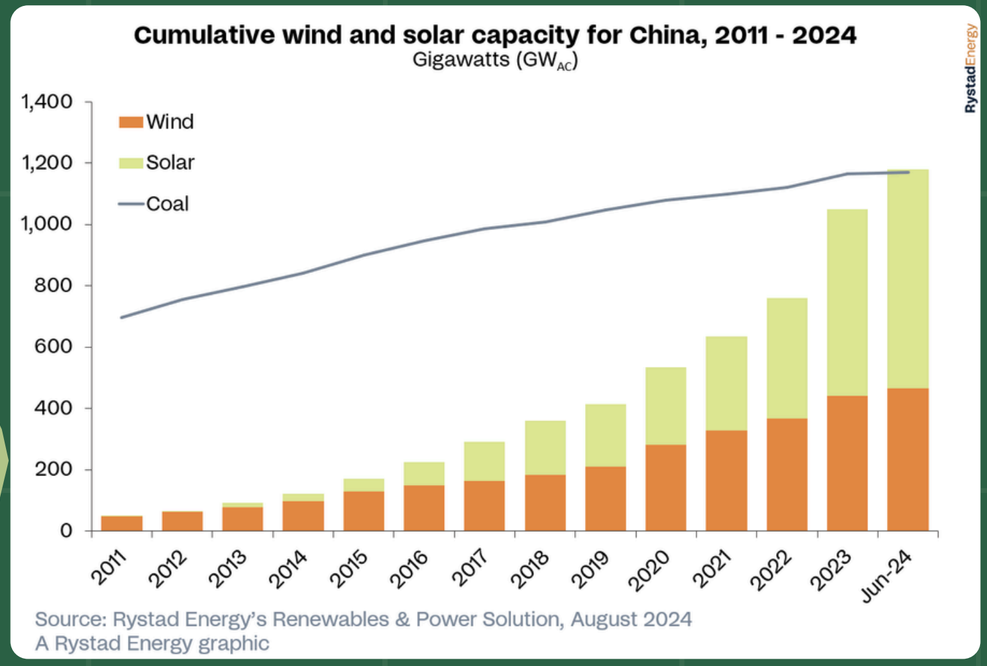
Renewable energy reduces carbon intensity and creates green jobs.



China's global renewable investments now exceed $800 billion in planned grid modernizations by 2030.

Such milestones prove that a rapid transition to renewables can significantly lower carbon emissions and create millions of green jobs.

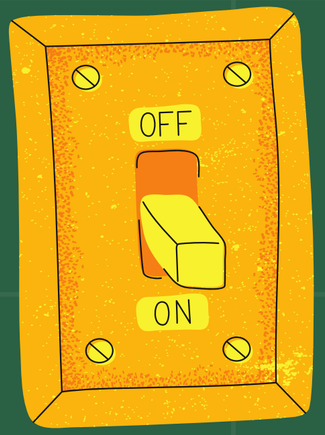
Renewable + power grid



INDUSTRIAL SOLUTIONS

Retrofitting buildings and industrial facilities for energy efficiency is one of the fastest ways to reduce emissions.

"Research indicates that "nearly zero energy" buildings can use up to 70% less energy in colder climates and 60% less in milder regions."



- A push for stricter building codes and industrial retrofits has led to a reported 20% improvement in energy intensity. (Germany)
- These measures not only lower emissions but also reduce carbon emissions & energy costs, making sustainability economically viable.

DATA CAPTURING APPROACH

📊 QUANTITATIVE IMPACT

What We Measure	How We Measure It
Household electricity/water/gas reduction	Compare monthly utility bills (pre & post participation)
CO_2 saved per action	Use standardized emission factors (e.g., 1 km walk = 0.25 kg CO_2 saved)
Participation in green activities	App check-ins, QR code scanning at events, household pledge forms
Food, waste, and transport choices	Surveys + in-app logging of meals, travel modes, waste bins
Solar panel & LED adoption	Citizen-submitted installation proof or invoices via partner platforms

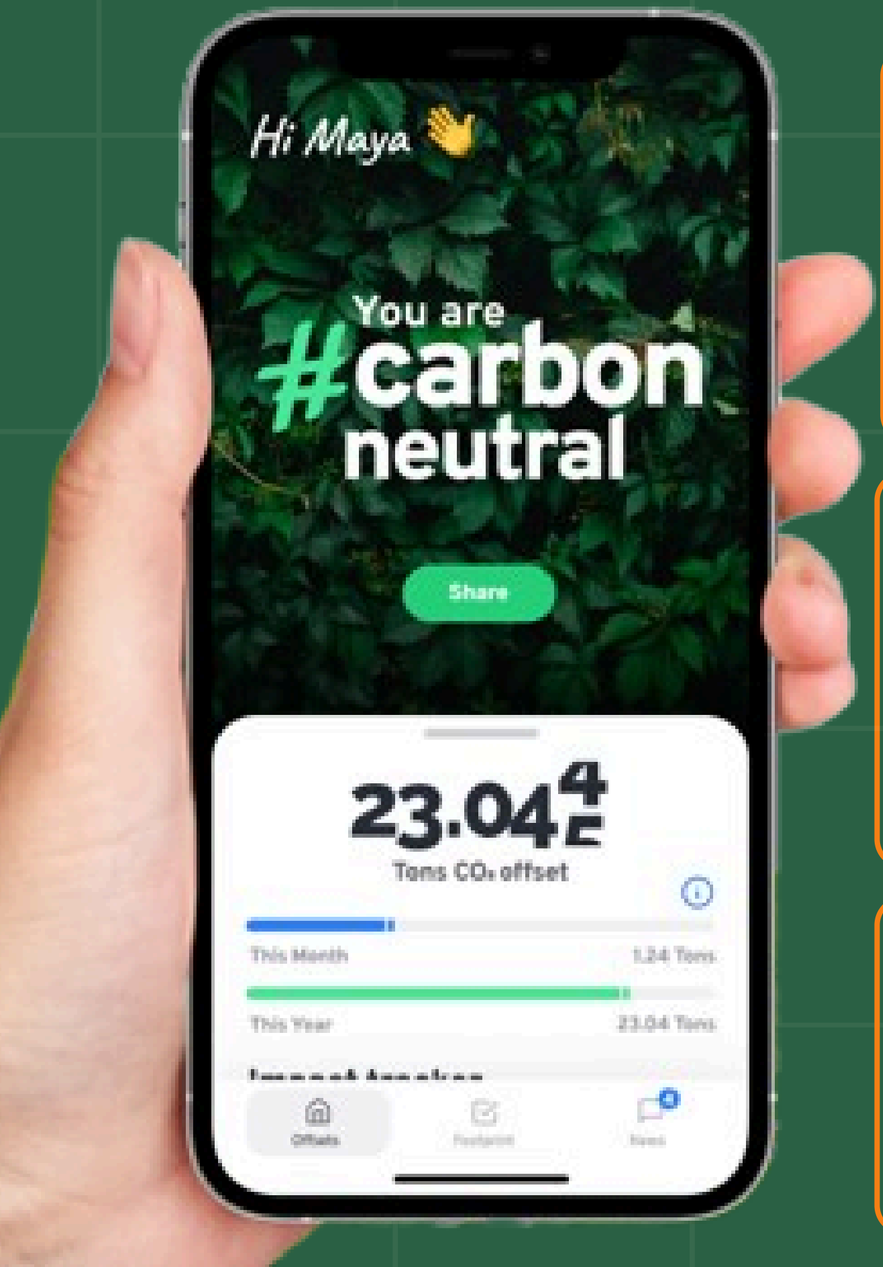
🌍Impact Reporting Format

- 📈 **Monthly Report Dashboards**: Aggregated community impact (e.g., “Ward 5 saved 2.3 tons of CO_2 this month”)
- 🧾 **Individual Impact Reports**: Each citizen can view their own estimated CO_2 reduction
- 🏆 **Public Leaderboards**: Gamify motivation while keeping data privacy intact

📊 QUANTITATIVE IMPACT

What We Observe	How We Capture It
Habit Change Over Time	Pre/post behavior surveys (monthly)
Awareness Growth	In-app quizzes, climate literacy scores
Community Engagement	Event participation, pledges, uploads from clean-up or workshops
Testimonials & Feedback	Citizen stories, local leader highlights, video/photo submissions

GREENTRACK - A SMART APP FOR PERSONAL CO_2 TRACKING & REDUCTION



A mobile-first, chatbot-powered app that lets users:

- 📲 Log daily climate actions (travel, energy use, food, waste)
- 🧠 Use voice/chatbot input to track actions on-the-go
- 📍 Scan QR pledges at eco-events and public locations
- 📊 View personal CO_2 dashboards and join community leaderboards

🔹 Core Features

✅ Daily habit logging across 8 sectors
✅ Smart chatbot & voice assistant (GreenBot AI)
✅ QR-based pledges & event validation
✅ Weekly CO_2 impact report + gamified rewards
✅ National leaderboard to inspire friendly competition

📈 Impact

- Daily tracking = higher engagement = long-term behavior change
- Every action converted to kg CO_2 = tangible, motivating feedback
- Builds transparency and accountability at both individual and community level

CORE PARTICIPATION BARRIERS

PROBLEMS #1

- **Awareness Gap** : Many citizens are unaware of their personal carbon footprint or how small lifestyle changes can make a big difference.
- **Behavioral Inertia** : Long-standing habits like daily meat consumption, private vehicle use, and overuse of AC are difficult to break without consistent nudges.

PROBLEMS #2

- **Access & Affordability** : Eco-friendly options like solar panels, electric vehicles, or energy-efficient appliances are often expensive or inaccessible to many households.
- **Time Constraints** : Sustainable behaviors such as composting, waste segregation, or logging eco-actions are perceived as time-consuming and inconvenient.
- **Data & Feedback Loop** : Without visible progress or real-time impact tracking (e.g., "CO_2 saved"), citizens lose motivation to continue sustainable actions.
- **Digital & Language Divide** : Older adults, rural communities, or migrants may face barriers using apps due to digital literacy or language limitations.

PROBLEMS #3

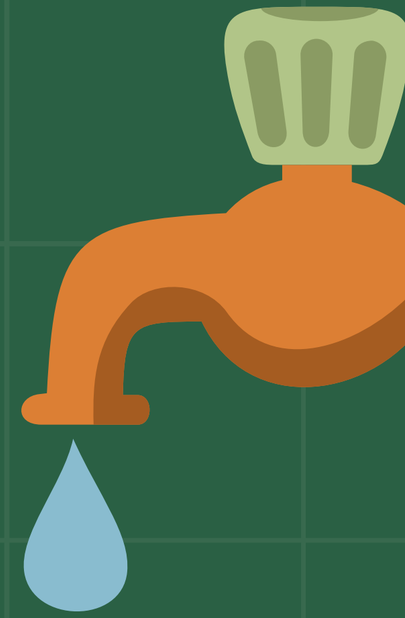
- **Skepticism or Trust Issues** : Some citizens doubt whether their individual efforts genuinely contribute to solving climate change or are skeptical of how data is used.
- **Infrastructure Gaps** : Even motivated citizens are limited by the lack of infrastructure — like EV charging stations, bike lanes, compost bins, or public recycling centers.

DEEPER SYSTEMIC & SOCIAL CHALLENGES

Challenge	Why It Matters
No Incentive Loop	Without rewards, recognition, or competition, adoption rates stay low.
Cultural & Social Pressure	People may feel judged for carrying eco kits, saying no to meat, or biking to work.
Lack of Unified Platform	Citizens often don't know where or how to start tracking or acting.

Estimates based on EPA/IEA data, adapted for urban household use

THANK YOU



Together, we can make a world
of difference for the Earth!
There is no Planet B.

~ Team India AI

Meet Patel
Mohit Nippanikar
Jeet Nakrani
Shubham Vishwakarma
Dhiraj Nair