



# ANNUAL REPORT

2024-2025

Decarbonizing Agriculture  
[Oorjasolutions.org](http://Oorjasolutions.org)

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# MESSAGE FROM THE CBO

**Dear partners, supporters and colleagues,**

2024-25 was a defining year for Oorja, marking our transition from proven innovation to scalable impact. After years of testing, learning, and refining, we entered this phase with a clear mission: to make clean energy-driven farming services accessible to every smallholder in India. This year, we focused on extending our reach, strengthening our foundation, and shaping the systems that will sustain long-term growth.

By March 2025, Oorja operated 222 solar irrigation systems across six districts, serving more than 38,000 people and training over 1,800 farmers. Each system demonstrates how our Pay-Per-Use model enhances productivity for smallholders while establishing a commercially viable energy service for rural markets.

A key achievement this year was the further development of our Farming-as-a-Service model, which unites Irrigation-as-a-Service with Climate-Smart Farmer Advisory into one integrated solution. This approach disrupts the traditional model of ownership by removing upfront costs and making clean energy and agricultural support accessible to every farmer. It increases yields, raises incomes, and enables rural households to move out of poverty cycles through reliable access to modern farming infrastructure.

We also expanded new service models that reach agri-businesses and large corporates, strengthening value chains and positioning Oorja as a key partner in agricultural transformation.

As we look ahead, Oorja is ready to scale this model across India and, in time, throughout the Global South. Our systems, digital tools, and partnerships are designed for replication and rapid growth, building a foundation for a new kind of agricultural economy powered by clean energy and shared prosperity.

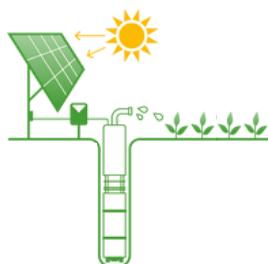
**Audrey Fillon**  
**Chief Business Officer**  
Oorja Development Solutions





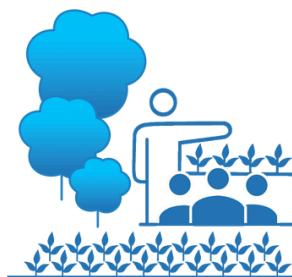
# INTRODUCTION

Oorja is a Farming as a Service company working at the intersection of sustainable agriculture and renewable energy that helps smallholder farmers shift away from fossil fuels. We have pioneered the Pay-Per-Use business model in the agricultural sector while also offering Climate-Smart Farmer Advisory services. By installing and maintaining community-scale solar infrastructure, Oorja makes farming more affordable, reliable, and sustainable.



## IRRIGATION AS A SERVICE

Affordable and reliable solar irrigation service for farmers to increase their income by replacing diesel and growing crops year-round.



## CLIMATE SMART ADVISORY

A solution for farmers to increase their productivity and income while increasing efficiency of input use through climate-smart agricultural practices.



## WATER ENTREPRENEURSHIP

The Water Entrepreneurship Programme enables farmers to own and manage solar irrigation systems, reduce irrigation costs, and generate income by supplying water to their local farming communities.

# ABOUT US

## MISSION

**Empowering 1 million farmers globally by 2035** with clean energy and agricultural services that raise incomes, improve quality of life, and build climate resilience.

## OBJECTIVES



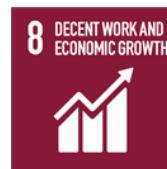
Mitigate carbon emissions and build climate resilience



Increase agricultural productivity and farmers' income



Improve food security



# AREA COVERAGE & EXPANSION MAP

# Current Operational Areas

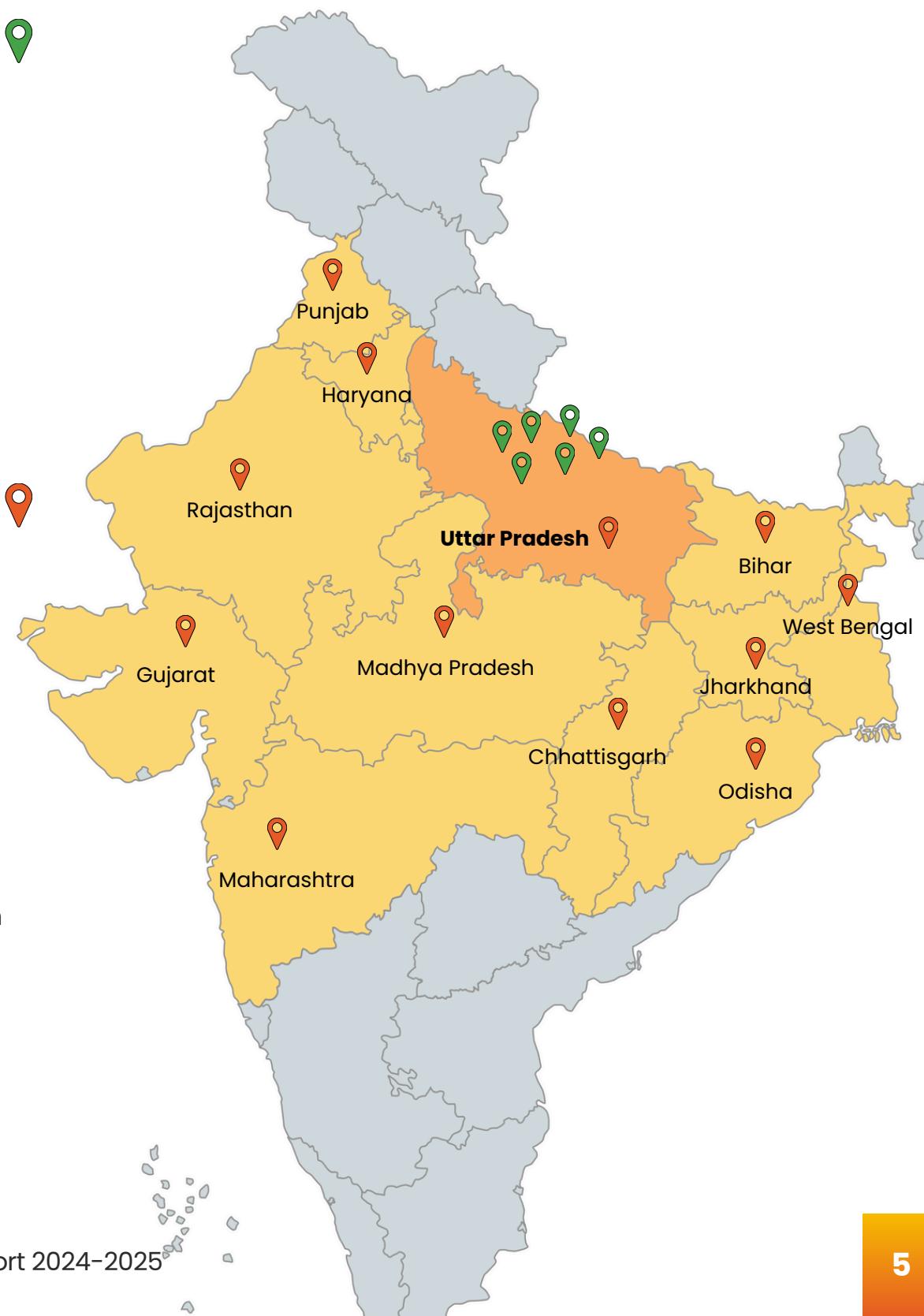
## **Uttar Pradesh**

Barabanki  
Bahraich  
Hardoi  
Lucknow  
Shravasti  
Sitapur

# Expansion Plans

## Uttar Pradesh Other Districts

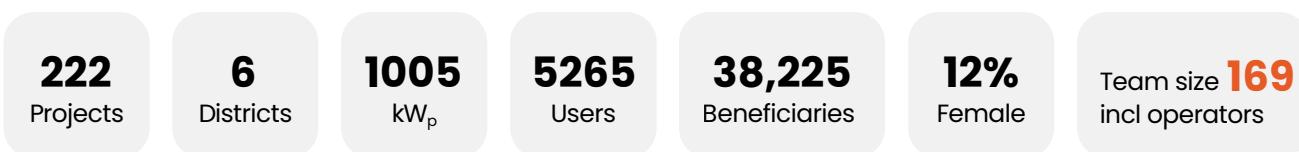
**Bihar**  
**Jharkhand**  
**Odisha**  
**West Bengal**  
**Chhattisgarh**  
**Madhya Pradesh**  
**Haryana**  
**Punjab**  
**Rajasthan**  
**Gujarat**  
**Maharashtra**



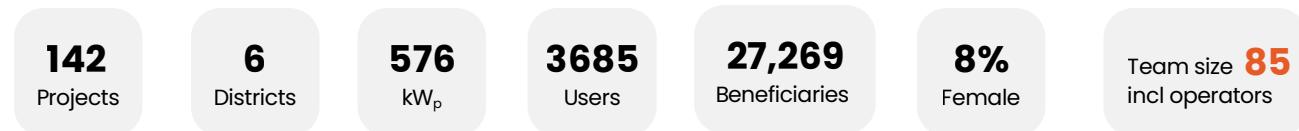
# MILESTONES & ACHIEVEMENTS



## March 2025



## March 2024



# KEY HIGHLIGHTS

## Reach



Grew customer base to  
**38,000+ people** irrigating  
**3,871 acres**

## Coverage



**6 districts** of northern India  
reaching 4,603 male and 622  
female direct users

## Team



Brought on board experts in  
**operations, impact, finance,**  
**business development**

## Partners



Partnered with **IISD\***, **IWMI\***,  
**GIZ\***, **HCL Foundation**, and  
**GOGLA** to scale up and amplify  
our impact

\***IISD**: International Institute for Sustainable Development

\***IWMI**: International Water Management Institute

\***GIZ**: Deutsche Gesellschaft für Internationale Zusammenarbeit  
(German Agency For International Cooperation)

# OUR CUSTOMERS



Smallholder farmers,  
women and low-income  
**communities**



Farm  
**1-10 acres**  
of land per household



Average household size  
**7.4 people**



Earnings:  
**INR 5,000-8,000**  
(US\$ 60-100) per month  
per household



Rely on  
**agriculture**  
as their primary source  
of livelihood



Face up to  
**50% yield gap**  
due to non-optimal  
farming practices

## THE OPPORTUNITY

Given access to localised, timely inputs and information, Indian farmers can:



Obtain **>2x higher**  
crop yields.



Reduce **500K MTCO2e** emissions.



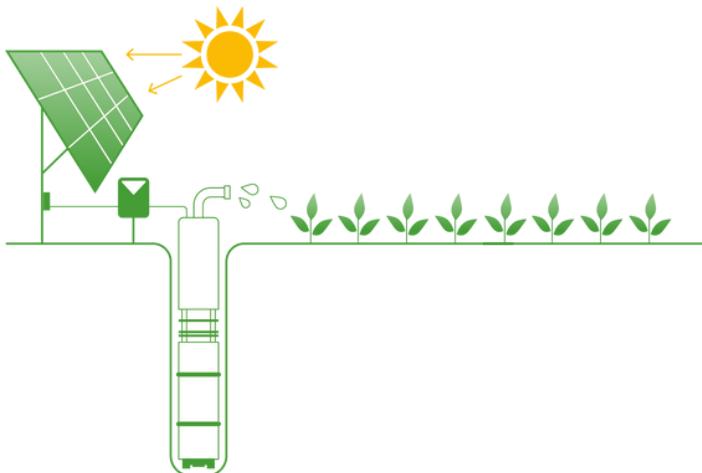
Decrease reliance  
on **chemical inputs**.

# IRRIGATION AS A SERVICE



## Pay per litre of water available on-farm

A Pay-Per-Use community irrigation service that enables farmers to transition from diesel-based pumping to affordable and reliable solar irrigation.



**Average tariff:  
INR 3.5 per m<sup>3</sup>  
of water**

**Min. 20% cheaper  
than diesel**

## WHY SOLARIZE IRRIGATION?

In Northern and Eastern India, 30 million farmers are reliant on diesel fuel, the most expensive irrigation source. Smallholders generally practice deficit irrigation of crops. This contributes to 50% lower crop yields than potential and prevents them from growing crops year-round. Diesel pumps have an immense carbon footprint: they are responsible for 5% of India's GHG emissions.

## MILESTONES REACHED IN MARCH 2025

**222**

solar pumps  
under operation

**3,017**

farmers  
served

**3,871**

acres under  
solar irrigation

**4,712,112**

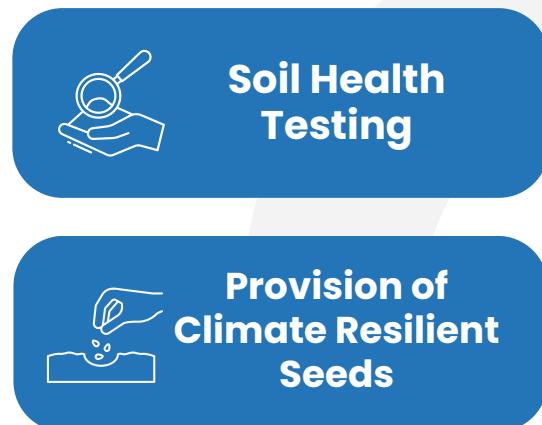
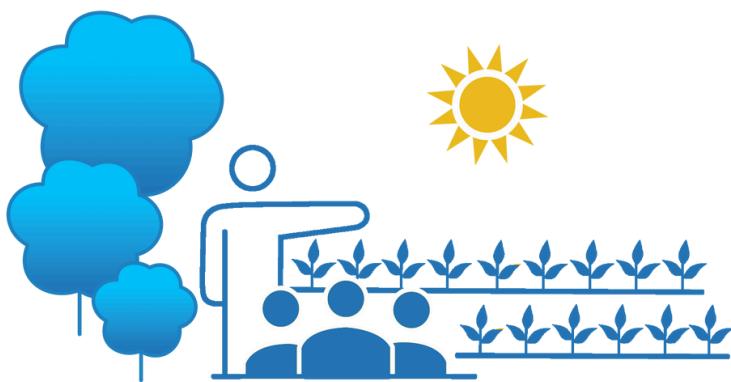
m<sup>3</sup> of  
water sold

# CLIMATE-SMART FARMER ADVISORY



We continued providing Climate-Smart Farmer Advisory services to our irrigation customers. Led by expert agronomists and farmer advisors to promote sustainable, profitable, and resource-efficient agricultural practices, smallholder farmers received training through workshops, personalised sessions and on-farm demonstrations.

## NEWLY LAUNCHED



## DIGITAL SERVICES

Our farmer-facing mobile app, Dhoop, has been developed as an all-in-one digital platform enabling easy irrigation scheduling, access to quality seeds, soil testing, and advisory services and is currently in testing phase. In addition, we have actively engaged over 250 farmers through dedicated WhatsApp groups, advancing our digital advisory goals.

## MILESTONES REACHED IN MARCH 2025

**1,800+**

farmers trained,  
including **300**  
women farmers

**91%**

farmers found  
our training to  
be effective

**23,000+**

kg of climate-  
resilient seed  
varieties sold

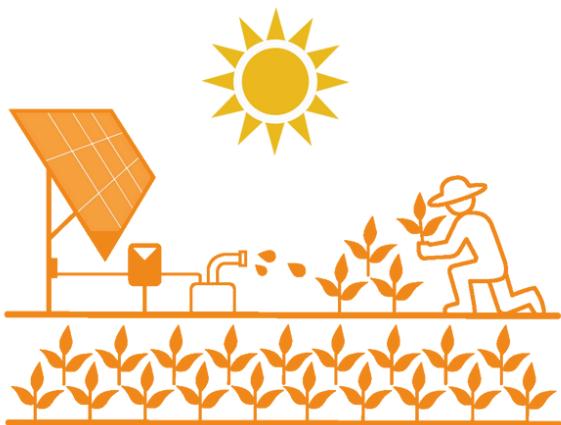
**48.6%**

reduction in  
usage of  
chemical inputs

# WATER ENTREPRENEURSHIP



Oorja is offering solar irrigation pumps for sale to agri-businesses, NGOs, FPOs, and individual farmers. With flexible payment plans, farmers also get the option to add services like water metering, regular maintenance, servicing, and remote monitoring. Oorja supports farmers by providing Water Entrepreneurship training, thus enabling them to generate additional income.



## Water Entrepreneurship

Enabling farmers to own their own system and generate additional income by reselling water to nearby farmers while reducing their own irrigation costs.

## FLEXIBLE PAYMENT OPTIONS

### PAY AT ONCE

Full ownership of solar assets is passed on to the farmers upon upfront payment, providing autonomy and long-term energy savings for farmers, FPOs, and businesses.

### PAY IN INSTALLMENTS

Farmers can pay through monthly installments over 1-3 years, making it more accessible. Customers can earn more by selling water for irrigation to other farmers.

## BENEFITS



Sustainable growth



Year-round availability

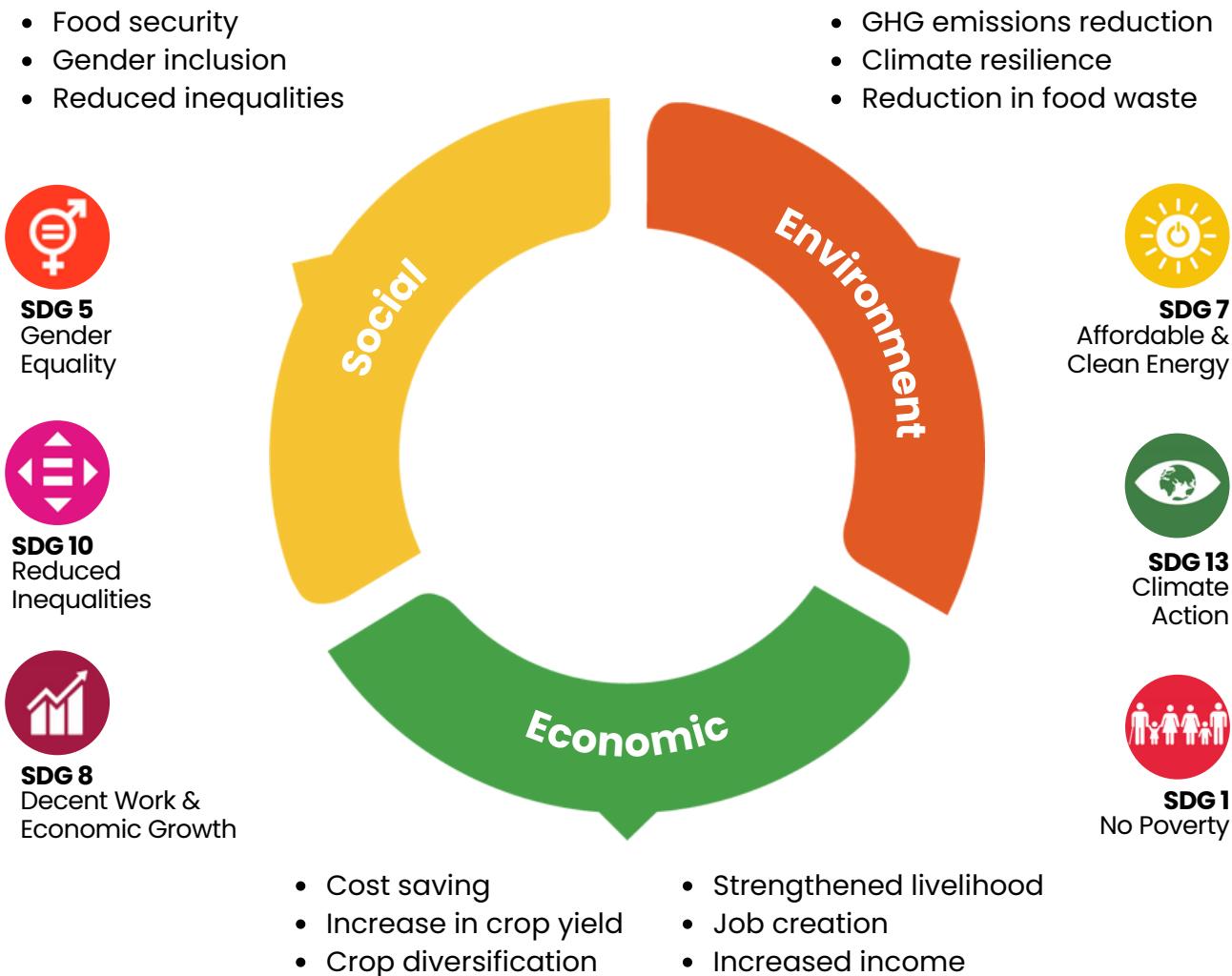


Long-term investment



Lower lifecycle costs

# IMPACT MODEL



## KEY IMPACT INDICATORS

	Number of direct and indirect beneficiaries		Crop yield
	Farmer income and savings		Crop diversification
	Jobs created		GHG emissions saved

# OUR IMPACT

## 2024 Independent Impact Evaluation Study

This data was collected externally by 4<sup>th</sup> Wheel Social Impact through standardized questionnaires that were conducted in person in late 2024. 102 respondents (70 customers and 32 non-customers) from Bahrail, Barabanki and Hardoi districts of Uttar Pradesh were part of the assessment.



## Crop Diversification

Crop	Season	Customer Adoption	Non-Customer Adoption
Mustard	Rabi	17%	4%
Peppermint	Zayed	14%	8%
Chickpea	Zayed	Adopted	Not Adopted

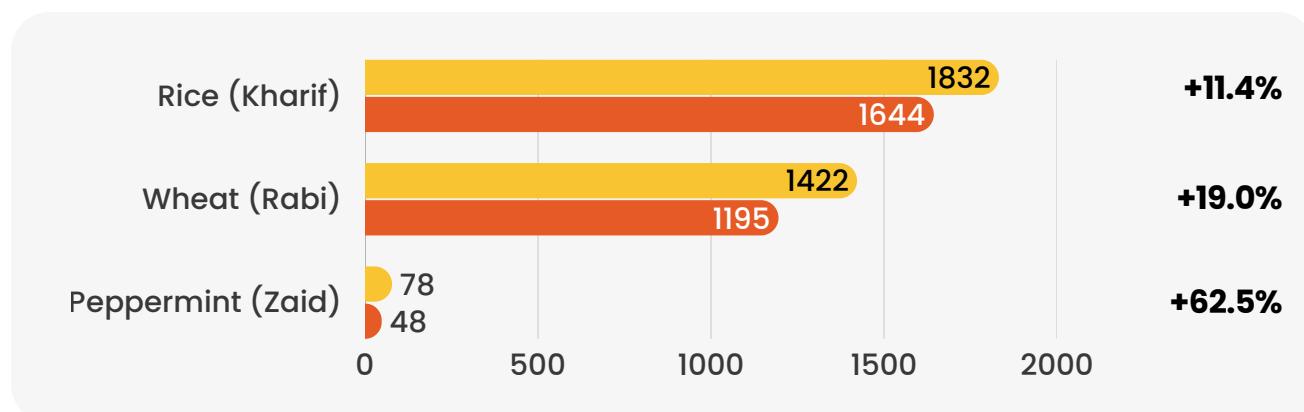
\*Customers moved beyond staples into pulses, oilseeds and vegetables in the Zayed season—enabled by reliable irrigation.

## Crop Yields

● Customer

● Non-Customer

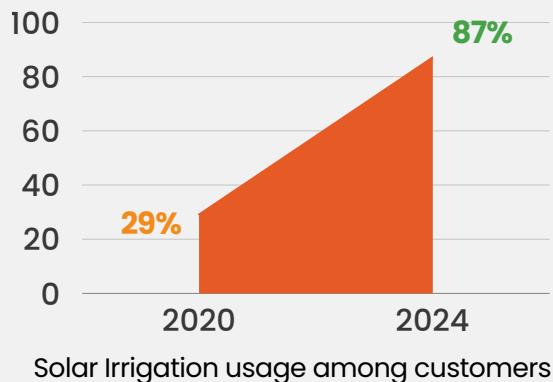
% Gain



\* Reliable irrigation increased crop yield (kg/acre) consistency, especially in water-sensitive seasons.

# OUR IMPACT

## Adoption of Solar Irrigation



## Cropping Intensity

**186%**

in non-  
customers

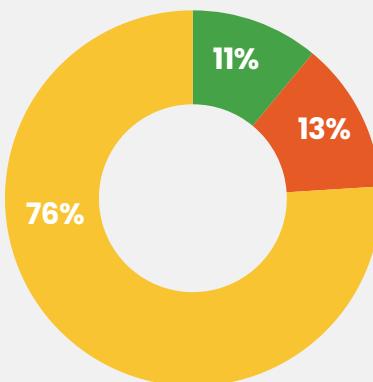
**198%**

in  
customers

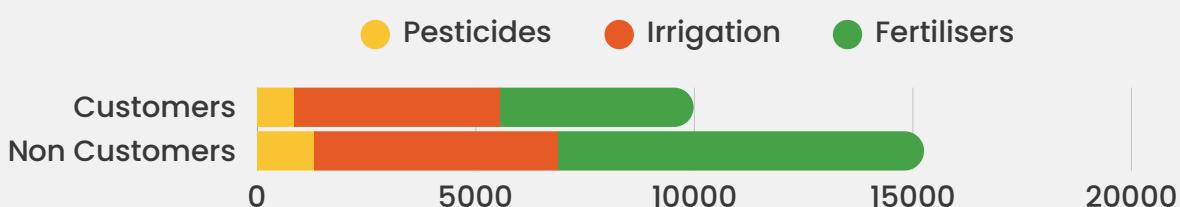
Higher intensity = more efficient use of land + income potential

## Income Improvement in Oorja customers

- Income increase from 0-49%
- Income increase of 50% +
- No Change



## Cost Of Cultivation



\*Guided advisory + solar irrigation led to consistent input cost reductions for customers.

# OUR IMPACT

## Reduced Diesel Consumption

Each diesel icon represents 100 litres of diesel



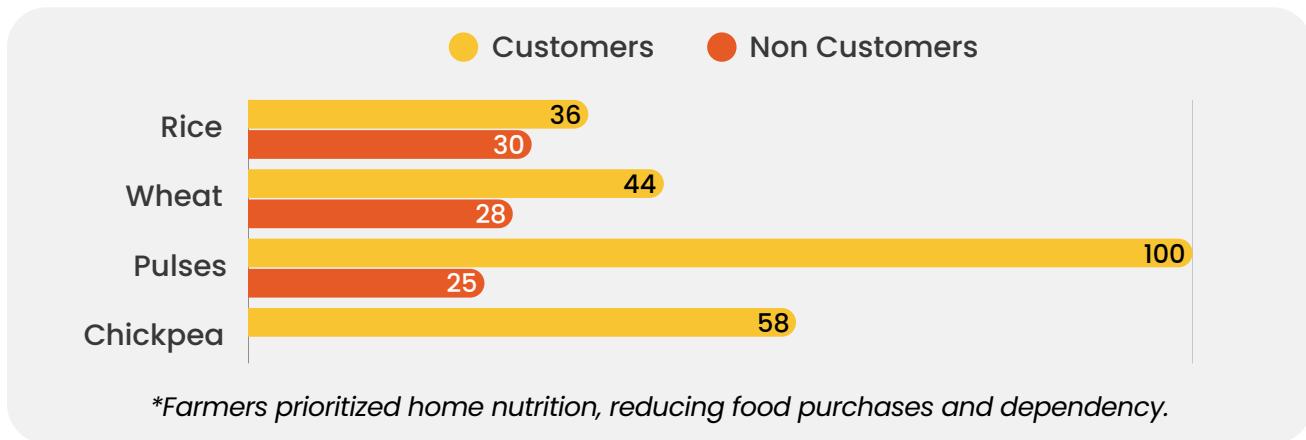
## Social Return on Investment (SROI)

A measure of combined social, economic, and environmental value



## Food Security

% of crop retained for home use



# OUR IMPACT

## Quality of Life

● Customer

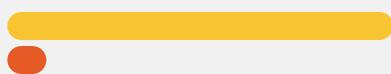
● Non-Customer

Purchased Durable Items  
(per year)



23%  
7%

Women Irrigating  
Independently



73%  
Rare

## Customer Satisfaction

**64%**

Rated "Good" or  
"Very Good"

## Ease of Use

**73%**

customers found  
it "convenient"



My farm produce has increased, and crops do not dry. I can also cultivate vegetables on my land. Earlier, I had to buy vegetables from the market, but now I don't, as my farm's produce is sufficient to feed the whole family.

# CUSTOMER TESTIMONIALS



I've been using Oorja's solar irrigation for 3 years. Earlier, I only grow wheat due to irrigation issues. Now I also grow maize and urad. It's convenient, my crop yield and income have improved. Oorja's farmer advisory taught me modern farming techniques like soil preparation, vermicomposting, and pest control.

**- Neelam Verma, Bahraich, (UP)**



We used to grind our produce at the local mill, but it often broke down and caused delays. Although the cost was the same, the quality wasn't great. Since switching to Oorja's milling services, we've noticed a big difference. The quality is much better, and we never have to worry about breakdowns or delays.

**- Rajesh Kumar Maurya, Hardoi (UP)**



Working with Oorja was smooth and hassle-free. They handled everything from system design to installation, professionally and transparently. We highly recommend Oorja for any agribusiness looking for a scalable clean energy solution.

**- Fairtrade International & Organic India Farmers Producer Company Limited**

# PARTNERS

## INVESTORS & DONORS



## IMPLEMENTATION PARTNERS



AGA KHAN FOUNDATION



Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH



## RESEARCH & ECOSYSTEM PARTNERS



International Water  
Management Institute



International Institute for  
Sustainable Development



Santa Clara University



## AWARDS



# OORJA IN THE SPOTLIGHT



Our co-founders featured on the cover of The Philanthropist, a leading Swiss philanthropy magazine.

[Read More -->](#)



Oorja ranked among the Top 6 Climate Tech Solutions globally at the MIT Solve Global Challenges 2024.

[Read More -->](#)



CEO Amit Saraogi attended the Regional Convening organised by Water and Energy for Food - South and Southeast Asia RIH. He led a key session on building strong Marketing and PR Strategies.

[Read More -->](#)



Our co-founders participated in the Innovation Bootcamp Breakthrough Energy Summit and Climate Innovation Forum curated by The Earthshot Prize and Bloomberg Philanthropies.

[Read More -->](#)



Oorja achieved the 2X 'Best-in-Class' Certification, recognizing our commitment to gender equity and inclusivity as a core driver of our mission.

[Read More -->](#)



Senior Manager Ankur Singh, participated in the Global Science-Policy Forum in Nepal, organised by the IWMI, ICIMOD, International Solar Alliance & Alternative Energy Promotion Center

[Read More -->](#)



Senior Manager Ankur Singh published an insightful article on our Pay-Per-Use model in the

[Read More -->](#)

# MANAGEMENT TEAM



**Amit Saraogi**

CEO & Co-Founder

#management



**Dr. Clementine Chambon**

CTO & Co-Founder

#management



**Audrey Fillon**

Chief Business Officer

#operations



**Ankur Singh**

Director

#fundraising



**Bindu Trivedi**

Finance Manager

#finance



**Sejal Agarwal**

Impact Manager

#impact



**Lipsa Priyadarshini**

Business Dev. Manager

#businessdevelopment



**Anup Kumar**

Field Ops. Manager

#operations

## Board of Directors

Amit Saraogi  
Clementine Chambon  
Chris Emmott  
Gerald Weigl  
Vikram Raman Schneider

Co-Founder & CEO  
Co-Founder & CTO  
Associate Director, Acumen  
Executive Director, elea  
Electric Energy Access Asia

# MEET THE TEAM



The Oorja team is a group of extremely passionate and committed professionals in pursuit of a common mission.

We are an international team of agriculture professionals, researchers, engineers, farmers, scientists, teachers, and community mobilisers. We work together to deliver high-impact projects with business, social and environmental benefits.

Currently, our dynamic **team of 170+ individuals** is spread across the remote HQ in New Delhi, Bangalore, Pune, Bhubaneswar, Assam, and London as well as three operating hubs in Bahraich, Hardoi, and Barabanki districts.



Oorja has a truly supportive and inclusive work culture where every voice is valued and considered in decision-making. During my time here, I've experienced not just professional growth but also personal development. The organization actively introduces team members to new tools and technologies, making our work more efficient and future-ready. Skill-building and training opportunities are a regular part of the journey at Oorja, creating a strong foundation for long-term career growth. I feel fortunate to be part of a team that believes in collaboration, learning, and innovation.

**- Ashish Kumar Yadav**  
Agronomist

# ROADMAP FOR 2025-2026

## Digitisation



Roll out **Dhoop** app and **digitise** advisory, payments, and pump **monitoring** systems.

## Operational Efficiency



Improve asset **utilisation**, **reduce** installation time, and implement structured **maintenance** contracts.

## Diversification



**Scale** the Water Entrepreneurship model and pilot **bundled** services combining irrigation, inputs, and advisory.

## Farmer Advisory Expansion



**Expand** Farmer Advisory services with soil health testing, training, and **digital advisory**.

## Partnerships & Input Provision



Build **alliances** for inputs, soil labs, irrigation for high value commodities in India and joint events with **Farmer Producer Organisations**.

## Team, Growth & Strategic Initiatives



**Grow** field and mid-level teams, **expand** regionally, enhance **impact** systems, and **explore** new energy offerings.



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