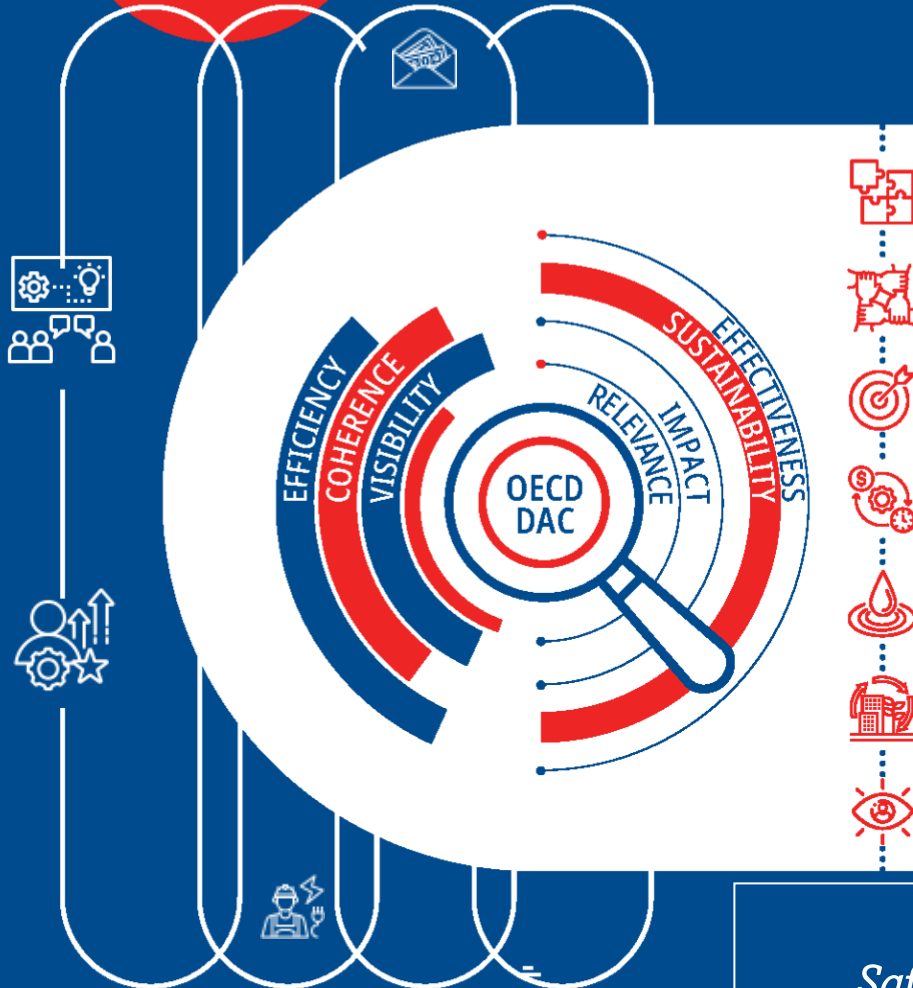




Project P0706
*Safe Drinking Water Initiative:
Community-Based RO Plant Installation*

IMPACT ASSESSMENT REPORT

Towards A Better Tomorrow

FY 2025-26

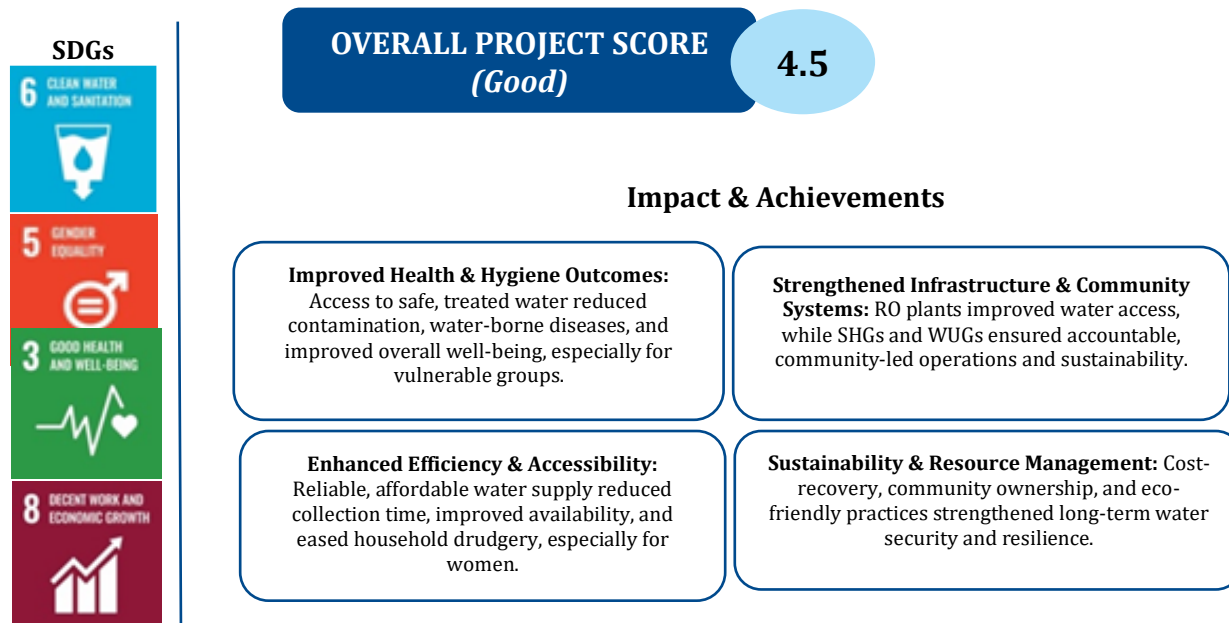
Executive Summary

P0706, a project under HDFC Parivartan, was aimed at strengthening community-level water systems by providing safe and reliable drinking water solutions through the installation of RO plants across rural coastal areas. The intervention significantly improved water quality by addressing salinity, iron contamination, and high TDS levels, thereby enhancing health and hygiene outcomes. It also strengthened community-led governance through SHG and Water User Group (WUG) participation, improved affordability of safe drinking water, and contributed to more efficient and sustainable water management systems across Jagatsinghpur district, Odisha.

Location	Duration	Total Beneficiaries Reached	Implementation Partner
Jagatsinghpur District, Odisha	1 st Nov 2023 – 30 th Nov 2024	2447	Harsha Trust

OECD Framework Score

Relevance	Coherence	Efficiency	Effectiveness	Impact	Sustainability	Visibility
4.6	4.6	4.4	4.4	4.5	4.5	4.7



Project Partnership

Harsha Trust effectively mobilized communities, enabling SHG- and WUG-led operations with strong ownership and smooth RO plant functioning. To enhance long-term sustainability, stronger technical planning and feasibility assessments—especially on raw water availability and seasonality—are needed.

Recommendations

Strengthen Technical & Climate Resilience: Conduct hydrogeological assessments and build climate-resilient infrastructure for reliable, uninterrupted services.	Improve Access & Coverage: Expand last-mile solutions, including doorstep delivery, to enhance equity and reach.	Enhance Capacity & Sustainability: Provide refresher training, strengthen accountability, and ensure dedicated O&M funding for long-term sustainability.
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Way Forward

The intervention has strong potential to scale across coastal and water-stressed regions. With improved technical planning, resilient infrastructure, community governance, and convergence with JJM and RWSS, it can become a sustainable rural water security model.

Impact at a Glance



Safe & Reliable Drinking Water Access

High salinity, iron, high TDS, and cyclone-related contamination addressed through RO plants; daily, affordable, safe water available even during summer and cyclones; complete reduction in dependence on unsafe sources, tankers, and private suppliers.

Health, Time & Social Well-being



Significant reduction in water-borne illnesses, improved **taste, colour, and odour**; **reduced drudgery for women**, time savings, improved **children's health and school attendance**, better household functioning.



Community-led Governance & Women's Leadership

SHG/WUG-led **planning, operations, and financial management**; clear roles, transparency, accountability; **enhanced women's leadership, confidence, and decision-making** in water governance.

Affordability, Sustainability & System Strengthening



Water cost reduced from ₹30-₹40 to ₹5-₹10 per 20L jar; **revenue generation, savings for O&M**, livelihood creation; strong alignment with **Jal Jeevan Mission & RWSS**, no duplication, environmentally responsible practices (wastewater recharge).

SDG Alignment

SDG	How the Project Contributes
SDG 6: Clean Water and Sanitation 	The project directly addresses salinity, iron, and TDS-contaminated groundwater by ensuring affordable, reliable, and climate-resilient access to safe drinking water, including during summers and cyclones.
SDG 5: Gender Equality 	Women-led SHGs and Water User Groups manage operations, finances, and decision-making, reducing women's drudgery and strengthening leadership, confidence, and participation in local water governance.
SDG 3: Good Health and Well-being 	Access to RO-treated safe drinking water reduced water-borne and vector-borne diseases, improved household health outcomes, and enhanced children's school attendance by minimizing illness-related absenteeism.
SDG 8: Decent Work and Economic Growth 	Creation of local livelihoods (operators, delivery personnel, SHG members) and revenue-generating service models strengthened economic self-reliance and sustained operation of drinking water assets.

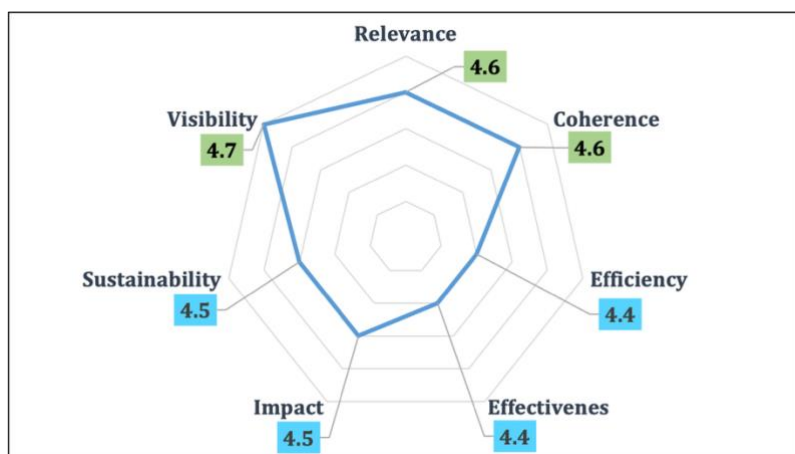
Key Achievements

- **Timely & Efficient Delivery:** 96% of activities were completed on time or with minor delays, ensuring smooth operations and uninterrupted water supply.
- **Strong Beneficiary Satisfaction:** 82% of beneficiaries rated the intervention as adequate to highly adequate, reflecting strong alignment with community needs.
- **High Sustainability Outcomes:** 92% of respondents affirmed long-term sustainability through income generation and skill-building initiatives.
- **Reliable Service Functionality:** Consistent plant operations ensured dependable access to safe drinking water across all intervention areas.

- **Effective Community-Led Management:** SHG and WUG involvement **strengthened ownership, accountability, and efficient system management.**
- **Improved Livelihood & Self-Reliance:** The intervention **supported economic empowerment through local employment and enterprise opportunities.**

FINDINGS

OECD parameter:



LEGEND

> = 4.6	Excellent
3.6 - 4.5	Good
2.6 - 3.5	Moderate
<= 2.5	Poor

OECD Framework Assessment

OECD-DAC Criterion	Key Findings
Relevance: 4.6 (Excellent) 	Most respondents rated the intervention as essential or high priority, indicating strong alignment with critical community needs identified through participatory village meetings. Combined ratings indicate that the intervention was largely adequate in addressing local drinking water requirements.
Coherence: 4.6 (Excellent) 	Community consultation, SHG/WUG formation, participatory site selection, clearly defined operational roles, record-keeping, and revenue management are tightly integrated, enabling smooth, coordinated, and community-led implementation. The intervention aligns with Jal Jeevan Mission (JJM) and RWSS objectives by addressing water quality gaps (salinity, iron, high TDS) that existing government schemes and panchayat supply systems do not cover.
Efficiency: 4.4 (Good) 	Project execution remained smooth and well-coordinated, with RO plants operating efficiently and reliably, supported by clear role allocation, trained SHG/WUG members, and effective use of electricity, manpower, and maintenance funds. Operational systems were simple and robust, allowing day-to-day functioning, revenue collection, and troubleshooting to be managed locally with minimal external support and no major technical failures reported.

Effectiveness: 4.4 (Good) 	The intervention significantly reduced the household burden of fetching water. Reliable daily access to drinking water was widely acknowledged. Health improvements were widely reported following access to RO-treated water - 76% agreed and 21% strongly agreed that water-related illnesses have significantly declined
Impact: 4.5 (Good) 	The RO plants supported by HDFC Bank continue to demonstrate high and sustained utility - 55% of respondents reported frequent use, with benefits largely sustained over time. The project has generated livelihood opportunities for SHG women, WUG members, operators, and delivery personnel, while also strengthening women's leadership, confidence, and participation in water governance and decision-making.
Sustainability: 4.5 (Good) 	A strong majority of respondents affirmed that adequate to excellent systems are in place to ensure continuation of benefits beyond project support. The project integrates affordable user pricing, revenue generation, cost recovery, savings for repairs, and planned business expansion, providing a strong financial foundation for long-term viability. SHG women, Water User Groups (WUGs), operators, and drivers consistently demonstrated high technical, managerial, and financial capacity to manage daily operations independently, without reliance on external support.
Visibility: 4.7 (Excellent) 	Awareness of HDFC Bank as the funding partner and Harsha Trust as the implementing organization was high across communities, driven mainly by visible RO plant infrastructure and signage that villagers interacted with daily, fostering trust and positive association.

What worked well and What did not work well

What Worked Well	What Did Not Work Well
Strong technical relevance & reliability: RO plants effectively addressed high salinity, iron, high TDS, and cyclone-related contamination , ensuring safe drinking water during normal periods as well as summer and disaster situations , leading to high uptake and trust.	Raw water source constraints: In some locations, limited groundwater availability and seasonal depletion restricted plant capacity, coverage, and revenue generation despite efficient machinery.
Community-led governance & operations: SHG/WUG-led planning, operation, record-keeping, and revenue management ensured transparency, accountability, smooth daily functioning, and strong local ownership.	Infrastructure resilience gaps: Source protection and shelter resilience against cyclones and extreme weather remain critical gaps in a few sites, posing risks to uninterrupted operations.

Affordability, sustainability & impact: Low user charges, revenue generation, savings mobilisation, and livelihood creation (operators, drivers, SHG women) supported sustainability, reduced women's drudgery, improved health outcomes, and school attendance.	Visibility gaps: While HDFC Bank and Harsha Trust are well recognized at community and leadership levels, awareness among operators and drivers is relatively weaker and can be strengthened.
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Recommendations-

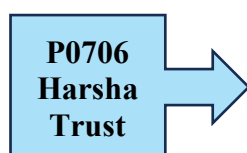
- **Build Climate-Resilient Infrastructure:** Upgrade RO plant structures, electrical systems, and **source protection to withstand cyclones, floods, and extreme weather.**
- **Expand Service Models for Greater Reach & Revenue:** Scale doorstep delivery, vehicle-based distribution, and packaged water solutions to improve access for distant households while strengthening financial sustainability and livelihoods.
- **Strengthen Institutional Convergence:** Align with **Jal Jeevan Mission (JJM)** and **RWSS** to position RO plants as water-quality augmentation units and enable replication in similar regions.
- **Ensure Reliable Raw Water Availability:** Conduct hydrogeological assessments and strengthen sources through additional borewells/handpumps to address groundwater constraints.
- **Improve Equity, Access & Visibility:** Enhance last-mile access through flexible delivery and pricing, while strengthening communication and branding to improve accountability and ownership.

Key Impacts and Evidence of Change

Key Impact	Evidence of Change
Universal Access to Safe Drinking Water and Water Security	Installation of RO plants has transformed drinking water access across villages previously affected by high salinity, iron contamination, poor taste, and water-borne diseases. Plants now supply 20-40 litres per household per day, with 24×7 availability, including during summer months and cyclones. Coverage has exceeded targets, serving 150-180 households against an initial plan of 100, and in several cases 200-250 households village-wide. Over 96% of respondents reported sustained and active use of RO water facilities.
Significant Health Improvements and Reduced Disease Burden	Communities reported a marked decline in water- and vector-borne illnesses, including diarrhoea, gastric discomfort, acidity, and recurrent infections. 97% of respondents (76% agree, 21% strongly agree) confirmed reduced disease incidence post-intervention. Children's health improved visibly, contributing to better school

	attendance and reduced absenteeism previously caused by illness and water-fetching duties.
Reduction in Drudgery, Time, and Financial Burden-Especially for Women	Prior to the intervention, households-primarily women and children-walked 2-3 km daily or depended on tankers and private suppliers charging ₹30-₹40 per 20-litre jar. Post-intervention, RO water is available at ₹5-₹10 per 20 litres , resulting in 54% of households reporting high and 36% moderate reductions in time, energy, and cost burdens. Women reported significant relief from physical strain, enabling greater participation in livelihoods and community activities.
Strengthened Community Governance, Women's Leadership, and Livelihoods	SHG-led Water User Groups (WUGs) manage daily operations, finances, and maintenance through rotational responsibilities involving 22-24 members per village. The intervention created local livelihood opportunities, including operator roles (₹3,000/month), delivery services, and management functions. Women's participation in water governance and financial decision-making increased substantially, building confidence, leadership, and social cohesion. 80-90% households access RO water regularly, with equitable access across social groups.
Financial Sustainability, Environmental Benefits, and Long-Term Viability	RO plants operate on cost-recovery models, generating revenues of up to ₹4.2 lakh, with ₹2 lakh reinvested and ₹2 lakh saved for repairs and future expansion. Wastewater recharge practices support groundwater replenishment, with no negative environmental impacts reported. 96% of respondents confirmed that adequate to excellent sustainability measures are in place, and WUGs expressed full confidence in managing the systems independently, including plans for bottled water expansion, source augmentation, and insurance coverage.

Implementation Partner Efficiency: Harsha Trust



Harsha Trust served as the implementing partner for the community-based RO drinking water intervention across Jagatsinghpur district, Odisha. The organisation demonstrated strong grassroots mobilisation, timely execution across most locations, and effective community engagement through Self-Help Groups (SHGs) and Water User Groups (WUGs). The intervention was widely accepted by communities, with high levels of beneficiary satisfaction driven by improved water quality, affordability, and reliability. Harsha Trust's strength lies in its ability to build community ownership and establish participatory governance systems, although certain technical and sustainability aspects-particularly related to raw water availability and long-term source planning-present opportunities for further strengthening.

1. The intervention demonstrated strong technical relevance by directly addressing critical drinking water challenges, including high salinity, iron contamination, and elevated TDS levels. The RO

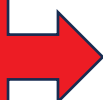
What worked



plants ensured safe and reliable drinking water across seasons, including summer months and cyclone periods, leading to high utilisation and community trust.

2. Community-led governance emerged as a key strength of the intervention. SHGs and Water User Groups played an active role in planning, operations, financial management, and monitoring, ensuring transparency, accountability, and smooth day-to-day functioning. This participatory approach strengthened local ownership and reduced dependency on external support.
3. Affordability and cost efficiency significantly enhanced the intervention's impact. The reduction in water costs from ₹30–₹40 to ₹5–₹10 per 20 litres eased financial burdens on households, particularly for women, while also contributing to improved health outcomes and increased school attendance among children.
4. The integration of livelihood opportunities further strengthened sustainability. Local operators, delivery personnel, and SHG members gained income, technical skills, and social recognition, reinforcing the long-term viability of the systems. Additionally, environmentally responsible practices such as wastewater reuse and groundwater recharge contributed to ecological sustainability.

What did not work



Despite strong performance, certain constraints affected optimal outcomes in some locations.

1. Limited raw water availability and seasonal groundwater depletion restricted plant capacity, coverage, and revenue generation, even where systems were technically sound.
2. Infrastructure resilience also varied across sites, particularly in cyclone-prone areas where source protection and structural strength of plant shelters required further strengthening to ensure uninterrupted operations during extreme weather events.
3. In addition, branding visibility and ownership perception were uneven. While HDFC Bank and the implementing partner were well recognised at community leadership levels, awareness among operators and frontline users was relatively lower, indicating the need for improved on-site communication and visibility.

Stories of Change

Case Study 1:

My name is **Sibasish Nayak**, and I am a resident of Aligarh village in Bijipur Gram Panchayat, Erasama Block, Jagatsinghpur district. I am sharing my experience of how the RO drinking water plant has impacted our village and the key concerns that still need attention. While this

intervention has significantly improved access to safe drinking water, a few structural and access-related challenges remain important from the community's perspective.

From my experience, the RO drinking water plant has brought a major positive change to our village. Earlier, we depended on contaminated water sources that caused frequent health issues such as acidity and other water-borne diseases. Today, access to safe RO-treated water has

improved the health of families, reduced the burden on women and children, and ensured regular water availability even during heat waves and cyclones.

However, I strongly feel that **the shed structure of the RO plant needs urgent strengthening**. Our region is highly prone to cyclones, and the existing shed may not be strong enough to withstand extreme weather events. Without a cyclone-resilient structure, there is a risk of damage to the plant, which could disrupt



drinking water supply during emergencies.

I still clearly remember **the Super Cyclone of 1999**, which caused massive destruction across Jagatsinghpur district. Many houses and public structures were damaged or completely destroyed, and access to drinking water became a major crisis. If a similar cyclone were to strike again, I fear that the current shed of the RO plant may not survive, putting the entire village at risk.

Another important concern is access for **elderly people and single women** in the village. Some households do not have family members who can fetch water regularly, and in the absence of a male member, they often struggle to access RO water. Introducing a **water delivery vehicle or a door-to-door supply system**, even for a fixed quantity like 20 litres per household per day, would ensure inclusive access and further strengthen the impact of this intervention.

Case Study 2:

My name is **Ahilya Samal**, and I am the President of the **Maa Kusum Chandi Water User Group** from Biswali Village, Biswali Gram Panchayat, Kujang Block, Jagatsinghpur district. Along with **Anupama Mohapatra (Cashier)**, **Swarna Pradhan Malla (Secretary)**, and **Mamata Pasai**, I am sharing our collective experience of how the RO drinking water plant has transformed our village. This initiative addressed a long-standing issue of unsafe and contaminated drinking water.

Earlier, the water in our village was yellow in colour, had an unpleasant taste and odour, and contained high levels of iron and salinity. Families across all age groups frequently suffered from water-borne illnesses, and households often travelled long distances to neighbouring villages or depended on tankers, especially during summer months. Those alternative sources were also contaminated, increasing health risks and daily hardship.

After the RO plant was installed, members of the Water User Group



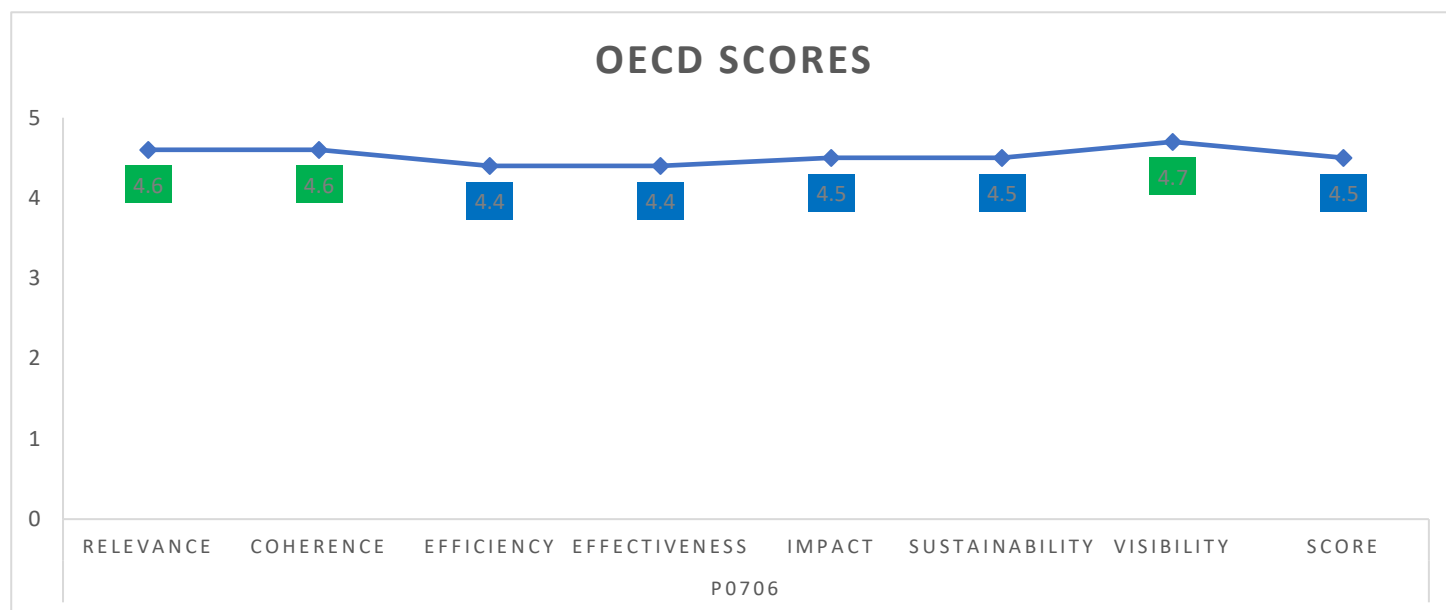
were trained to operate the system and manage records. The plant now supplies water twice

daily, and households collect **20-40 litres per day** based on family size. The intervention has significantly reduced the burden on women, who earlier walked long distances to fetch water, often involving children or male family members and losing productive work time.

Water is provided at **₹10 per 20-litre jar**, compared to **₹40 earlier**, making safe drinking water highly affordable. A cash-based pay-and-collect system was introduced after monthly register-based payments proved challenging. The Water User Group treasurer manages earnings used for filter replacement, operator salary (**₹3,000 per month**), electricity, operations, and savings. **Total revenue generated is ₹4.2 lakh, with ₹2 lakh spent and ₹2 lakh saved, and earnings are sufficient to cover monthly maintenance costs.**

The plant was originally expected to serve **100 households**, but it currently serves **150-180 households**, exceeding targets. There is a **noticeable improvement in children's health, with fewer cases of diarrhoea, cold, and cough, leading to better school attendance.** Women's participation in water governance and financial management has increased, strengthening confidence and leadership. Wastewater from the RO plant is recharged into the ground, ensuring groundwater recharge with no water wastage, and the group feels fully confident managing the plant independently.

Annexure



Relevance	Coherence	Efficiency	Effectiveness	Impact	Sustainability	Visibility	Score
4.6	4.6	4.4	4.4	4.5	4.5	4.7	4.5

LEGEND

> = 4.6	Excellent
3.6 - 4.5	Good
2.6 - 3.5	Moderate
<= 2.5	Poor

Pictures



Image 1: (Above) An installed and functioning RO plant Badabuda, in Badabuda, Odisha



Image 2: (Above) FGD with WUGs in Odisha

CSRBOX & NGOBOX

A-404-405, SWATI TRINITY

Applewood Township, SP Ring Road,
Shela Ahmedabad, Gujarat 380058