The earth, the land and the water are not an inheritance from our forefathers, but on loan from our children. So, we have to hand over to them at least as it was handed over to us.

Mahatma Gandhi
THE FRAGILITY OF RURAL INDIA

280 million rural Indians live in abject poverty - their fragile existence threatened by an overdependence on unproductive agriculture, their vulnerability to climate change, and the severely degraded ecosystems in which they live, and rely upon, for life and livelihood.

And it is the rainfed parts of the country that are the hardest hit. Here, farming is used to cling to survival, rather than being harnessed as a productive, growing business.

But whilst these rainfed drylands have been the most neglected, they also possess the greatest untapped potential for growth and development in India.

With the right investments and support, these areas can be transformed - from degraded ecosystems and impoverished villages, to vibrant hubs of prosperity.

It can, and has been done, sustainably.
THE ROOT CAUSES OF RURAL POVERTY

Despite being a complex issue, rural poverty can actually be unpacked into four root causes which fuel its growth:

- Ecosystem Degradation
- Climate Change
- Low Agriculture Productivity
- Over-dependence on Agriculture
1. DEGRADED ECOSYSTEMS IN RURAL INDIA

Much of the world’s poor are highly dependent on the ecosystems in which they live.

A healthy ecosystem provides the poor with multiple goods and services that underpin their life and livelihood. Therefore the vibrancy, health and robustness of an ecosystem determines the quality of life and wellbeing of the rural community that lives within it.

Unfortunately, ecosystems in much of rural India are highly degraded. Forests have been destroyed. Water sources are contaminated and exploited. Soil nutrients are depleted. Air is polluted.

The result? The ecosystem goods and services that communities depend upon – fertile soil and water for agriculture, clean water for drinking and sanitation, timber and forest produce for livelihoods, forage and grass for animals, insects for pollination and biodiversity – are severely limited, threatening the ability for survival there.

And driven by sheer necessity, the poor become perpetrators of further degradation. They live from hand-to-mouth, trying to meet the needs of the present, at the cost of the future - destroying their immediate environment for their present survival and further spiralling downwards into poverty.

The Value of Ecosystems to the Rural Poor

While the value of ecosystem services such as fresh water, soil nutrients and non timber forest products is around 7% of the national GDP, it amounts to some 57% of the income of India’s rural poor (Sukhdev 2009).
ECOSYSTEM RESTORATION & ITS BENEFITS
Restores soil and water cycles, reverses desertification and unites communities.
ECOSYSTEM DEGRADATION & ITS CONSEQUENCES

Leads to drought, soil erosion, desertification, and social/economic disruption.

-Accelerates Climate Change
-Overgrazing
-Loss of Livelihoods & Distress Migration
-Water Shortage & Food Insecurity
-Loss of Vegetation & Biodiversity

-Enhanced Resilience to Climate Change
-Water & Food Security
-Sustainable Livelihoods
-Better Quality of Life
2. CLIMATE CHANGE

Climate change is real and it is upon us.

It will not only increase the population living in poverty, but will also exacerbate the conditions of those currently impoverished.

And it will hit rural India the hardest, because they have the least capacity to adapt. How?

Climate Change Directly Impacts Agriculture

It plays havoc with the already unpredictable monsoon, which farmers in vulnerable rainfed areas so heavily rely upon to grow crops.

Droughts, Floods & Pest Attacks Intensify

Over the past few decades, the intensity of rainfall has increased as extreme weather events become more frequent and widespread. There are also periods of droughts interspersed with floods. These intense, extreme weather events cause huge losses and damages to India’s agriculture-based economy and to millions of farmers. Extreme weather events also lead to increased crop vulnerability to infection and pest infestation.

Ecosystem Goods & Services are Impacted

Shifting weather patterns as a result of climate change, especially variable rainfall and temperature, impact ecosystem services (water, air quality, pollination, etc) in very significant ways - magnifying the existing risks of rural communities and their vulnerability to disasters.
Agricultural productivity in India is amongst the lowest in the world mainly due to severe land degradation and unsustainable agricultural practices – with rainfed parts of India being far less productive than irrigated parts. Despite representing the largest cultivatable area in India, crop yields in rainfed parts of the country are only a third of the national average.

As a result, farmers in rainfed areas earn only 20-30% of their income from farm-related activities – resorting to migration and labour to bridge the gap – while farmers in irrigated areas earn as much as 60% of their income from agriculture.

By merely increasing the productivity of agriculture, poverty quickly declines. Evidence highlights that the speed with which gains in agricultural productivity reduces rural poverty is at least twice that of what the rest of the economy can achieve.

Herein lies an opportunity – for India’s GDP has the potential to grow at 9-10% for the next 30 years, through an agriculture revolution alone.
4. OVERDEPENDENCE ON AGRICULTURE FOR INCOME

Although the number of people employed in the non-farm sector has steadily risen over the past decade, agriculture remains the primary source of livelihood for 58% of India’s population.

However, there is a need for increased diversification into other agro-based livelihoods, as well as the growth of non-farm livelihoods. This will provide supplementary income to farming households and make rural communities sustainable.

1. Agro-based Livelihoods -

Such as horticulture and animal husbandry are important to the rural economy. The livestock sector (primarily dairy) contributes to over a quarter of the agricultural GDP and is a source of income for 70% of India’s rural families. Backyard poultry farming and goatery increasingly offer rural families both food and financial support. However, production in these sectors is constrained by insufficient knowledge, poor genetic quality of livestock, improper disease management, inadequate nutrients and limited market access.

2. The Non-Farm Sector -

Is essential to making the rural economy self-reliant and resilient. Several non-farm sectors (such as retail, blue-collar trades, manufacturing and entrepreneurship) have particularly high potential for income expansion, if suitable skills, know-how and finances are provided. Poor levels of skill development in rural India have hampered the growth of the non-farm sector and as a result, much of the rural population works as unskilled labour in the unorganised sector.

The diversification from agriculture into other agro-based and non-farm livelihoods is an important source of income, economic growth and transformation - not just for rural India, but for the whole economy as well.
WOTR PROVIDES THE SOLUTION!

WOTR tackles the key causes of rural poverty, and takes a holistic approach to rejuvenating rural communities and the ecosystems they live in — mobilising rural communities to regenerate and efficiently manage the land, water and forests that surround them.

Working at the grassroots, WOTR creates resilient rural communities that enjoy a fulfilling quality of life within vibrant and sustainable ecosystems by:

- Enhancing community resilience to climate change by rejuvenating the landscapes and ecosystems they live in
- Improving agricultural productivity and creating livelihood opportunities
- Increasing the availability of water
- Empowering women
- Strengthening the health and well-being of communities and their institutions

Implementation  Research & Policy Advocacy  Training & Capacity Building
WOTR’S FOOTPRINT

WOTR works in rainfed parts of the country, where poverty is most prevalent.

- Rajasthan
- Madhya Pradesh
- Chhattisgarh
- Bihar
- Jharkhand
- Odisha
- Andhra Pradesh
- Maharashtra
- Karnataka
- Telangana

- 10 States
- 59 Districts
- 4,395 Communities
- 4.43 Million People

- States with ongoing projects
- States with completed projects
OUR PROGRAMS

By using an integrated Ecosystem-based Adaptation (EbA) approach, WOTR regenerates degraded landscapes and ecosystems to help rural communities adapt to climate change, while expanding livelihood opportunities, improving health, nutrition and the overall quality of life and well-being.

Our onground implementation falls into five core areas:

**WATER & LAND MANAGEMENT**
- Integrated Watershed Development
- Water Stewardship & Water Governance
- Ecosystems and Biodiversity Conservation

**AGRICULTURE**
- Agriculture Productivity
- Soil Health Management
- Water Efficient Agriculture
- Agrometeorology
- Farmer Training
- Market Linkages

**LIVELIHOODS**
- Livestock Development
- Agro-based Enterprises
- Non-Farm Enterprises
- Alternative Energy

**WOMEN EMPOWERMENT**
- SHG Formation & Capacity Building
- Drudgery Reduction
- Women’s Enterprise Development
- Women in Decision Making

**HEALTH, SANITATION & NUTRITION**
- Cadre of Health Workers
- Nutrition
- Drinking Water
- Sanitation
- Health Awareness
- Screening Camps
WATER & LAND MANAGEMENT

Water is a catalytic entry point into rural communities as it is their greatest point of need.

Through ‘Integrated Watershed Development’ WOTR supports rural communities to:

- Capture and conserve water via rainwater harvesting structures
- Treat degraded soils
- Undertake soil and water conservation measures such as water absorption trenches, continuous contour trenches, farm bunds, gully plugs and check dams, among others
- Undertake afforestation to bring barren lands under tree and grass cover
- Establish local representative bodies to better manage water assets

Through Water Stewardship and Water Governance, WOTR supports rural communities to:

- Promote efficient water use
- Facilitate community-based Water Budgeting for crop planning and optimising water use
- Establish rules for equitable water use which the community enforces

“Where water runs, we make it walk, where it walks, we make it stop, and where it stops, we push it underground”

Crispino Lobo
Co-Founder, WOTR
AGRICULTURE

WOTR enhances the productivity, profitability and sustainability of farming.

Our Climate Resilient Agriculture (CRA) approach helps farmers reduce the cost of cultivation, increase productivity, mitigate climate induced risks, and enhance their capacity to adapt.

1. **System of Crop Intensification**

Farmers are oriented on crop-friendly farming techniques, the use of organic inputs for fertilizer and plant protection, high-quality seeds and micro-nutrients.

2. **Improving Soil Health**

Degraded soil is protected and revived through various soil treatments, minimising the use of chemical fertilisers and promoting the use of organic manures.

3. **Enhancing Water Use Efficiency**

Crop Planning and Micro-irrigation technology is promoted to achieve "more crop per drop".

4. **Agro-meteorology**

Timely weather forecasts are provided to farmers with crop management advisories to help them better plan their agricultural activities and reduce weather-related farm losses.

5. **Promotion of Horticulture & Household Forestry**

Farmers are supported to develop fruit orchards and fields of vegetables and flowers. Useful trees for fodder, fuel wood, timber and income are raised on homesteads and farmlands.

6. **Farmer Producer Companies (FPOs)**

Small and marginal farmers are collectivised into FPOs and equipped with knowledge and practices for sustainable production and better market access. The FPOs have started input shops along with other enterprises, and have received direct marketing licenses - registering with e-NAM & NCDEX for marketing their produce.
LIVELIHOODS

Because livelihoods in rural communities are so deeply rooted in the natural world, there is a need to reduce this overdependence by promoting livelihood diversification.

WOTR promotes alternate agro-based and non-farm livelihoods to build vibrant and resilient local economies. It does this by promoting and supporting a variety of alternate livelihoods including:

**Livestock Development**

WOTR promotes backyard poultry, goatery, dairy, improved breeds of livestock, fodder management and livestock care through veterinary extension services.

**Farm Related Livelihoods**

WOTR provides training in dairy development, shade net and green house farming for horticulture and processing of animal and crop based products.

**Non-Farm Livelihoods**

WOTR trains people in fabrication, welding, soap making, and the setting up of small stores for household goods among others - providing seed capital, technical support and market access for establishing micro enterprises.

**Renewable & Alternate Energy**

WOTR promotes hot water cooking stoves, solar lighting systems for homes and communities, solar pumps for lifting water, and biogas units; and trains a cadre of technicians to maintain them.
HEALTH, SANITATION & WELL BEING

The health of the rural poor is disproportionately affected by contaminated water and poor sanitation services, setting up a cycle of ill-health that has severe financial and personal costs.

WOTR enables people, especially women and children, to live healthy, well-nourished and holistic lives within clean habitats.

It addresses key health issues of the community by:

1. **Creating a Cadre of Health Workers - ‘Mahila Pravartaks’**
   Who work in close coordination with local institutions (Anganwadis, Asha, ANM) to create awareness of, and promote preventative health, community health services and hygiene.

2. **Health Camps**
   WOTR conducts screening camps for anaemia, cancer and eye diseases and ensures referrals for proper treatment.

3. **Nutrition Enhancement**
   Demonstrating nutrition positive cooking practices, and promoting kitchen gardens and multilayered farms, to ensure nutrition security.

4. **Tackling Malnutrition & Stunting**
   Children’s height and weight are regularly monitored and mothers are trained to adopt proper nutrition, child care and hygiene practices.

5. **Providing Drinking Water Facilities**
   Via the installation of home drinking water facilities, community water purification filters and water ATMs.

6. **Sanitation**
   By constructing toilets, bathrooms and soak pits as well as conducting sanitation awareness sessions.

7. **Menstrual Hygiene**
   By promoting bio-degradable and self-sanitizing Sanitary Pads called “Safkins.”

8. **Mental Well-being**
   ‘Atma Darshan’ camps are conducted for meditation, inner healing and mental well being.
WOMEN EMPOWERMENT

The burdens of fetching water, collecting firewood and fulfilling other domestic responsibilities are disproportionately borne by women – severely impacting their physical security, opportunities for adult education, productivity, income-generating capacity, nutritional status, time and overall health and well-being.

WOTR reduces the ‘time poverty’ and drudgery of women, by providing them with access to economic opportunities and enabling their participation in decision-making, so they become equal partners in development.

Whilst Gender is a crosscutting theme across all activities, specific initiatives aimed at women include:

**Formation & Federation of SHGs**

Providing women with skill training, seed capital, credit linkages and support to set up enterprises. Through bank linkages, loans have been availed to start micro-enterprise ventures and meet personal needs. Federations of SHGs have been created at the village level.

**Participation in Village Bodies**

Women are trained to participate actively in Gram Panchayats, Village Watershed Committees, Village Development Committees and other community institutions.

**Drudgery Reduction**

By supporting the provision of home appliances and tools to free up their time, such as kitchen utensils, mixer/grinders, pressure cookers, dals mills, agricultural implements, biogas units and solar home lighting systems.
THE TRANSFORMATION OF BHOJDHARI

Bhojdhari - Sangamner Block, Ahmednagar District, Maharashtra

1082 People
203 Households
1145 ha Watershed Area

The hamlet of Bhojdhari lies in the rain-shadow belt of Maharashtra, on a drought-prone, rainfed plateau. With no river, dam or canal nearby, the land is barren, hard, and rainwater simply flows off it during the rains.

With frequent droughts, the region regularly experienced acute water shortages and stress in summer, repeated crop failures, and the loss of cattle and livestock - resulting in large scale distress migration.

Extreme weather related events (drought, unseasonal rain, hailstorms, pest & disease attacks) played further havoc - driving farmers into penury and suicide (in 2012, Maharashtra accounted for 25% of all farmer suicides in India.)

2 Decades of Work by WOTR

To tackle the crisis, WOTR implemented three major projects in Bhojdari that spanned over 2 decades. The series of interventions represent an evolving progression of actions that address the health of the ecosystem, help people adapt to climate change, and strengthen participatory governance and stewardship of natural resources.

1996 - 2002 Indo-German Watershed Development Programme
2009 - 2014 Climate Change Adaptation Project
2015 - 2017 Water Stewardship Initiative
Using a holistic design, a series of interventions were implemented to address the numerous challenges:

**Holistic Design of Interventions**

- Watershed Development
- Adaptative Sustainable Agriculture
- Biodiversity & Ecosystem Services
- Sustainable Livelihoods & Localisation
- Agro Meteorology
- Disaster Risk Reduction
- Water Budgeting
- Alternate Energy

**The Result? Total Transformation**

And the results were transformational. Today Bhojdhari is a thriving community that has been empowered to overcome the challenges they face. The people of Bhojdhari are now able to build a more secure and predictable future, despite climate change. Their story is no better indicator of the fact that when we nurture nature we also nurture people.

- 37% increase in income from agriculture
- Through water budgeting, 50% families grow a 2nd crop
- Food shortages reduced by 50%
- Surface water storage capacity increased by 87%
- The number of types of crops increased from 3 to 10
- 100% reduction in distress migration
THE WOTR CENTRE FOR RESILIENCE STUDIES (W-CReS)

Having experienced the devastating impacts of climate change in rural India, WOTR saw an urgent need for developing and implementing ‘evidence-based climate risk mitigation and adaptation strategies.’

While there was existing research being undertaken, much of it was top down, technocratic and often unable to bridge the ‘implementation’ gap.

As a result, W-CReS was established in 2016 to address these considerable knowledge gaps. It plays a key role in understanding how climate change impacts rural communities and identifies suitable pathways to reduce climate-induced risks and build the resilience of rural communities.

W-CReS conducts rigorous, application oriented studies on the key thematic areas of WOTR, and aims to contribute high quality knowledge, insights and learnings ‘from the ground’ towards policy formulation, program design, implementation and capacity building.
WOTR’S DIRECT IMPACT ON RURAL COMMUNITIES

- 4.43 MILLION PEOPLE impacted across 4395 villages
- 4,400 enterprises of which 2,200 are by women (poultry, goatery, dairy, kiranas, processing, fabrication, crafts, etc)
- 15-25% increase in agriculture productivity
- 121% increase in agricultural area under triple cropping
- 78,973 people received drinking water facilities
- 25% increase in horticulture coverage
- 25% increase in non-farm incomes
- 158 BILLION LITRES total water storage capacity created
- 50% decrease in distress migration
- 13,185 SHGs promoted covering 1,60,000 women
- 139,102 people impacted by overall health initiatives
NATIONAL IMPACT ON PRACTICE

- WOTR, in partnership with NABARD, designed and launched the large-scale, highly acclaimed Indo-German Watershed Development Program in Maharashtra (IGWDP). WOTR was the Capacity Building Agency of the Program.

- Many innovations pioneered by WOTR have been mainstreamed in all large-scale watershed programs across the country - “ridge-to-valley” approach, “learning-by-doing” capacity building, community ownership of the project, partnership with government programs, participatory site-specific planning, public accountability mechanisms, and many more.

- Trained over 420,000 rural youth and hundreds of NGOs in the concept and practice of various aspects of Watershed Development. This has resulted in a huge pool of skilled “replicators” who have helped ground and up-scale watershed projects across the country and in other countries.

- Developed a Private-Public-Civil Society Partnership Model (PPCP) for MGNREGA which has been up-scaled up across the country.

- Developed an IT-enabled program for weather-based crop advisories that is being mainstreamed by the India Meteorological Department in the National Agricultural Advisory System.

KNOWLEDGE PRODUCTS & CAPACITY BUILDING

- Organized 14,600 training and knowledge events in which 420,000 people from across India and 63 countries have participated. These contributed to effective policy making, improved project implementation and widespread acquisition of skills.

- Published > 520 knowledge products such as books, manuals, research papers, impact assessments, socio-economic studies, tool kits, newsletters and numerous blogs.

- Developed and released > 513 audio-visual products in various Indian languages.

IMPACT ON POLICY

- Co-initiated the National Watershed Development Fund (NWDF), now managed by NABARD, to upscale the participatory watershed approach developed under the IGWDP across India - now operating across 2.3 million hectares and impacting as many lives.

- WOTR’s advocacy with Government resulted in the establishment of the National Adaption Fund for Climate Change in 2014 to enhance resilience in rural India.
Towards 2025 ...

We have a big vision, and the needs of rural India are vast.

Our Strategic Goals towards 2025 focus on the following:

- Lifting 720,000 households and 2.9 million people out of poverty from 2,200 villages across 10 states in India.
- Regenerating watersheds and landscapes impacting 650,000 acres in 450 villages, impacting 360,000 people.
- Making 250,000 acres of agricultural farmland climate resilient, sustainable and remunerative across 1,500 villages benefitting 720,000 people.
- Upskilling and enhancing the capacities of over 880,000 villagers to improve their quality of life.
- Training 2,500 development practitioners to effectively manage developmental initiatives.
- Setting up an accredited education and research institution of higher learning and excellence to:
  - Impart credentialed professional and vocational education and training, for employment and livelihoods
  - Conduct societally relevant trans-disciplinary applied research
  - Offer professional advisory, consultancy and technical services
- Establish the WOTR Centre for Resilience Studies (W-CReS) as a thought leader and leading think tank in South Asia.
ALIGNING WITH NATIONAL & INTERNATIONAL AGENDA

The Sustainable Development Goals (UN 2030 Agenda for Sustainable Development) emphasise conservation and revitalisation of ecosystem services as critical to poverty reduction.

WOTR’s work directly contributes to 9 of the 17 SDGs and is aligned with other key international conventions - Land Degradation Neutrality, the Paris Agreement on Climate Change and the Sendai Framework on Disaster Risk Reduction.

Our programs also align with several national policy priorities:

- Ecosystem & Landscape Restoration
- Enhancing Agriculture Productivity – “More Crop per Drop”
- Relieving Water Stress
- Rural Development
- Women’s Empowerment
- Climate Change Adaptation
- Renewable Energy
RURAL INDIA NEEDS YOU ...

Much of rural India continues to live in a state of deprivation - vulnerable to climate change which threatens their life and livelihoods.

The opening up of the economy in 1991 transformed the lives of the educated urban classes, but rural India has been left far behind, with the urban-rural divide growing even wider.

The need of the hour are strategic solutions which tackle rural poverty issues at their root with a long-term impact.

Now, more than ever, we need to expand our work, to secure the lives and livelihoods of distressed rural communities.

This is where you can step in and join our long term supporters.

How You Can Help

- Support applied research studies—W-CReS
- Help us build our financial sustainability
- Support our rural development programs
- Support the setting up of an accredited education & research institution of higher learning and professional training
WHY WOTR?

The nexus between rural poverty and the degraded ecosystems in which India’s rural poor live, is intricate. Exacerbated by extreme weather events that push below the poverty line communities into further penury, tackling this problem requires a unique and powerful set of competencies.

As the pioneers of participatory watershed development in the country, and having spent over 27 years transforming rural communities and ecosystems, WOTR is uniquely poised to expand its footprint and scale this vital work.

WOTR’s ability to penetrate the interiors swiftly, and make an impact, is strong. And by taking a scientific, evidence based approach to project implementation and product development, we have become leaders in our field – influencing both policy, implementation and the sector, as a whole.

With your support, WOTR can capitalise on its strengths and decades long learnings, to take rural communities from poverty to prosperity.

Core Competencies

- Technical knowhow and expertise in:
  - Ecosystem-based watershed development
  - Climate resilient agriculture
  - Integrated water resource management and water stewardship
  - Community biodiversity
  - Rural livelihoods

- Program implementation and management expertise of large scale, community-led land, water and agriculture development programs.

- Development of innovative technologies and methodologies for project implementation and upscaling - developed 24 tools, some supported by customized software packages.

- Understanding, research and practical experience of climate change adaptation and its mainstreaming.

- Farmer-friendly agro-meteorology - providing weather based crop and farm specific advisories to farmers.

- Capacity building and training - WOTR and its affiliates have trained > 530,000 people.

- Undertaking Trans Disciplinary Applied Research to provide evidence to policy making and improving program implementation.
Differentiators

- Ability to navigate the complex social dynamics of rural India.
- Deep roots and relationships within the community and ability to obtain community ownership.
- Scientific, evidence based approach to project implementation and product development.
- Leading professionals, thought leaders and practitioners from the Ecosystems, Watershed, Land and Water sectors partner with, and collaborate with WOTR.
- Committed, competent and professional workforce - many of whom have been with us for over 20 years.
- Long term supporters and funding relationships.
- Significant influence on the development sector and policy.

AWARDS

- Land for Life Award 2017 - United Nations Convention to Combat Desertification (UNCCD)
- Special Mention Award by Jury of Best Climate Practices Awards 2017 - Initiative on Climate Change Policy and Governance (ICCG)
- The Dr. Punjhabrao Deshmukh Krishi Ratna Award 2010 – Maharashtra’s highest award in Agriculture
- Kyoto World Water Grand Prize 2009 at the 5th World Water Forum, Istanbul Turkey
- And several other national and international awards and honourable mentions for excellence in Watershed Development, Natural Resources Management, Agriculture Innovations, Rural Development and IT applications for public good.

RECOGNITION

- Accredited member of UN bodies: Convention to Combat Desertification (UNCCD); Framework Convention on Climate Change (UNFCCC) and the UN Economic and Social Council (ECOSOC)
- Formal MOUs with the Indian Council for Agricultural Research (ICAR), the India Meteorological Department (IMD) and other premier agricultural research institutes
- Regular invitee for Pre-Budget Consultations on Agriculture by the Ministry of Finance, Government of India, since 1999