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## **DEPARTMENT OF INFORMATION TECHNOLOGY**

### **AD1006 - Unnat Bharat Abhiyan (UBA)**



**Focusing Area:** Good Health and Well-being

**Location:** Keezhakkarai, Ramanathapuram District

### **REPORT**

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## UBA Focusing Area Mapping with SDG and Justification



### Goal 3: Good Health and Well-being

This goal aims to ensure healthy lives and promote well-being for all at all ages. The project in the project implemented in Keelakarai village aligns strongly with Sustainable Development Goal 3: Good Health and Well-being, as it focuses on improving healthcare access, sanitation, nutrition, and overall well-being. The initiative introduces basic health facilities, such as mobile health clinics and telemedicine services, to ensure remote communities have access to quality healthcare. These interventions help reduce maternal and child mortality rates by providing essential prenatal and postnatal care. Additionally, health education programs focus on preventive measures, such as hygiene practices and nutrition, reducing the incidence of preventable diseases. The project directly contributes to enhancing the quality of life, addressing both immediate health needs and long-term well-being for the population of Keelakarai.

**Target 3.1:** "By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births."

The project in Keelakarai directly supports this target by offering maternal healthcare services, including prenatal and postnatal care, which can reduce the risks associated with childbirth and help lower the maternal mortality ratio in the area.

**Target 3.2:** "End preventable deaths of newborns and children under 5 years of age." Through the provision of maternal and child health services, the project aims to reduce preventable deaths of newborns and children under five by ensuring they receive proper medical care during the most critical stages of life.

# **CHAPTER 1**

## **INTRODUCTION**

The Unnat Bharat Abhiyan (UBA) is a flagship program initiated by the Ministry of Education, Government of India, with the aim of involving higher educational institutions in the transformation of rural India. The mission seeks to bridge the gap between urban and rural India through knowledge transfer, sustainable practices, and community-based innovation. As part of the academic course AD1006, our institution undertook a social responsibility to connect with a rural community, assess their current status with respect to Sustainable Development Goals (SDGs), and identify actionable areas for improvement.

Among the 17 Sustainable Development Goals proposed by the United Nations, SDG 3 – Good Health and Well-being stands as a foundational pillar for societal development. Health is not just the absence of disease but a state of complete physical, mental, and social well-being. In rural India, access to quality healthcare continues to remain a challenge due to infrastructural, economic, and educational limitations. For our UBA project, we selected Keelakarai, a coastal village located in the Ramanathapuram District of Tamil Nadu. Keelakarai, known historically as a maritime hub, has a culturally rich community and a strong sense of local identity. Despite its vibrant community, the village faces various challenges in healthcare accessibility, disease prevention, and awareness about basic health practices.

Our primary objective was to conduct a health-based survey in Keelakarai and assess the ground reality regarding healthcare facilities, awareness, hygiene practices, maternal and child health, nutrition, and communicable diseases. We also explored the presence of primary health centres (PHCs), availability of doctors and nurses, and the usage of traditional vs. modern medicine in the community.

Initial field observations revealed certain health issues prevalent among the villagers. Common problems included waterborne diseases, malnutrition in children, and inadequate prenatal and postnatal care. We noticed that many families still depend on nearby towns for medical emergencies due to the limited infrastructure within the village. There were also gaps in sanitation awareness, menstrual hygiene management, and vaccination knowledge, especially among women and elderly individuals. The spread of health information was mainly through word-of-mouth, local clinics, or anganwadi centers. While some digital initiatives have started to reach the village, digital health literacy is still low. The young population is more aware of modern

healthcare practices, but access to affordable and quality treatment remains a major concern for low-income households.

To understand these concerns better, our team designed and distributed a detailed questionnaire and also interacted with villagers, health workers, and school teachers. We learned that improving health outcomes in Keelakarai requires a multi-dimensional approach combining medical intervention, education, infrastructure development, and government support. This report aims to highlight the current status of health and well-being in Keelakarai, the existing challenges, and propose sustainable solutions that can be implemented at a community level. Our goal is to align our findings with SDG 3 targets — reducing child mortality, combating diseases, improving access to healthcare services, and promoting healthy lifestyles.

## **OBJECTIVES**

The purpose of this project under the Unnat Bharat Abhiyan is not merely to observe, but to actively engage, document, and contribute to the health and well-being of the selected rural population. Our objectives are aligned with the principles of SDG 3 and focus on understanding and improving the healthcare landscape of Keelakarai village, Ramanathapuram District. We divided our objective into five major pillars, with each pillar addressing key areas of concern and action.

### **1. To Assess the Current Health Infrastructure in Keelakarai**

- Understand the availability and functionality of healthcare facilities like Primary Health Centres (PHCs), Sub-Centres, and private clinics.
- Examine the presence of essential medical staff including doctors, nurses, ANMs (Auxiliary Nurse Midwives), and ASHA workers in the village.
- Evaluate the distance of the nearest well-equipped hospital or emergency care unit from Keelakarai.
- Investigate how often health camps or government health drives (like immunization or anemia check-ups) are conducted.
- Identify any technological interventions used in the health system such as telemedicine or e-health services.

### **2. To Study the Common Diseases and Health Prevalent in the Village**

- Document the most common diseases reported among the villagers (e.g., diarrhea, typhoid, skin infections, or chronic diseases like diabetes).

- Understand seasonal diseases and their correlation with environmental conditions (e.g., post-monsoon fevers).
- Observe health conditions affecting vulnerable groups like pregnant women, infants, children, and the elderly.
- Investigate mental health awareness and presence of support services (if any) for stress, anxiety, and depression.
- Identify any stigma associated with certain diseases or disabilities in the village community.

### **3. To Evaluate the Community's Awareness and Practices Regarding Hygiene and Preventive Health**

- Survey households to understand their knowledge about vaccination, nutrition, menstrual hygiene, and sanitation.
- Analyze drinking water sources and their impact on waterborne diseases.
- Study the sanitation facilities and the presence (or absence) of toilets in homes and public spaces.
- Assess practices related to waste management, use of mosquito nets, and general cleanliness.
- Evaluate awareness of government health schemes like Ayushman Bharat, Janani Suraksha Yojana, etc.

### **4. To Identify Gaps in Accessibility, Affordability, and Acceptability of Health Services**

- Find out if financial limitations prevent villagers from seeking timely medical help.
- Understand how gender roles or social beliefs affect access to healthcare, especially for women.
- Explore how cultural and traditional medical practices influence decision-making in seeking treatment.
- Identify language or literacy barriers that prevent effective communication with medical professionals.

## **5. To Recommend Sustainable and Community-Driven Solutions to Improve Health Outcomes**

- Propose practical solutions like mobile medical vans, periodic health check-up camps, and school health awareness programs.
- Suggest collaborations with NGOs, district health authorities, or CSR initiatives for infrastructural upgrades.
- Recommend the formation of village health committees or volunteers trained in first-aid and awareness.
- Advocate for youth involvement in spreading health education using digital and social media platforms.
- Propose introduction of solar-powered cold storage units for vaccines and essential drugs in PHCs.

### **VILLAGE PROFILE**

Keelakarai is a coastal village situated in the Ramanathapuram district of Tamil Nadu. As part of our Unnat Bharat Abhiyan (UBA) project, this village was selected for a focused study under SDG 3 – Good Health and Well-being, due to its unique socio-economic and health-related challenges. The village reflects the typical demographic and developmental characteristics of many semi-rural Indian communities.

#### **Key Statistics:**

##### **1. Total Population: 922**

- a. Males: 457
- b. Females: 465

##### **2. Number of Households: 81**

##### **3. Literacy Rate:**

- a. Overall literacy is low, with a particularly high rate of female non-literates (approx. 175 women are non-literate).
- b. Access to formal education is limited, and dropout rates remain a concern, especially among girls.

#### **4. Primary Occupation:**

- a. The local economy relies predominantly on farming, fishing, and manual labour.
- b. Seasonal employment and low wages are common.

#### **5. Education Infrastructure:**

- a. Educational institutions are limited in number and quality.
- b. Lack of digital tools and poor internet connectivity hinder access to modern educational resources.
- c. Higher education opportunities require travel to nearby towns or cities.

#### **6. Health Facilities:**

- a. There is limited access to well-equipped healthcare centers.
- b. Basic facilities are available through government PHCs, but for advanced care, villagers often travel long distances.

#### **7. Sanitation & Water:**

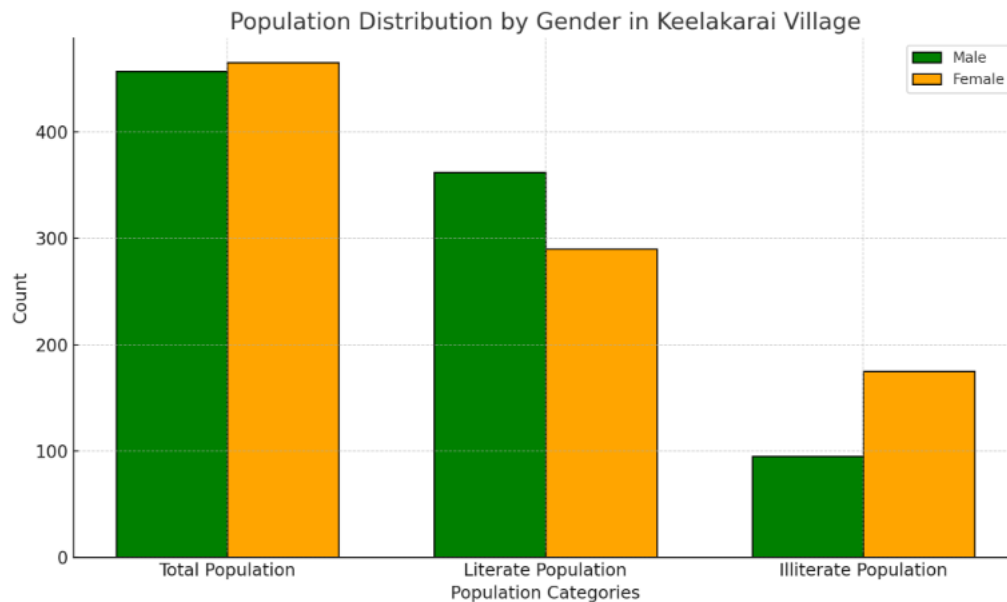
- a. Many households still lack access to clean drinking water and sanitary toilets.
- b. Waste management is inadequate and contributes to the spread of diseases.

	Male	Female	Total
Total Population	457	465	922
Literate Population	362	290	652
Illiterate Population	95	175	270

Keelakarai village, located in Ramanathapuram district, has a total population of 922 residents, comprising 457 males and 465 females. The population is relatively balanced in terms of gender distribution. Out of the total, 652 individuals are literate,

which reflects a modest literacy rate for a rural settlement. Among males, 362 are literate, showing better educational attainment compared to females, among whom only 290 are literate. This indicates a noticeable gender gap in education. A significant portion of the population, around 270 individuals, is still illiterate, with female illiteracy (175) nearly double that of males (95). This highlights the urgent need for improved educational access and literacy programs, especially focused on women and girls.

The data also emphasizes the rural nature of the village, where traditional gender roles and limited infrastructure may hinder education. The high number of illiterate women may impact health outcomes and economic independence. Children from these households are more likely to follow similar patterns unless systemic change is introduced. This literacy disparity also affects the effectiveness of health awareness programs. Addressing this gap through community-based education and government schemes is vital. The village, though small in number, presents a clear case for targeted educational and healthcare interventions under the SDG framework.





## **Health & Medical Services:**

The village is served by a Primary Health Center (PHC), which offers general outpatient services and maternal care but lacks diagnostic imaging facilities such as CT or MRI scanning. Residents requiring specialized care must travel to hospitals in Tenkasi, Tirunelveli, or Madurai, making early diagnosis of conditions like brain tumors difficult and costly. Awareness of neurological health is low, and conditions like seizures or chronic headaches are often misdiagnosed or left untreated.

## **Challenges in Keelakarai: Health and Well-being**

Keelakarai, like many rural villages in India, faces significant health challenges that hinder the well-being of its population. The lack of adequate healthcare infrastructure, coupled with socio-economic issues, places a heavy burden on the villagers, particularly the marginalized sections of society. These challenges require urgent attention to improve health outcomes and meet the objectives of SDG 3: Good Health and Well-being. Below are the key challenges observed during our field study:

1. Keelakarai has very limited healthcare infrastructure, with a primary health center (PHC) serving the entire village. While the PHC provides basic medical services, it lacks essential facilities such as advanced diagnostic tools, specialized doctors, and emergency care options. In case of critical health issues or emergencies, villagers are forced to travel long distances to Ramanathapuram or other nearby towns for treatment, often resulting in delayed medical care.
2. **Insufficient Medical Staff :**  
The PHC in Keelakarai is under-staffed, with a shortage of doctors, nurses, and healthcare workers. Currently, the village relies on a few local health workers and anganwadi centers for basic health services. The lack of trained medical professionals has made it difficult to address the growing health needs of the community, especially with regard to maternal and child health, chronic diseases, and mental health.
3. **Waterborne Diseases**  
The villagers of Keelakarai frequently face health issues related to contaminated drinking water. Despite the availability of wells and borewells, water quality is often compromised, leading to the spread of waterborne diseases such as diarrhea, cholera, and typhoid. Lack of awareness regarding water purification

methods exacerbates this problem, making the population vulnerable to these preventable diseases.

4. **Poor Sanitation and Hygiene Practices**

Sanitation remains a major concern in Keelakarai. Many households do not have access to proper toilets, and open defecation is still practiced in some areas. The lack of proper waste disposal systems and garbage management also contributes to unhygienic conditions, leading to the spread of diseases. Additionally, menstrual hygiene awareness is low, particularly among young girls and women, which can result in infections and other health issues.

5. **High Maternal and Infant Mortality Rates**

Keelakarai experiences high rates of maternal and infant mortality, primarily due to insufficient prenatal and postnatal care. The absence of skilled birth attendants, inadequate medical facilities during childbirth, and the long distance to hospitals contribute to complications during pregnancy and delivery. Furthermore, many women do not seek medical attention due to financial constraints, lack of awareness, or cultural factors.

6. **Malnutrition Among Children and Adults**

Malnutrition is prevalent in Keelakarai, particularly among children under the age of 5. Poor dietary habits, lack of access to nutritious food, and limited knowledge about balanced nutrition contribute to stunting and wasting. The village's reliance on farming for sustenance often results in irregular food availability, leading to nutrient deficiencies. Malnutrition also affects adults, particularly women, impacting their overall health and productivity.

7. **Inadequate Health Awareness**

Health awareness is generally low among the residents of Keelakarai. Many villagers, especially older adults, lack knowledge about basic healthcare practices, such as vaccination, nutrition, personal hygiene, and preventive healthcare. The primary source of health-related information is word-of-mouth or local health workers, who often do not have the resources to disseminate critical health information effectively. This knowledge gap results in delays in seeking treatment and a lack of preventive measures against diseases.

8. **Mental Health Stigma**

Mental health issues are often ignored or stigmatized in rural communities like Keelakarai. There is little awareness about mental health, and people suffering from stress, anxiety, depression, or other mental illnesses rarely seek help. Social stigma and the perception that mental health problems are a sign of weakness discourage individuals from speaking out or accessing mental health support.

services. This lack of mental health care further worsens the well-being of vulnerable groups.

#### **9. Access to Medical Treatment and Financial Barriers**

The affordability of healthcare services remains a major concern. Many families in Keelakarai cannot afford to pay for medical treatment, especially in case of emergency situations. The cost of transportation to nearby towns for specialized care adds to their financial burden. Although government health schemes like Ayushman Bharat exist, villagers are often unaware of them, or the schemes may be difficult to access due to bureaucratic hurdles.



### **Identification of Need**

Keelakarai village faces multiple health-related challenges, including inadequate access to medical facilities, lack of sanitation, and limited health awareness. Many residents, especially women and children, suffer from preventable diseases due to poor hygiene, malnutrition, and absence of regular check-ups. The village also struggles with insufficient maternal care and rising cases of lifestyle-related diseases that remain undiagnosed. Mental health and elderly care are largely neglected, and awareness of government health schemes is minimal. These issues highlight the urgent need for improved healthcare infrastructure, education, and outreach in the community.

1. Keelakarai village lacks proper healthcare infrastructure, leaving many without access to medical facilities. The nearest primary health center is far, making timely treatment difficult during emergencies.

2. Transportation is poor, delaying access to hospitals or emergency care services. This increases the risk of complications and mortality in critical cases.
3. The village does not have resident doctors or specialists. People must travel long distances for even basic consultations.
4. Unqualified and traditional practitioners are often the first point of contact. This leads to improper treatment and worsening health conditions.
5. Maternal health services are limited and underutilized. Many women lack access to prenatal check-ups or institutional deliveries.
6. Infant mortality is still a concern due to poor neonatal care. Home births without medical supervision pose serious risks.
7. Vaccination coverage among children is inconsistent. Lack of awareness and outreach programs lead to missed doses.
8. Malnutrition among children and women is widespread. Many families lack knowledge of balanced diets and nutrition.
9. Anemia is common in adolescent girls and pregnant women. This is due to poor dietary habits and inadequate health monitoring.
10. Sanitation facilities are either unavailable or insufficient. Many families still practice open defecation due to lack of toilets.
11. Waterborne diseases are prevalent during the rainy season. Contaminated drinking water leads to frequent illness outbreaks.
12. Waste disposal is unorganized and unhygienic. This results in increased cases of gastrointestinal infections.
13. Hygiene education is lacking in schools and homes. This increases the risk of diseases, especially among children.
14. People are unaware of lifestyle diseases like diabetes and hypertension. These conditions go undiagnosed and unmanaged for years.
15. Routine health screenings are rarely conducted. Most chronic illnesses are detected only at advanced stages.
16. Mental health is a neglected issue in the community.

## **GOVERNMENT SCHEMES FOR KEEZHAKKARAI VILLAGE**

Keezhakkarai, a coastal village located in Ramanathapuram District of Tamil Nadu, is home to a vibrant fishing community and has strong potential for socio-economic growth. The government has launched several welfare schemes focusing on livelihood enhancement, health care, housing, education, and rural development. These initiatives are especially beneficial for villages like Keezhakkarai, where both coastal and rural

challenges need targeted solutions. Below are key government schemes that can be effectively utilized for the upliftment of Keezhakkarai:

1. **Pradhan Mantri Awas Yojana (PMAY) - Rural**
  - **Objective:** To provide affordable housing to rural families through financial assistance for constructing houses.
  - **Benefit to Keezhakkarai:** Fishermen and other families living in temporary or poorly built shelters can construct pucca houses with better sanitation facilities, improving health and safety.
2. **MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act)**
  - **Objective:** To provide 100 days of wage employment annually to rural households willing to engage in manual labor.
  - **Benefit to Keezhakkarai:** This scheme ensures employment during non-fishing seasons, engaging locals in village infrastructure works like road laying, coastal protection, and water conservation.
3. **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)**
  - **Objective:** To provide financial assistance of ₹6,000 annually in three installments to eligible farmers.
  - **Benefit to Keezhakkarai:** Farmers in the region can receive financial support to invest in irrigation, seeds, fertilizers, and other inputs to boost crop production.
4. **Swachh Bharat Mission - Gramin**
  - **Objective:** To ensure open defecation-free villages by promoting sanitation practices and supporting toilet construction.
  - **Benefit to Keezhakkarai:** The scheme helps build individual toilets, reducing open defecation, improving hygiene, and creating a cleaner, healthier environment.
5. **National Rural Health Mission (NRHM)**
  - **Objective:** To provide accessible, affordable, and quality healthcare services to rural populations, especially women and children.
  - **Benefit to Keezhakkarai:** NRHM can enhance local healthcare by ensuring the presence of mobile clinics, trained health workers, and maternal care facilities in the village.

These flagship schemes cover critical areas such as housing, employment, agriculture, health, and sanitation. Effective implementation in **Keezhakkarai** can significantly enhance the overall quality of life, promote inclusive development, and support the unique needs of its coastal and rural communities.



## SUGGESTIONS FOR DEVELOPMENT IN KEEZHAKKARAI VILLAGE

1. **Establish a Primary Healthcare Centre (PHC):**  
Set up a well-equipped PHC with qualified staff to ensure timely treatment, especially maternal and child health care in this rural coastal region.
2. **Promote Marine and Inland Fisheries Training:**  
Conduct regular skill development workshops for fishermen on modern fishing techniques, fish preservation, and marketing strategies to improve income and reduce post-harvest losses.
3. **Introduce Digital Literacy Programs:**  
Provide computer and smartphone training for students and youth to improve digital skills, access to online education, and job opportunities.
4. **Rainwater Harvesting and Desalination Units:**  
Install rainwater harvesting systems and small-scale desalination units to address the issue of saline groundwater and ensure clean drinking water.
5. **Eco-Tourism and Cultural Promotion:**  
Utilize the village's coastal beauty and cultural heritage to promote eco-tourism, which can generate employment and preserve local traditions.
6. **Upgrading School Infrastructure:**  
Improve existing government school facilities with smart classrooms, libraries, and science labs to promote quality education and reduce dropout

rates.

7. **Encourage Women Self-Help Groups (SHGs):**  
Strengthen SHGs and provide micro-loans for women to start cottage industries like seafood processing, tailoring, or handicrafts.
8. **Waste Management System:**  
Introduce a village-level waste segregation and recycling initiative to keep the environment clean and promote health.
9. **Solar Energy Projects:**  
Promote rooftop solar panels and solar street lights to reduce dependency on grid electricity and promote renewable energy use.
10. **Awareness Camps on Government Schemes:**  
Organize regular awareness drives to educate villagers on available welfare schemes and help them with application and documentation.

#### **ACTIVITIES CONDUCTED – KEEZHAKKARAI VILLAGE**

1. **General Health Camp**  
A free medical camp was organized in collaboration with local healthcare professionals, providing checkups, medicines, and health advice to villagers.
2. **Awareness Program on Sanitation and Hygiene**  
Sessions were conducted in the community to spread awareness about personal hygiene, handwashing, clean drinking water, and toilet usage.
3. **Nutrition Awareness Drive**  
Mothers and children were educated on balanced diets, anemia prevention, and locally available nutritious food to promote healthy eating habits.
4. **Mental Health & Stress Management Workshop**  
Students and villagers participated in interactive workshops covering mental well-being, stress reduction techniques, and emotional resilience.
5. **Eye Screening Camp**  
Free vision tests and distribution of spectacles were carried out, especially for elderly people and school children.
6. **COVID-19 Awareness and Vaccination Support**  
Informative sessions on COVID-19 prevention, importance of vaccination, and on-site registration assistance were provided.



## **7. Telemedicine**

## **Demonstration**

Introduced villagers to digital healthcare consultation options to bridge the gap between remote patients and city doctors.

## **8. Training on First Aid & Emergency Response**

Basic first-aid training and safety drills were given to school staff and youth volunteers for emergency preparedness.

## **9. Swachh Bharat Cleanliness Drive**

A village-wide cleanliness campaign was held, engaging local youth and school children in cleaning streets and public areas.

## **10. Distribution of Sanitary Kits & Masks**

Essential hygiene kits including soaps, sanitary napkins, and reusable face masks were distributed to women and adolescent girls.

## **CONCLUSION:**

The initiatives carried out in Keezhakkarai village under the Unnat Bharat Abhiyan have significantly contributed to improving the overall health and lifestyle of the residents. By focusing on healthcare access, sanitation, nutrition, and awareness, the project has laid a strong foundation for sustainable well-being in the community. The active participation of villagers in health camps, awareness drives, and hygiene programs reflects their growing interest in adopting healthier practices. With continued support and proper implementation of government schemes, Keezhakkarai is well on its path to achieving inclusive and holistic rural development aligned with Sustainable Development Goal 3 – Good Health and Well-being.

