DEPARTMENT OF INFORMATION TECHNOLOGY

AD1006 - Unnat Bharat Abhiyan (UBA)

उन्नत भारत अभियान
UNNAT BHARAT ABHIYAN

Focusing Area: Women empowerment.

Location: Thenneri, Kanchipuram District, Tamil Nadu

REPORT

Submitted by

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UBA Focusing Area Mapping with SDG and Justification

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

The project strongly aligns with SDG Goal 4 – Quality Education, as it aims to ensure inclusive and equitable educational opportunities for all, especially for tribal and marginalized communities in Thenneri. Special emphasis is placed on girl child education, bridging the learning gap through community-led tuition classes, and introducing smart classroom tools in local schools. The initiative also promotes vocational education for school dropouts and underprivileged youth, enabling them to gain employable skills. Awareness drives about scholarships and government education schemes have been carried out to encourage higher enrollment and retention rates. Additionally, efforts to promote lifelong learning include adult education sessions and digital literacy programs for all age groups within the village.

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship

Goal 5. Achieve gender equality and empower all women and girls

This initiative also directly supports SDG Goal 5 – Gender Equality, by actively promoting the empowerment of women and girls in the village of Thenneri. Through the formation and active engagement of Self-Help Groups (SHGs), women are being encouraged not only to participate in income-generating activities but also to take on leadership roles within their communities. The project facilitates vocational training programs in areas such as tailoring, handicrafts, food processing, and the use of digital tools, with special focus on tribal women from the Irula community, who often face greater socio-economic barriers. In addition, health awareness sessions have been conducted to address crucial issues related to women's hygiene, reproductive health, maternal care, and nutrition, helping to improve overall well-being. The initiative also works toward ensuring equal access to education for girls, thereby reducing school dropout rates and empowering young girls to become confident contributors and decision-makers within their families and society. Collectively, these efforts aim to create a more inclusive and equitable environment, fostering sustainable development through gender-balanced growth.

5.1 End all forms of discrimination against all women and girls everywhere.

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

INTRODUCTION

India's path to inclusive development lies in the empowerment and upliftment of its rural population. Recognizing this, the Government of India launched the Unnat Bharat Abhiyan (UBA)—a flagship initiative under the Ministry of Education aimed at linking higher educational institutions with rural communities to address developmental challenges through knowledge, technology, and community participation. The core objective is to harness the potential of students and faculty in identifying and solving the pressing issues of rural India in a sustainable manner.

As part of this mission, our team undertook a focused developmental study and engagement program in Thenneri, a village located in Tamil Nadu. This region, while rich in culture and heritage, faces several socio-economic challenges—particularly in the areas of education for girl children, women empowerment, vocational training, health awareness, and access to sustainable livelihood opportunities. Through field surveys, direct community interactions, and the formation of Self-Help Groups (SHGs), the initiative identified key intervention areas aligned with Sustainable Development Goal 4 (Quality Education) and Sustainable Development Goal 5 (Gender Equality).

Our efforts have concentrated on addressing the gaps in educational access for girls, enhancing vocational skill development among women (especially from the Irula tribal community), and creating awareness about health, hygiene, and government welfare schemes. The long-term vision is to nurture self-reliant communities through knowledge-driven transformation, enabling villagers to become active participants in the developmental process.

This report outlines the objectives, methodology, findings, and proposed solutions that were developed in line with the UBA framework. It also highlights how such collaborative efforts can act as a model for sustainable rural development and meaningful community engagement.

OBJECTIVES OF THE PROJECT

The primary objective of this project is to foster inclusive and sustainable development in the village of Thenneri, Tamil Nadu, through a multidimensional approach that aligns with the core values of the Unnat Bharat Abhiyan (UBA) initiative. One of the central goals is to promote access to quality education for all children, with a special focus on girls and those from marginalized communities. The project seeks to improve literacy rates by encouraging continuous school attendance, reducing dropout rates, and enhancing awareness among parents about the importance of education. Early childhood education and foundational learning have also been prioritized to ensure that every child begins their schooling journey with proper readiness and support.

1. **Promoting Quality Education for All.**

   The project aims to ensure access to inclusive and equitable quality education for children in the village of Thenneri. A key focus is placed on reducing dropout rates among school-aged children, especially girls, by encouraging consistent school attendance and increasing awareness among parents regarding the importance of education. Initiatives include supporting early childhood care and foundational learning, enhancing the academic environment, and facilitating the provision of educational materials and infrastructure. These efforts strive to prepare children for lifelong learning and help them achieve meaningful educational outcomes.

2. **Empowerment of Women through Skill Development.**

   One of the core goals of the initiative is to empower women, particularly those from the Irula tribal community, through targeted skill development. The project supports the formation and active functioning of Self-Help Groups (SHGs), encouraging women to engage in income-generating activities. Training programs in tailoring, handicrafts, and basic digital literacy are conducted to enhance their employability and entrepreneurial

potential. These interventions are designed to promote financial independence, self-confidence, and leadership roles among women in both household and community contexts.

3. Improving Health and Hygiene Awareness.

Another vital objective of the project is to improve the health and hygiene standards of the community, with a special emphasis on women's well-being. Health awareness sessions are organized regularly to educate residents about menstrual hygiene, maternal health, nutrition, and common illnesses. These sessions also aim to break taboos around sensitive health issues and promote open conversations about personal hygiene. Additionally, basic health check-ups and collaborations with local health workers ensure that preventive care becomes an integral part of everyday life in the village.

4. Enhancing Digital Literacy and Access to Technology.

The project emphasizes bridging the digital divide by introducing basic digital literacy programs for both youth and adults. Training in computer operation, internet use, and digital communication equips villagers to access e-governance services, job portals, and online learning platforms. The initiative also encourages the use of technology in agriculture, education, and health monitoring, helping the community adapt to a modern, tech-enabled lifestyle. This digital inclusion contributes to greater awareness, empowerment, and access to opportunities beyond the local setting.

5. Facilitating Sustainable Livelihood Opportunities

Creating sustainable livelihoods forms an essential part of the project's long-term goals. By promoting rural entrepreneurship, particularly in areas such as handicrafts, tailoring, and local tourism, the project helps individuals and families improve their economic conditions. Special efforts are made to identify local resources and convert them into viable micro-enterprises. This not only increases income but also supports the preservation of traditional

skills and cultural heritage, ensuring a self-sufficient and vibrant rural economy.

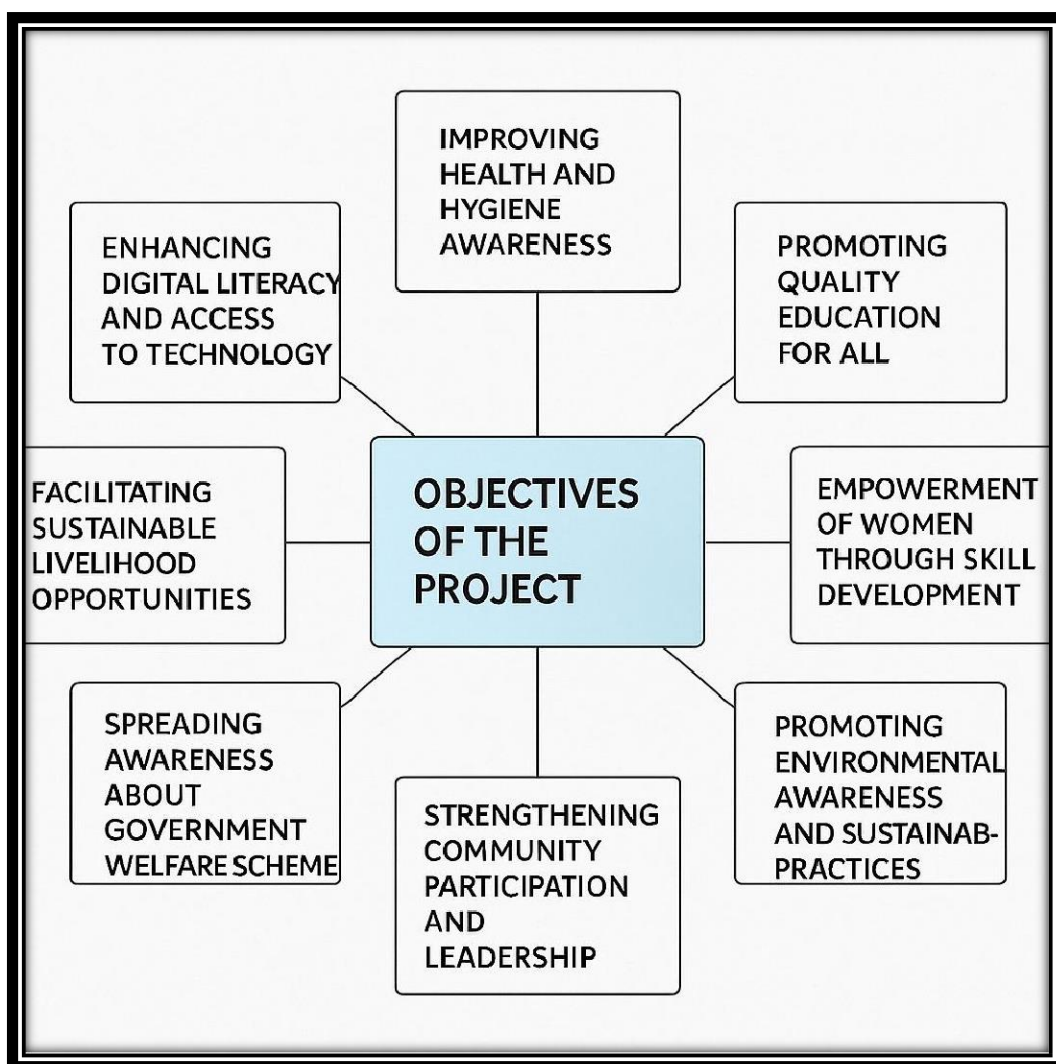## 6. Spreading Awareness about Government Welfare Schemes

The project works to raise awareness about various government schemes and initiatives that can benefit the rural population. Many villagers are unaware of the assistance available to them through central and state programs. Through workshops, home visits, and community meetings, and encouraged to make use of these schemes. Focus areas include health insurance, housing support, agricultural subsidies, and women's welfare programs. This initiative strengthens the link between rural communities and institutional support systems, ensuring inclusive growth.

7. Strengthening Community Participation and Leadership

A significant objective of this initiative is to build strong community engagement by fostering a culture of collective responsibility and participatory governance. The project encourages local residents, especially women and youth, to take up active roles in decision-making processes related to village development. Regular community meetings, leadership development sessions, and the establishment of local committees enable individuals to voice their concerns and contribute to solutions. This participatory approach not only enhances transparency and trust but also ensures that the interventions are more sustainable and tailored to the real needs of the community.
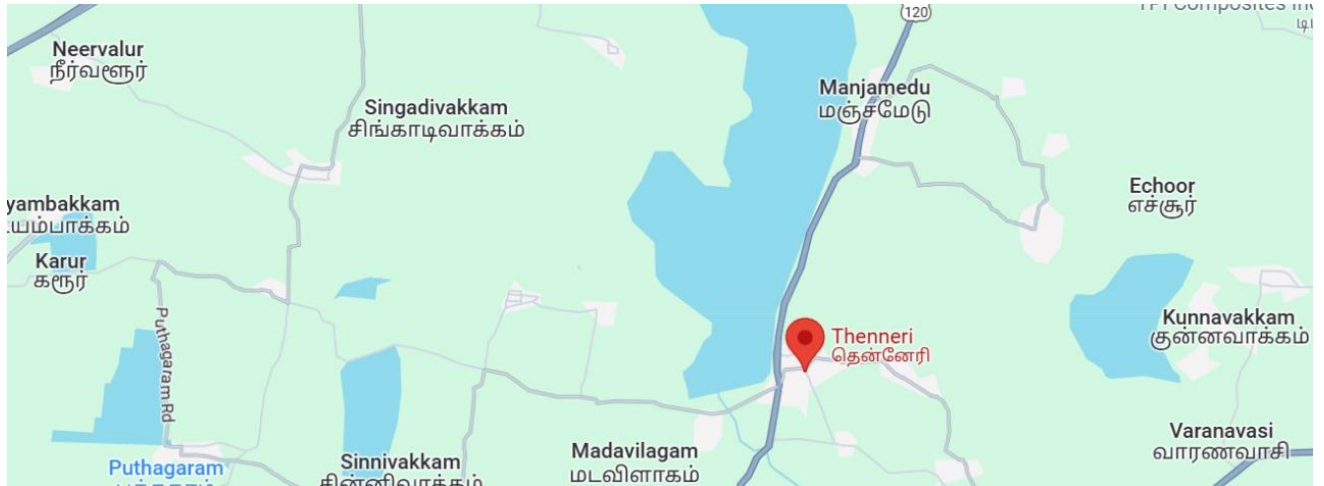
8. Promoting Environmental Awareness and Sustainable Practices

The project also places importance on spreading awareness about environmental sustainability and encouraging eco-friendly practices within the village. Sessions are conducted to educate people on waste management, the importance of tree planting, water conservation, and the responsible use of natural resources.

OBJECTIVES OF THE PROJECT

- IMPROVING HEALTH AND HYGIENE AWARENESS
- ENHANCING DIGITAL LITERACY AND ACCESS TO TECHNOLOGY
- PROMOTING QUALITY EDUCATION FOR ALL
- FACILITATING SUSTAINABLE LIVELIHOOD OPPORTUNITIES
- EMPOWERMENT OF WOMEN THROUGH SKILL DEVELOPMENT
- SPREADING AWARENESS ABOUT GOVERNMENT WELFARE SCHEME
- STRENGTHENING COMMUNITY PARTICIPATION AND LEADERSHIP
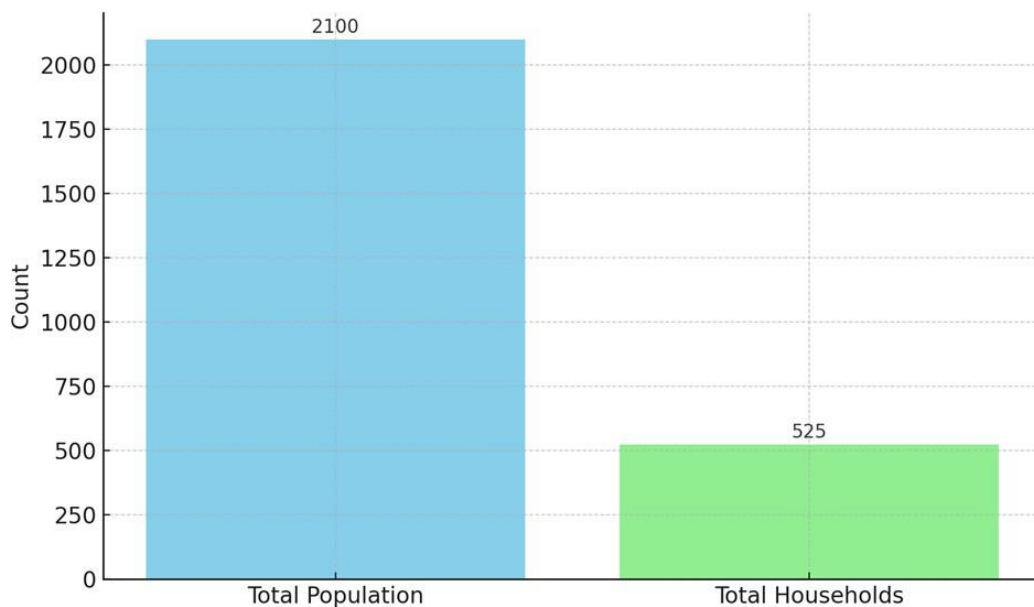- PROMOTING ENVIRONMENTAL AWARENESS AND SUSTAINAB-PRACTICES

VILLAGE PROFILE - THENNERI

Thenneri is a rural village situated in the Walajabad block of Kanchipuram district, Tamil Nadu. It serves as the administrative center for the Thenneri Gram Panchayat. The village is approximately 18 km east of Kanchipuram district headquarters and about 59 km from Chennai, the state capital. The primary agricultural activities include the cultivation of paddy, sugarcane, and groundnut. Irrigation is facilitated through boreholes/tube wells (62.31 hectares) and lakes/tanks (20 hectares), covering a total of 82.31 hectares. Additionally, the village is known for producing clay pots and handicrafts.
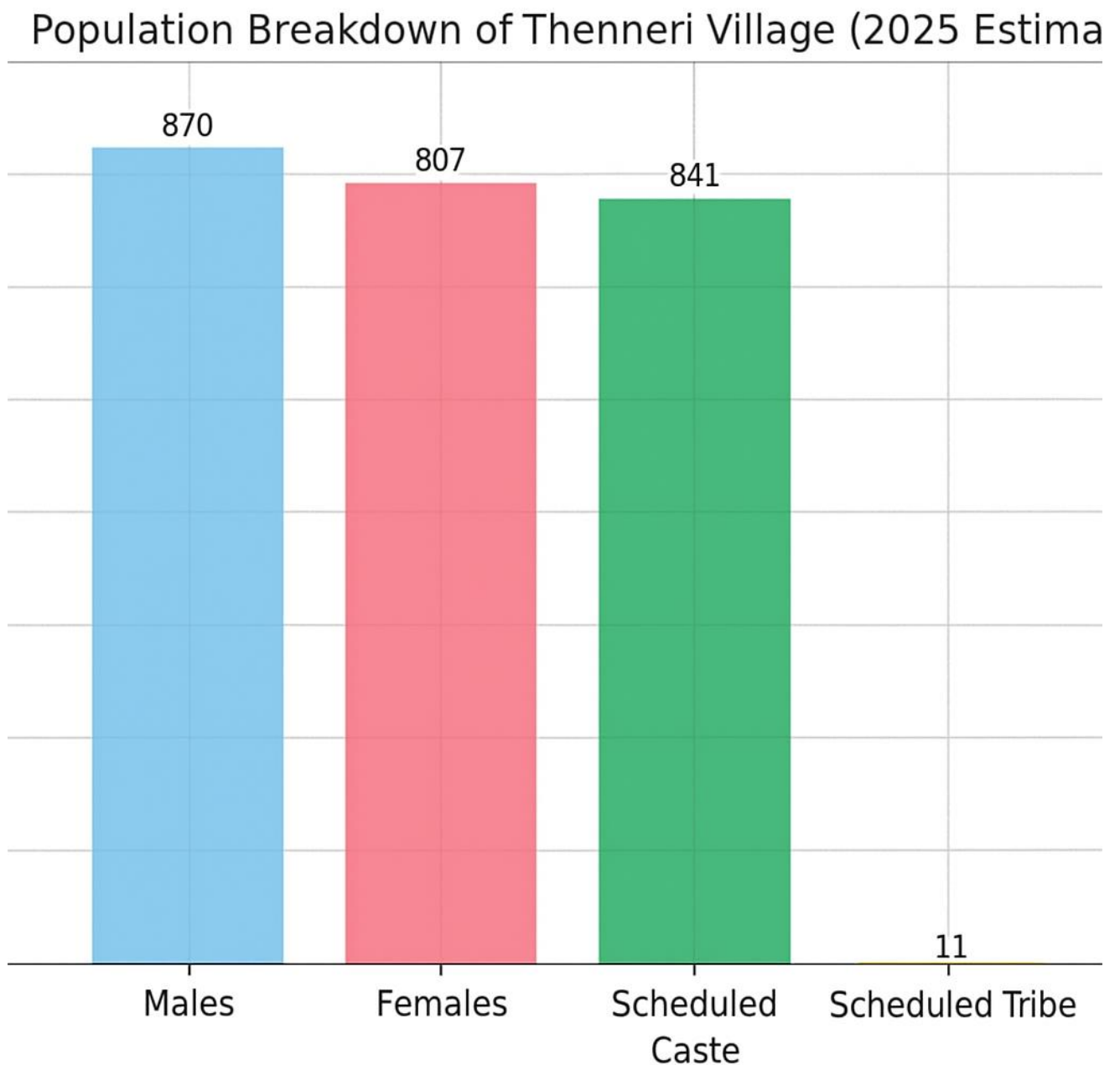
Based on our field observations and household interactions under the Unnat Bharat Abhiyan (UBA) program, Population of Thenneri Village, Tiruchirappalli District, Tamil Nadu (approx.):Total Population: 1,677 people

- o Males: 870
- o Females: 807
- Sex Ratio: 920 females per 1,000 males
- Scheduled Caste (SC): 841 individuals (approx. 53.6% of the population)
- Scheduled Tribe (ST): 11 individuals

Thenneri is a vibrant rural village located in the Walajabad block of Kanchipuram district, Tamil Nadu, and serves as the administrative hub for the Thenneri Gram Panchayat. Situated approximately 18 km east of the Kanchipuram district headquarters and about 59 km from Chennai, the state capital, the village spans an area of 98.24 hectares. As per the 2025 population estimate, Thenneri is home to around 1,677 residents, including 870 males and 807 females, resulting in a sex ratio of 920 females per 1,000 males. The literacy rate stands at 70.52%, with male literacy at 79.34% and female literacy at 61.26%. The village has a significant Scheduled Caste population of 841 individuals (53.64%) and a Scheduled Tribe population of 11 individuals (0.7%). Thenneri hosts basic infrastructure such as a Primary Upper Middle School, a government health center, a public library, an Anganwadi center, an ASHA worker, and a birth and death registration office. The village is connected by both public and private bus services, and the nearest railway station is located approximately 26 km away. Electricity is supplied for about 20 hours daily in summer and 18 hours during winter. Agriculture plays a major role in the local economy, with primary crops including paddy, sugarcane, and groundnut. Irrigation is supported through boreholes/tube wells covering 62.31 hectares and lakes or tanks serving another 20 hectares, totaling 82.31 hectares of irrigated land. The village is also known for its production of clay pots and handicrafts, contributing to local livelihoods. Social and cultural life centers around the Mariamman temple, and the village features a Samathuvapuram (model village) and dedicated housing for Scheduled Tribes. Politically, the area is influenced by major parties such as AIADMK, DMK, PMK, and VCK. Nearby villages include Seeyamangalam, Thenthinnalur, Sivanam, Pappanallur, Thellar, Nallur, Eramalur, Mudur, Kavaniyathur, Kalpattu Nainankuppam, and Eyipakkam, with Desur (10 km) and Vandavasi (14 km) being the nearest towns. National Highways NH32 and NH179D provide regional connectivity. Although no direct initiatives from the Unnat Bharat Abhiyan (UBA) have

been recorded in Thenneri, neighboring villages like Vengangudi and Konalai have benefitted from such programs, including solar-powered water purification systems and digital platforms for local products. Thenneri represents a blend of traditional agriculture, community engagement, and developing infrastructure, making it a promising candidate for future developmental efforts under initiatives like UBA.

Population Breakdown of Thenneri Village (2025 Estima

1. Energy

Thenneri village experiences intermittent power supply, with electricity available for about 20 hours during summer and only 18 hours during winter. While the situation is slightly better than in remote hamlets, frequent power cuts still disrupt daily life, particularly affecting education and productivity after sunset. Many households resort to kerosene lamps and firewood, which not only pose fire hazards and health risks due to indoor air pollution but also contribute to environmental degradation.

There is minimal adoption of sustainable alternatives such as solar-powered lighting or backup systems like inverters and power banks. Our field survey revealed a general lack of awareness regarding cost-effective solar kits and government schemes that promote renewable energy solutions. Promoting clean energy in Thenneri could greatly improve living standards, particularly for students and women engaged in domestic chores.

2. Water Usage in Agriculture

Agriculture in Thenneri is primarily dependent on traditional methods, with paddy, sugarcane, and groundnut being the major crops. Irrigation is facilitated through borewells and lakes, covering over 80 hectares. However, farmers mainly rely on flood irrigation, which causes significant water wastage and hastens groundwater depletion. Water is applied based on fixed routines rather than soil or crop needs, reducing irrigation efficiency.

Technologies like drip irrigation, sprinkler systems, and soil moisture sensors are rarely used, largely due to lack of awareness and training. Although subsidies and support programs are available, farmers are not informed about how to avail them. This gap hinders the transition to sustainable agricultural practices that could conserve water and increase yields.

3. Digital Awareness
While smartphones are present in many households in Thenneri, digital literacy remains low, especially among older adults and less-educated villagers.

Most farmers are unaware of beneficial mobile apps like Uzhavan, Kisan Suvidha, or weather forecast tools, which could provide valuable insights into crop planning, pest control, and market prices.

Moreover, the village lacks digital infrastructure such as internet cafés, public Wi-Fi spots, or digital learning centers. Even essential services like mobile recharge points and online banking assistance are missing. This severely limits participation in digital governance, online education, and financial inclusion through platforms like UPI, Aadhaar-linked banking, and e-wallets.

Our findings point to the need for tailored interventions such as digital awareness camps, hands-on training sessions, and mobile-based helplines. Bridging this gap could unlock a range of opportunities for the local community in agriculture, education, and financial independence.

PROPOSED TECHNOLOGY SOLUTIONS

To overcome the challenges identified in Thenneri village—such as unreliable electricity, unhealthy cooking methods, water wastage in agriculture, and low digital awareness. We proposed the following four simple yet impactful technology-based solutions. These were selected for their affordability, ease of use, and suitability in a rural setting.
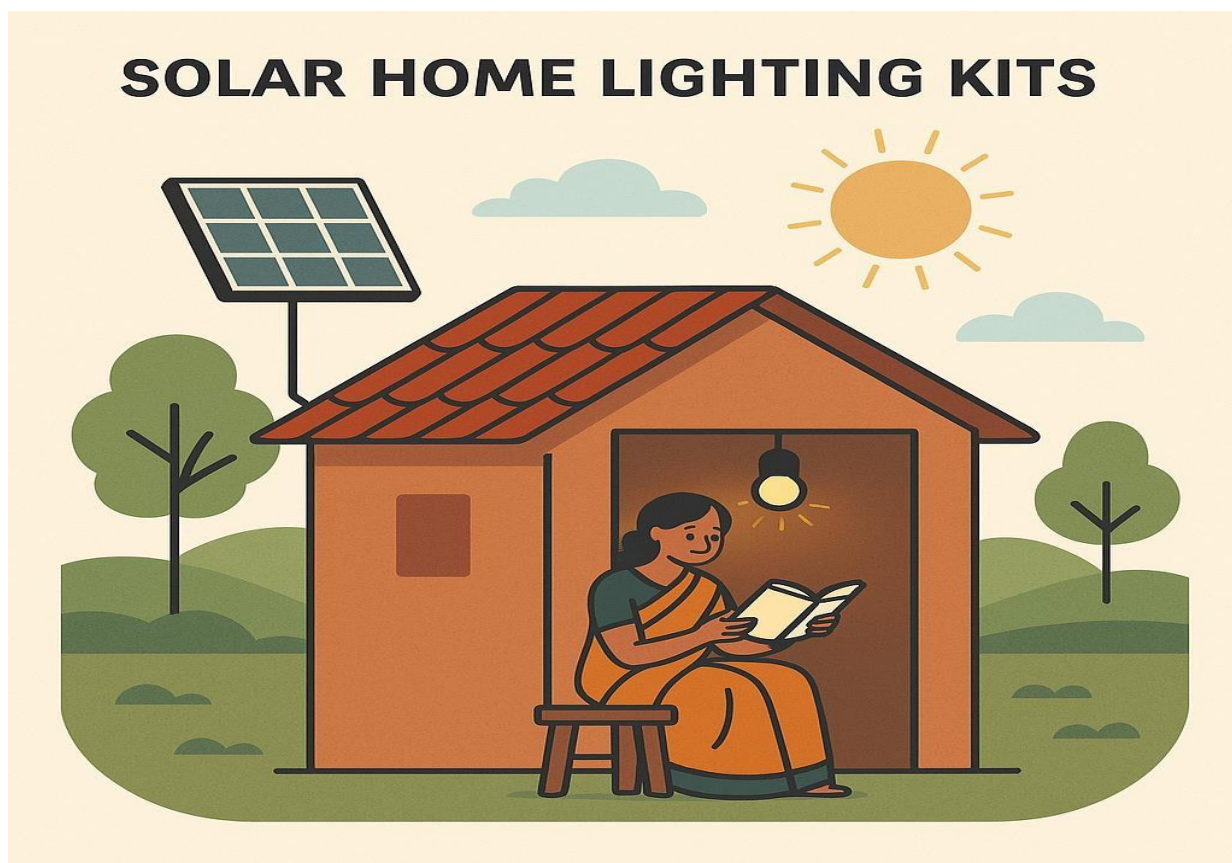
1. Sustainable Energy Solutions

To address the issue of unreliable electricity and promote clean energy use, the following technology-based solutions are proposed:

- **Solar Home Lighting Kits**: Distribute cost-effective solar lighting kits to households. These include solar panels, LED lamps, and battery backup to ensure 6–8 hours of power during outages.
- **Solar Microgrids for Community Spaces**: Install solar microgrids in public buildings like the school, health center, and Anganwadi for uninterrupted power supply.
- **Energy Literacy Workshops**: Conduct awareness sessions to educate villagers about the health hazards of kerosene and the long-term cost

benefits of switching to solar power.

- **Government Scheme Linkages**: Help eligible families avail subsidies under schemes like **PM-KUSUM**, **Saubhagya Yojana**, or **State Renewable Energy Programs**.

In many households of Thenneri, electricity supply is inconsistent, especially during evenings and nights. Families often rely on kerosene lamps or candles, which pose fire hazards, emit harmful fumes, and are expensive over time. As a solution, we proposed **Solar Home Lighting Kits** that include a 20W solar panel, a rechargeable battery pack, two LED bulbs, and a USB mobile charging port. These kits store solar energy during the day and provide clean, bright light at night. LED lights are energy-efficient and long-lasting, while the solar system requires minimal maintenance. This solution not only improves household safety and comfort but also supports children's education by enabling night-time study.

2. Biogas Stove Pilot

Most families in Thenneri use firewood or traditional chulhas (mud stoves) for cooking, which leads to indoor air pollution and contributes to deforestation.

Women, who are primarily responsible for cooking, are especially at risk due to prolonged smoke exposure. As a cleaner and sustainable alternative, we suggested setting up a **biogas stove system** using a compact biogas digester. The digester processes cow dung and organic kitchen waste to produce methane gas, which can be used for cooking. This system not only reduces reliance on firewood but also converts waste into energy. It is ideal for households with livestock and promotes an eco-friendly lifestyle while reducing fuel costs and respiratory issues.

3. Mobile App Literacy Drive

While the government offers several digital services and mobile applications to assist farmers and citizens, most villagers in Thenneri were unaware of them. To bridge this digital gap, we conducted a **Mobile App Literacy Drive** where we introduced farmers and families to useful applications such as the **Uzhavan App** (offering farming tips, weather forecasts, market prices) and **eSevai** (for accessing online services like income certificates, Aadhaar updates, and pension applications). We demonstrated how to download, navigate, and use these apps in **Tamil** using simple language and visuals. This initiative helped build confidence

among the villagers to use smartphones more effectively and access government schemes directly without relying on intermediaries.

4. Enhancing Digital Literacy and Connectivity

To bridge the digital divide and improve access to government services, information, and financial tools, the following interventions are proposed:

- Digital Training Camps: Conduct regular digital literacy camps to teach villagers how to use smartphones, access government portals, apply for schemes, and make digital payments.
- Village Digital Help Desk: Set up a digital service kiosk manned by a trained youth volunteer to assist villagers with e-governance services, mobile recharges, and basic tech queries.
- Smartphone Application Awareness: Promote awareness of beneficial apps like Uzhavan, CropIn, AgriApp, DigiLocker, and BHIM UPI through pamphlets and community meetings.
- Community Wi-Fi Hotspot: Propose installation of a public Wi-Fi hotspot near the school or Panchayat office to enable access to online education, health services, and digital banking.

ACTIVITIES CONDUCTED

As part of our engagement with the village of **MThenneri** under the **Unnat Bharat Abhiyan (UBA)** initiative, our team undertook a series of community-based and technology-focused activities. These were designed to understand local challenges, introduce practical solutions, and promote awareness of technology-driven improvements for rural living.

Activities Conducted in Thenneri Village under Unnat Bharat Abhiyan
As part of the Unnat Bharat Abhiyan initiative, a series of impactful activities were conducted in Thenneri village aimed at identifying local challenges, spreading awareness, and proposing sustainable solutions.

1. Baseline Survey and Data Collection:

A comprehensive door-to-door household survey was conducted to gather detailed information on demography, education, occupation, energy usage, water resources, agricultural practices, health facilities, sanitation, and digital accessibility. This helped in identifying the core issues affecting the daily lives of villagers and served as the foundation for planning interventions.

2. Awareness Campaigns:

Multiple awareness sessions were organized covering topics such as health and hygiene, renewable energy, digital literacy, and sustainable farming practices. These included interactive talks and demonstrations on handwashing techniques, the importance of sanitation, and the harmful effects of indoor air pollution caused by kerosene lamps and firewood. Pamphlets and posters in the local language were distributed to ensure clear communication.

3. Cleanliness Drive (Swachhata Abhiyan):

A village-level cleanliness campaign was conducted involving students, volunteers, and local youth. Streets and public areas were cleaned, and proper waste disposal methods were discussed. Dustbins were installed in key locations to encourage better waste management. This was done in alignment with the Swachh Bharat Mission goals.

4. Digital Literacy Workshop:

To bridge the digital divide, a training session was conducted for school children and farmers on using mobile apps for agriculture, banking, and accessing government schemes. Apps like Uzhavan, DigiLocker, BHIM UPI, and Kisan Suvidha were demonstrated. The session also covered the basics of internet safety and smartphone usage for elderly villagers.

5. Educational Support and Interaction with School Students:

Volunteers visited the local Primary Upper Middle School (PUMS) to conduct

fun learning sessions, drawing competitions, and science demonstrations. Stationery kits and educational charts were distributed. Emphasis was given to promoting regular school attendance and career guidance for students.

6. Interaction with Farmers and Agricultural Awareness:

Meetings were held with farmers to discuss the advantages of modern irrigation techniques like drip and sprinkler systems, organic farming, and crop diversification. Discussions included methods to reduce groundwater usage and the importance of soil testing. Leaflets on government schemes for agricultural equipment and subsidies were provided.

7. Health and Sanitation Survey:

A focused health survey was carried out to assess sanitation conditions, availability of toilets, waterborne diseases, and maternal-child health. Based on the findings, recommendations were made to improve the health infrastructure and increase usage of the local health center.

8. Proposal of Technological Interventions:

After analyzing village needs, a detailed report was prepared suggesting low-cost solar lighting solutions, soil moisture sensors, and community Wi-Fi zones. These proposals were shared with village officials and the Gram Panchayat to facilitate implementation with government or NGO support.

GOVERNMENT SCHEMES SHARED

During the Unnat Bharat Abhiyan outreach, various central and state government schemes were introduced to the people of Thenneri to improve their livelihoods, health, education, agriculture, and digital access. For farmers, awareness was raised about schemes like PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) which provides ₹6,000 annually to small and marginal farmers, and PMFBY (Pradhan Mantri Fasal Bima Yojana) for crop insurance.

They were also informed about NABARD-supported drip irrigation subsidies, and the Soil Health Card Scheme to promote efficient fertilizer use. In the domain of energy, villagers were made aware of the KUSUM Yojana, which subsidizes solar-powered irrigation pumps, and Saubhagya Scheme for rural electrification. Health-related schemes discussed included the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (PM-JAY) which offers free health coverage up to ₹5 lakh, and Janani Suraksha Yojana (JSY) for promoting institutional delivery among pregnant women. For digital empowerment and financial inclusion, schemes like PM Digital Saksharta Abhiyan (DISHA) for digital literacy, PM Jan Dhan Yojana for opening zero-balance bank accounts, and Aadhaar-enabled Payment Systems (AePS) were explained. Additionally, Swachh Bharat Mission (SBM) objectives and benefits for household toilet construction were highlighted. School students and youth were informed about National Scholarship Portal, Skill India Mission, and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) for vocational training and job-readiness programs. These schemes were shared using printed handouts and verbal explanations, and villagers were guided on how to apply through nearby Common Service Centers (CSCs) or local government offices.

Key Initiatives for Women Empowerment and Education under UBA
1. Skill Development and Vocational Training

UBA encourages educational institutions to implement skill-building programs tailored for rural women. These include training in areas such as tailoring, handicrafts, and other vocational skills, aimed at enhancing employability and fostering entrepreneurship among women.

ResearchGate

2. Promotion of Self-Help Groups (SHGs)

The program supports the formation and strengthening of SHGs, which play a crucial role in empowering women by providing a platform for collective action, financial inclusion, and community development. nitw.ac.in

3. Educational Outreach and Awareness

UBA facilitates educational outreach programs that raise awareness about the importance of girls' education and encourage community support for female students. These initiatives aim to reduce dropout rates and promote gender equality in education.

Babasaheb Gawde Institute

4. Infrastructure Improvement for Gender-Sensitive Education

Institutions under UBA work towards upgrading educational facilities to be more inclusive and gender-sensitive. This includes creating safe learning environments for girls and addressing barriers to education such as inadequate sanitation facilities.

fiib.edu.in

5. Leadership Development Programs

UBA institutions collaborate with government schemes like "Nai Roshni," a leadership development program for minority women. This initiative aims to empower women by providing knowledge and tools to interact effectively with government systems and institutions.

Unnat Bharat Abhiyan

Notable Success Stories

PSGR Krishnammal College for Women (Coimbatore) has implemented programs focusing on women's empowerment through education, skill-building, and promoting gender equality.

PSGR Krishnammal College for Women

NIT Warangal has undertaken projects that empower rural women by providing skill training, promoting SHGs, and fostering active participation in local development.

nitw.ac.in

MGM Institute of Health Sciences has worked towards empowering women through active participation in decision-making processes, increasing income, and improving access to resources.

CHALLENGES FACED

The Unnat Bharat Abhiyan (UBA) has made significant strides in rural development, including women's empowerment and education, but there are still several challenges in fully realizing its goals. Here are some key challenges faced in the process:

1. Limited Awareness in Rural Areas

- **Challenge:** One of the primary challenges is the limited awareness about UBA's objectives and the benefits it can bring, especially in remote rural areas. Women and local communities may not fully understand the potential impact of the programs.
- **Impact:** This lack of awareness can result in low participation rates, especially among women who may not recognize the value of education or skill development programs.

2. Infrastructural Constraints

- **Challenge:** Many rural areas lack the basic infrastructure necessary for the effective implementation of educational and empowerment programs. Poor roads, unreliable electricity, and inadequate educational facilities limit the reach and quality of initiatives.
- **Impact:** These infrastructural gaps can delay or even hinder the success of initiatives aimed at enhancing women's education and skills development.

3. Gender Stereotypes and Cultural Barriers

- **Challenge:** Deep-rooted gender stereotypes and cultural norms in rural India often hinder women's participation in education and empowerment programs. Families may prioritize male children's education over female children's, and traditional roles may limit women's opportunities for employment or leadership.

Impact: Even when programs are available, the cultural mindset can prevent women from actively participating or taking full advantage of the benefits.

4. Inadequate Financial Support and Resources

- **Challenge:** Many of the rural communities lack financial resources to support the full range of initiatives under UBA. While some programs focus on skill development, financial barriers like high costs for training or materials can deter participation.

- **Impact:** Without proper financial backing, both educational institutions and rural women face challenges in accessing the necessary resources to implement and benefit from the programs.

5. Limited Skilled Trainers and Facilitators

- **Challenge:** There is often a shortage of skilled trainers or facilitators in rural areas who can deliver quality education or vocational training to women. UBA requires the active involvement of skilled professionals, but they are often reluctant to work in remote areas due to logistical challenges or low compensation.

- **Impact:** The lack of trained instructors can compromise the quality of education and skill-building programs, which may hinder the long-term empowerment of women.

6. Monitoring and Evaluation Challenges

- **Challenge:** The effective monitoring and evaluation of the numerous initiatives under UBA is a significant challenge. Tracking progress, measuring outcomes, and assessing the impact of each project require strong monitoring systems, which can be hard to implement in rural areas with limited technological access.

- **Impact:** Without robust monitoring, it is difficult to assess the success of initiatives or to refine and scale successful models.

7. Resistance to Change

- **Challenge:** Rural communities, particularly older generations, may be resistant to change, especially in areas related to women's rights, education, and empowerment. Some communities may have a traditional

mindset that limits women's mobility, education, or participation in the workforce.

- **Impact:** This resistance can reduce the effectiveness of educational programs, skill-building activities, or women-led SHGs, as community acceptance is essential for these initiatives to succeed.

8. Interventions Not Tailored to Local Context

- **Challenge:** Programs under UBA may not always be tailored to the unique needs and cultural contexts of different regions. Standardized approaches may not work as effectively in regions with specific socio-economic or cultural conditions.

- **Impact:** The lack of customization can result in the failure of programs to resonate with the local population, particularly women, who may not see the relevance to their lives or struggles.

9. Sustainability of Programs

- **Challenge:** Ensuring the long-term sustainability of UBA initiatives is a major challenge. While UBA introduces programs, there is a risk of their losing momentum once the initial funding or support from educational institutions wanes.

- **Impact:** Without long-term investment, training, or continued institutional support, the impact of these initiatives may be short-lived, and empowerment efforts may not lead to lasting changes.

10. Coordination Between Government, NGOs, and Educational Institutions

- **Challenge:** Effective coordination between various stakeholders, including government bodies, NGOs, and educational institutions, remains a challenge. Sometimes, overlapping responsibilities or lack of communication can lead to inefficiencies in the implementation of programs.

- **Impact:** Poor coordination may result in duplication of efforts, delays in program delivery, and a lack of resources being effectively allocated to the communities that need them most.

11. Technological Barriers

- **Challenge:** The lack of access to digital tools and the internet in rural areas can limit the reach and impact of UBA programs, especially those that incorporate online learning, digital literacy, or telecommunication-based services.

- **Impact:** Women and rural populations who do not have access to technology are excluded from participating in programs that rely on it, thus deepening the digital divide and further limiting opportunities for empowerment.

CONCLUSION

Our Unnat Bharat Abhiyan project in Thenneri has been a truly enriching experience that blended technical learning with meaningful community engagement. By identifying core problems such as unreliable electricity, unsafe cooking practices, inefficient irrigation, and low digital awareness, we were able to propose practical and simple solutions that are both sustainable and cost-effective. Through activities like door-to-door surveys, solar and IoT demos, digital awareness sessions, and biogas feasibility assessments, we built trust with the villagers and encouraged participation in the process of change. The project taught us the importance of designing technology that is context-aware, locally adaptable, and inclusive. We saw firsthand how even small interventions—like teaching someone to use a government app or showing how a solar light works—can spark hope and confidence in rural communities. The project not only helped the people of Thenneri but also inspired us as student volunteers to carry forward the spirit of service, innovation, and rural transformation.

FUTURE SCOPE

The future scope of Unnat Bharat Abhiyan (UBA) holds great potential for expanding its reach and deepening its impact, particularly in the areas of women's empowerment and education in rural India. One of the primary avenues for growth is the increased integration of digital technology. Expanding digital literacy programs and providing access to e-learning platforms will ensure that rural women and communities have the necessary skills and knowledge to benefit from modern educational resources and skill-building opportunities. Additionally, designing region-specific programs that address the unique socio-economic, cultural, and environmental contexts of different rural areas is crucial. These tailored interventions can better meet the needs of women in specific regions and enhance the effectiveness of the programs.

Moreover, ensuring the long-term sustainability of UBA programs is a critical factor in their future success. By creating self-sustaining models, such as women-led cooperatives or skill-building hubs, UBA can ensure that the benefits of its initiatives continue even after the initial phase of implementation. Additionally, incorporating health and well-being programs, including mental health support, maternal care, and nutrition, into UBA's initiatives will contribute to the holistic development of rural women, addressing not only their educational and economic needs but also their overall well-being.

Furthermore, expanding skill development programs to include advanced fields such as technology, entrepreneurship, and sustainable agriculture will help women access new opportunities, take on leadership roles, and contribute to the modernization and growth of rural economies. Encouraging women to engage in these emerging fields can have a transformative impact, fostering innovation and resilience in rural communities. By addressing these diverse areas, UBA can significantly enhance its contributions to rural development, ensuring that women are equipped with the resources needed to lead their communities and achieve long-term success.