

Public Disclosure Authorized

Environmental and Social Systems Assessment (ESSA)

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India: Tamil Nadu Health System Reform Program

The World Bank



ABBREVIATIONS

ANC	Antenatal Care
ASHA	Accredited Social Health Activist
BMW	Bio-Medical Waste
BMWM	Bio-Medical Waste Management
CMCHIS	Chief Minister's Comprehensive Health Insurance Scheme
CPF	Country Partnership Framework
CPR	Contraceptive Prevalence Rate
CTF	Common Treatment Facility
DIMH	Directorate of Indian Medicine and Homeopathy
DLI	Disbursement-Linked Indicator
DME	Directorate of Medical Education
DMRHS	Directorate of Medical and Rural Health Services
DoF	Department of Finance
DoHFW	Department of Health and Family Welfare
DPH	Directorate of Public Health
ELCOT	Electronics Corporation of Tamil Nadu
EMS	Emergency Medical Services
ESSA	Environmental and Social Systems Assessment
ETP	Effluent Treatment Plant
FM	Financial Management
GDP	Gross Domestic Product
GoI	Government of India
GoTN	Government of Tamil Nadu
HDI	Human Development Index
HDR	Human Development Report
HMIS	Health Management Information System
MCH	Maternal and Child Health
MIS	Management Information System
MMR	Maternal Mortality Ratio
MoHFW	Ministry of Health and Family Welfare
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NCD	Noncommunicable Diseases
NFHS	National Family Health Survey
NHM	National Health Mission
NITI	National Institution for Transforming India
NQAS	National Quality Assurance Standards
OBC	Other Backward castes
PAP	Program Action Plan
PDO	Project Development Objective
PforR	Program for Results
PHC	Primary Health Center
PMU	Program Management Unit
PSC	Program Steering Committee

PWD	Public Works Department
RCH	Reproductive and Child Health
RMO	Resident Medical Officer
RTI	Right to Information
SBCC	Social and Behavior Change Communication
SC	Scheduled Castes
ST	Scheduled Tribes
TNFSDA	Tamil Nadu Food Safety and Drug Administration
TNHSP	Tamil Nadu Health Systems Project
TNHSRP	Tamil Nadu Health System Reform Project

Table of Content

Executive Summary	vi
1 Introduction.....	1
1.1 The State Context	1
1.2 The Health Sector in Tamil Nadu	2
2. PROGRAM DESCRIPTION.....	2
2.1 Programme Development Objectives AND INDICATORS	2
2.2 Program Scope	3
2.3 Geographic Scope of the Program	5
3 Environmental and Social System Assessment (ESSA).....	5
3.1 Introduction to ESSA	5
3.2 Methodology Adopted for ESSA	6
3.3 Consultations and Disclosure	6
4 Institutional Assessment	7
4.1 Borrower’s Past Experience in Managing Environmental and Social Risks	7
4.2 Assessment of Institutional Roles and Capacity Gaps	7
4.2.2 Key findings of the institutional assessment on environment and social aspects	12
5 Legal and Regulatory Framework applicable to the Program	14
5.1 Environmental and Social Laws, Regulations and Policies	14
6 Assessment of Environment and Social Management Systems	20
6.1 Assessment of Environment Management Systems	20
6.1.1 Environmental management systems in State Programs	20
6.1.2 Potential Environmental Benefits	20
6.1.3 Potential Environmental Opportunities.....	20
6.1.4 Potential Environmental Impacts	21
6.1.5 Gaps and Risks in the Environmental System	23
6.2 Assessment of Social Management Systems	23
6.2.1 Stakeholder Analysis	23
6.2.2 Key Social Issues and Concerns	24
6.2.3 Gender Gap Assessment	28
6.2.4 Key Social Impacts	34

6.3	Key Risks and Gaps and Potential Measures to Align with ESSA Core Principles	35
6.3.1	Key issues concerning Institutional Strengthening	38
7	Assessment of Program Consistency with Core Principles in the Policy on Program for Results Financing	39
7.1	Environment	39
7.1.1	Core Principle 1	39
7.1.2	Core Principle 2	39
7.1.3	Core Principle 3	39
7.2	Social	40
7.2.1	Core Principle 4	40
7.2.2	Core Principle 5	40
7.2.3	Core Principle 6	41
8	Consultation and Disclosure	41
8.1	Consultation during the ESSA	41
8.2	Disclosure and Consultation on the Draft ESSA	41
8.3	Disclosure of the Draft and Final ESSA Reports	41
8.4	Citizen Engagement and Grievance Redress Mechanism	42
9	Conclusion and Recommendations	43
9.1	Program Exclusions and Recommendations on Environmental Aspects	43
9.2	Recommendations on Social Aspects	43
9.3	ESSA's Recommendations to Program Action Plan	44
	ANNEX 1: SOCIAL SAFEGUARD SCREENING CHECK LIST	47
	ANNEX 2: Minutes of essa disclosure and stakeholder consultation workshop – chennai – october 24, 2018	49

EXECUTIVE SUMMARY

Health Sector in Tamil Nadu

For a population of about 76 million, the State has a total bed strength of only 32,235 across 330 healthcare facilities under DMRHS, which likely to increase. The number of beds at private hospitals have not been quantified. Despite making good progress in maternal and child health outcomes, vaccination coverage has remained low at 70% for children between age of 12-23 months. The growth in Non-Communicable Diseases (NCD) is putting a dual health burden on the State and an increasing number of road accidents calls for improved pre- and post-hospitalization trauma care support. Overall, spending on the health is low at about 1% of the State's GDP.

Environmental and Social Systems Assessment

The World Bank policy and directive on PforR financing requires an environmental and social system assessment (ESSA) of operations financed under the PforR instrument. Accordingly, an ESSA of operations to be financed under the Program was carried out to assess the adequacy of environmental and social systems at the state level in context of the program boundary. The broad scope of the ESSA was to assess the extent to which the Program systems promote environmental and social sustainability; avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources; protect public and worker safety; manage land acquisition; consider issues related to indigenous peoples and vulnerable groups; and avoid social conflict. Further, it identified required actions for enhancing/strengthening the Program systems and mitigating potential environmental and social risks.

The specific objectives of the ESSA included the following: (a) identify potential environmental and social benefits, risks, and impacts applicable to the Program interventions; (b) review the policy and legal framework related to management of environmental and social impacts of the Program interventions; (c) assess institutional capacity for environmental and social management systems within the Program system; (d) assess Program system performance with respect to the core principles of the PforR instrument and identify gaps, if any; and (e) describe actions to be taken to fill the gaps that will be used as inputs to the PAP.

ESSA Methodology

The ESSA primarily relied on desk review of existing information and data sources, complemented by primary data collection/assessment through consultations/ interviews/ discussions with key stakeholders and field visits to healthcare facilities to capture opinions, anecdotal evidence, functional knowledge, and concerns. The desk review focuses on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. The desk review also covered the legal and regulatory requirements including those on environmental conservation, pollution control, occupational health and public safety, building construction codes, social inclusion and transparency and accountability mechanism, and social and cultural aspects related to the program, etc. The desk review included available documents, reports, data, websites etc.

The primary data collection and assessment involves consultation/ discussion/ interviews with key stakeholders including the key departments/ agency including TNHSP, Directorate of Family Welfare (DFW), Directorate of Public Health and Preventive Medicine (DPH), Directorate of Medical and Rural Health Services (DMRHS), Tamil Nadu State Health Society (TNSHS) including key staff members from NHM, Directorate of Medical Education (DME), Social Welfare Department, and Land Administration Department. The program design also benefited from the extensive consultation done under the earlier TNHSP project with tribal community in setting up agenda for tribal health program and which included consultations with various NGOs working on tribal health issues, tribal community and their ‘sangams’, and field visits to tribal areas, and also various government departments including the Health, Tribal Welfare and Forest Departments etc.. Further comments, suggestions and areas that require strengthening was sought during the free and prior informed consultation with NGOs working on tribal health and member of tribal community both men and women during the stakeholder consultation on 24th October 2018 and were also being incorporated and integrated into the program design.

Applicability of the ESSA Core Principles

<p><i>Core Principle 1: Applicable</i> Environmental and social management procedures and processes are designed to (a) promote environmental and social sustainability in the program design; (b) avoid, minimize, or mitigate against adverse impacts; and (c) promote informed decision-making relating to a program’s environmental and social effects</p>
<p><i>Summary Findings:</i> Certain interventions under the program would require mitigation actions and sustainable approaches to better manage program’s environmental effects. These include, among others:</p> <ul style="list-style-type: none"> • Issues related to generation, collection, segregation, storage, transport, management and disposal of Biomedical, Solid and Hazardous wastes. This is particularly relevant for facilities in peri-urban and rural areas. • Reducing the risk of contracting infections within healthcare facilities. The upkeep, cleanliness and hygiene of public conveniences in several of the healthcare facilities is deficient and inadequate resulting in sub-optimal infection control.
<p><i>Core Principle 2: Applicable</i> Environmental and social management procedures and processes are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program</p>
<p><i>Summary Findings:</i> Whereas interventions proposed under the program would not impact natural habitats and physical cultural resources, lack of pollution management infrastructure, particularly to treat and release effluents from large hospitals pose the risk of adversely impacting aquatic habitats.</p>
<p><i>Core Principle 3: Applicable</i> Environmental and social management procedures and processes are designed to protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and, (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazard</p>

Summary Findings: Certain interventions under the program could expose healthcare providers and beneficiaries to risks associated with exposure to hazardous materials, infections, radiation as well as risks related to construction activities, personal safety etc. This would require integrating mitigation actions in the operational manuals, SOPs, procedures etc. These include, among others:

- Improving occupational health and safety practices at healthcare facilities through infrastructure design, construction management, infection control, protocols for addressing accidental spills
- Providing protective clothing and personal safety equipment, as required
- Ensuring safe storage, segregation, transport and disposal of hazardous wastes

Core Principle 4: Applicable

Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards

Summary Findings: There is no land acquisition and/ or resettlement is anticipated under the program, as the program does not support any major construction and it is limited to minor renovation and repairs of health facilities. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility.

Core Principle 5: Applicable

Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups

Summary Findings: The program further supports the ongoing culturally appropriate tribal health agenda of the state by enhancing the quality of health care across all districts and in addition attempting to bridge inequality in health care provision among the poorer and backward districts of the state through the program component on #1 on quality of care, and #3 on equity.

Core Principle 6: Not Applicable

Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes

Summary Findings: The state has no conflict affected or territorial dispute area. The team does not expect any exclusion of any groups in terms of caste, religion, and/ or geography by the program activities. In addition, the state has been considered as generally a peaceful state in India with rare incidence of any civil strife or communal violence.

Key Findings of Institutional Assessment on Environment and Social Aspects

- **Management of Biomedical Waste.** The primary environmental risks and impacts of the program centers on the management of BMW generated at the healthcare facilities in the State. The previous Bank funded project built good capacity and made significant advances in management of BMW. The compliance with the provisions of the main regulatory instruments, the Bio-Medical Waste Management Rules, 2016 and the Bio-Medical Waste Management (Amendment) Rules, 2018, is generally adequate. Common Treatment Facilities (CTF) are regularly collecting wastes for disposal. However, no performance audits for the CTFs have been undertaken. Consumables,

such as, colored bins and other required items at the healthcare facility levels are available and optimally used.

- ***Management of other categories of healthcare wastes.*** These is limited institutional capacity to deal with other kinds of wastes generated at healthcare facilities, such as solid wastes, hazardous wastes, E-wastes and plastic wastes. These issues are gaining prominence and will require an integrated approach to manage all kinds of wastes.
- ***There is good institutional capacity for addressing inequity, inclusion and gender issues of the health sector.*** With the implementation of earlier World Bank-supported Tamil Nadu Health Systems Project (TNHSP), TNHSP Society has experience in efficiently coordinating with other Directorate and societies under the health department and with other departments to implement the program activities including addressing inequity, inclusion issues, gender issues and other social aspects. TNHSP had also coordinated the implementation of Tribal Health program under the earlier Bank supported project in an effective manner and helped mainstreamed that into the departments program after the closure of the project. However, with the change in the financing instrument i.e. PforR, there is a need to further strengthen the inter-institutional coordination mechanism.

Legal and Regulatory Framework

- ***The provisions of the existing environmental legal and regulatory framework are adequate but require enabling institutional and technical capacity to comply with.*** While the provisions of the Biomedical Waste Management & Handling) Rules, 1998 – as amended up to March 2018 are being implemented, provisions of other relevant environmental Acts, such as, hazardous, solid, plastic and E-waste Rules 2016 require additional capacity building efforts. Efforts are required to improve the monitoring of the management of different kinds of wastes.
- ***The existing legislative framework is adequate to ensure social sustainability of the protection of interest of marginalized and vulnerable population including the SC and ST population.*** It ensures (a) protection of the interest of SC and ST population, (b) non-discrimination based on religion, race, caste, and gender, and (c) transparency with right to information, (d) right to fair compensation in case of land acquisition. Tamil Nadu also has separate act for eviction of unauthorized occupants from public premises which defines the process, powers, nature of penalty and liabilities.

Assessment of Environmental and Social Management Systems

- ***No state level health policy that define clear goals and objectives to deal with the environmental issues of the health sector.*** The issue of growing loads of wastes generated from healthcare facilities, especially large hospitals, requires focused attention. Apart from management of biomedical wastes, other solid, hazardous, plastic and liquid wastes¹ are not managed adequately. The health sector is conspicuous in missing from the Tamil Nadu State Environment Policy 2017 which stresses on integrating environmental concerns in five development sectors.

¹ Only 14 out of a total of 90 healthcare facilities with a bed strength of over 100 have Effluent Treatment Plans

- ***Continuous education and training on biomedical waste management is lacking.*** Apart from inclusion of modules on BMW management in the formal medical education, there are inadequate opportunities for continuous training of medical staff. It is difficult to assess the level to which personal safety standards, especially when working with infectious diseases, chance needle pricks etc., are being adhered to.
- ***The program has low likelihood of any negative social impacts .*** The Tribal Health program initiated under the World Bank supported TNHSP project during 2005-15 has been effectively mainstreamed into the departments program after the closure of the project and includes regular activities such as provision of ASHAs in tribal/ difficult areas, creating birth waiting rooms in tribal PHCs and linking with 108 ambulances to ensure tribal mother reach the delivery point on time, running mobile medical units in tribal areas, placing of tribal counsellors in government hospital in tribal districts, strengthening emergency referral system from tribal PHCs, and screening of adolescent tribal children and unmarried school dropouts above the age of 14 in 30 selected tribal blocks in 13 Districts for early detection of Sickle Cell, Anaemia & Thalassemia which are common diseases among tribal population.
- ***The key social issues identified are related to inequalities in health sector on account of maternal and child health (MCH) outcomes, and issues related to quality of health care provision.*** These are being addressed through quality of care and equity component of the program. Though the program will be implemented across all districts in the state of Tamil Nadu, to address geographic disparities on account of MCH and quality related issues, special focus will be maintained in select nine priority districts which constitute the bottom quintile of the MCH indicators in the state and other poorer districts with relatively larger proportion of tribal population, and includes Virudhunagar, Thoothukkudi, Tirunelveli, Theni, Ramanathapuram, Ariyalur, The Nilgiris, Dharmapuri, and Tiruvannamalai districts. This also helps in project addressing the gender gaps with respect to reproductive health in the priority (low-performing) districts. In addition, addressing another gender concern by focusing on the specific disease concern of women (Cervical and Breast cancer) by the program.

Conclusion and Recommendations

The ESSA concludes that the program has a moderate environmental and social risk. The program risks on dealing with BMW are reasonably covered but will require efforts to address other environmental challenges emerging from the health sector. The institutional setup has the potential to develop required capacity to deal with the potential environmental risks and challenges. The program has low likelihood of any negative social impacts . There is no land acquisition is anticipated as the program does not support any major construction and it is limited to minor renovation and repairs. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility.. The result areas focus on quality of health care across the state and bridging inequalities in priority districts and bottom most quintile on MCH indicators and other poorer tribal districts.

ESSA DLI/Program Actions

The ESSA proposes the following DLI/Program Actions.

- ***DLI: Develop an Environment Strategy for the Health Sector in Tamil Nadu.*** The proposed environment strategy for Tamil Nadu will include provisions/ways to improve the efficiency of healthcare delivery by addressing issues such as waste management, resource efficiency, type-design of healthcare facilities, especially the wellness centers proposed by the State, effluent and hazardous pollution by expanding the pollution management set-up, particularly Effluent Treatment Plants, greenhouse gas emission footprint etc. The strategy will include an institutional capacity building plan, including a human resource plan and integration of healthcare waste management with the State's HMIS.
- ***Program Action 1: Introduce continuous refresher trainings on biomedical and other wastes management.*** Provide targeted training and refresher training for staff at all levels and across all healthcare facilities in managing biomedical, hazardous, plastic and other solid wastes.
- ***Program Action 2: Performance audits of CTFs.*** Carry out annual audit of CTFs, to assess the performance of BMW segregation, collection and transportation, performance of CTFs in line with the BMW Rules, 2016 and overall environment management of CTFs.

Environmental and Social System Assessment

Tamil Nadu Health System Reform Project

1 INTRODUCTION

1. Tamil Nadu ranks among the high-performing states in India with respect to human development as well as health index, attaining 3rd rank on the Human Development Index among all states in India (2014) and again 3rd rank among states on the NITI Aayog Health Index (2018). The Government of Tamil Nadu (GoTN) has made a concerted effort to strengthen public sector health service delivery, which is reflected as improved results in many areas. The earlier World bank supported TNHSP, a US\$210 million project over 2005-2015 period, also contributed towards making significant improvements in maternal and child health services and enabled the GoTN to pilot several initiatives to address the growing burden of NCDs. While, there is overall improvements in health care delivery in many areas, with the proposed program, GoTN wants to further strengthen management of NCDs, and to engage on a more advanced agenda with systems-based approach for improving the quality of health service delivery.

1.1 The State Context

2. Tamil Nadu is the sixth most populous state in India with 48 percent of the population residing in urban areas. Between 2000 and 2010, population grew by 15.6 percent, but the total fertility rate has declined from 2.2 to 1.6 in 2015-16. According to the 2011 Census of India, Scheduled Castes represent 20 percent of Tamil Nadu's population, Scheduled Tribes (ST) comprise 1.1 percent, Other Backward Castes (OBCs) form 68 percent, and others constitute 10.5 percent. There are 36 different tribes, present in almost all the districts, across 2860 villages located in 63 blocks of the state. The Nilgiris district has the highest percentage of STs (4.5%), particularly PVTG²s, has the lowest population overall as well as the lowest population density, followed by Dharmapuri district (4.2%). Most of the tribal communities are small in size and the exceptions are the Irulas and the Malaiali. Todas with a population of about 2000 and Kotas with a population of less than 500 are PVTGs. Although they are found across the state, their major presence is in the north, central and western parts of the state. Majority of the tribal population in Tamil Nadu live in hilly ranges viz., Eastern Ghats, Western Ghats and the discontinuous hill tracts adjoining the plains and the hills.
3. Tamil Nadu has experienced steady economic growth and poverty³ has declined considerably over the last few years. Tamil Nadu ranks among the high-performing states in India with respect to human development, attaining 3rd rank on the Human Development Index among all states in India (2014). This achievement is reflected in high literacy (80 percent) and vastly improved health outcomes. The Government of Tamil Nadu has set high standards for itself with the Vision 2023 document envisaging inclusive growth with

² Particularly Vulnerable Tribal Groups

³ Around 12 percent in 2012 (World Bank estimates).

six-fold increase in per capita incomes in real terms to reach the level of current median income of the upper middle-income countries and also to attain a human development index comparable to that of the developed countries by 2023.

4. The State is comprised of 32 districts and 10 corporations. Based on the State's Human Development Index, which is a composite measure of attainment in three core dimensions of well-being: education, health and income, the five worst-performing districts were: Thiruvarur (HDI of 0.568), Villupuram (0.561), Theni (0.539), Perambalur (0.447), and Ariyalur (0.282). In addition, Ramanathapuram and Virudhunagar districts have been included in NITI Aayog's list of 115 aspirational districts in India, requiring substantial improvements.

1.2 The Health Sector in Tamil Nadu

5. For a population of about 76 million, the State has a total bed strength of only 32,235 across 330 healthcare facilities under DMRHS, which is likely to increase. The number of beds at private hospitals has not been quantified. Despite making good progress in maternal and child health outcomes, vaccination coverage has remained low at 70% for children between age of 12-23 months. The growth in Non-Communicable Diseases (NCD) is putting a dual health burden on the State and an increasing number of road accidents calls for improved pre- and post-hospitalization trauma care support. Overall, spending on the health is low at about 1% of the State's GDP.

2. PROGRAM DESCRIPTION

6. Tamil Nadu's health program is anchored in its Vision 2023 and built around the Sustainable Development Goal (SDG) 3: "to ensure healthy lives and promote wellbeing for all at all ages." For the priorities set out in Vision 2023, the broader government program is comprised of the work-programs implemented by seven key Departments and Societies (out of ten) with a combined estimated budget of US\$8.2 billion over the next five years and constitutes the programme boundary of the proposed program. These include TNHSP Society, National Health Mission (NHM), Directorate of Medical Education (DME), Directorate of Medical and Rural Health Services (DMRHS), Directorate of Public Health (DPH), Directorate of Indian Medicine and Homeopathy (DIMH), and TN Food Safety and Drug Administration (TNFSDA). Their work-programs are critical to the achievement of results envisaged under the above-mentioned policies and vision documents.
7. The estimated cost of the Program is US\$5.3 billion of which World Bank financing is US\$287 million. The duration of the Program is 5 years (2019 -2024).

2.1 Programme Development Objectives AND INDICATORS

8. The Program Development Objective (PDO) is to improve quality of care, strengthen management of non-communicable diseases (NCDs) and injuries, and reduce inequities in reproductive and child health services in Tamil Nadu. The following indicators will be used to measure the achievement of the PDO:

- a) Accreditation of public health facilities (primary, secondary and tertiary) [of which in priority districts]
- b) Score in quality dashboard for primary, secondary and tertiary level facilities
- c) Utilization of diagnostic services in public sector facilities for cervical and breast cancers
- d) Patients with hypertension or diabetes whose blood pressure or blood sugar are under control
- e) Provision of 24x7 trauma care services
- f) Utilization of reproductive and child health services in priority districts

9. In addition, the Disbursement Linked Indicators (DLIs) for the Program are as follows:

Foundational DLIs

- i. Development and adoption of policies, strategies, guidelines and other foundational activities

Quality of Care DLIs

- ii. Accreditation of public health facilities (primary, secondary and tertiary)
- iii. Quarterly reporting of quality dashboard at facility (primary, secondary and tertiary) and aggregate levels
- iv. Implementation of other quality improvement initiatives

NCDs and Injuries DLIs

- v. Patients with hypertension or diabetes whose blood pressure or blood sugar are under control
- vi. Implementation of performance-based incentive mechanism in primary health centers
- vii. Provision of 24x7 trauma care services

Equity DLIs

- viii. Utilization of reproductive and child health services in priority districts

Cross-Cutting DLIs

- ix. Strengthening content of, access to and use of HMIS
- x. Operational research to inform implementation and decision making
- xi. Annual District and State Health Assemblies for voice, agency and accountability

2.2 Program Scope

10. While the priority interventions discussed below in the Program scope are categorized by results areas, many of them will support systematic reforms with cross-cutting outcomes. Included in this are: (i) strengthening, integration, transparency and use of data systems; (ii) development of an online quality of care dashboard for all levels of health facilities; (iii) strengthening and scaling up of quality assurance mechanisms; (iv) introduction of a performance appraisal system and mechanism to incentivize performance; (v)

strengthening of the continual medical education program; (vi) strengthening of health administration; and (vii) district and state health forums for community voice and agency using the Panchayati Raj system. These interventions aim to improve the planning and management of the health sector, strengthen institutions and enhance state capacity to address “how” the sector operates rather than “what” specifically it does. Good practices and innovations from Tamil Nadu are being scaled up while others from around the world are being introduced into the Program to improve management of the public health sector, increase transparency, and strengthen accountability. These key “hows” will enable Tamil Nadu to move from a focus on access to an increasing focus on quality of care. These systematic reforms will also better position the state to tackle emerging disease patterns that require a different approach to service delivery while simultaneously closing the remaining gaps on last mile delivery of basic RCH services.

11. The key result areas of the programme are as below.

Results Area #1: Quality of Care

- Improved score in quality dashboard
- Improved hygiene, sanitation and waste management practices
- Increase in NQAS/NABH accreditation
- Quarterly reporting of quality dashboard for primary, secondary, and tertiary facilities and collation at aggregate levels
- Implementation of quality improvement initiatives
- Increase in % of health providers annually receiving CME

Results Area #2: Non-Communicable Diseases, Mental Health & Injuries

- Increased utilization of diagnostic services (passive screening) in public sector facilities
- Patients with disease under control
- Increased awareness of NCD risk factors NCDs and mental health
- % of red category patients at the hospital arriving in an ambulance
- % of patients with head injury undergoing a CT scan within 45 minutes of reaching the hospital
- % of patients with trauma undergoing e-FAST (focused abdominal sonography in trauma) within 30 minutes of reaching the hospital)
- Better equipped ambulance system to improve pre-hospital care
- Provision of 24x7 trauma care services

Results Area #3: Equity

- Reduced inequities in utilization of select MCH services between top and bottom quintile of districts
- Increased provision of select MCH services at primary and secondary facilities in priority districts (bottom quintile of districts on select MCH services)

2.3 Geographic Scope of the Program

12. The Program will be implemented across all districts in the state of Tamil Nadu. However, to address geographic disparities, special focus will be maintained in select nine priority districts i.e. Virudhunagar, Thoothukkudi, Tirunelveli, Theni, Ramanathapuram, Ariyalur, The Nilgiris, Dharmapuri, and Tiruvannamalai.

3 ENVIRONMENTAL AND SOCIAL SYSTEM ASSESSMENT (ESSA)

3.1 Introduction to ESSA

13. The World Bank policy and directive on PforR financing requires an environmental and social assessment (ESSA) of operations financed under the PforR instrument. Accordingly, an ESSA of operations to be financed under the Program was carried out to assess the adequacy of environmental and social systems focusing at the state level in context of the program boundary. The broad scope of the ESSA was to assess the extent to which the Program systems promote environmental and social sustainability; avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources; protect public and worker safety; manage land acquisition; consider issues related to indigenous peoples and vulnerable groups; and avoid social conflict. Further, it identified required actions for enhancing/strengthening the Program systems and mitigating potential environmental and social risks.
14. The ESSA provides a comprehensive review of relevant government systems and procedures that address environmental and social issues associated with the Program. The ESSA describes the extent to which the applicable government environmental and social policies, legislations, program procedures and institutional systems are consistent with the six 'core principles' of OP/BP 9.00 and recommends actions to address the gaps and to enhance performance during Program implementation.
15. The Specific objectives of ESSA are as follows.
 - i. to identify the potential environmental and social impacts/risks/benefits applicable to the Program interventions,
 - ii. to review the policy and legal framework related to management of environmental and social impacts of the Program interventions,
 - iii. to assess the institutional capacity for environmental and social impact management within the Program system,
 - iv. to assess the Program system performance with respect to the core principles of the PforR instrument and identify gaps in the Program's performance,
 - v. to describe actions to fill the gaps that will input into the Operation Action Plan in order to strengthen the Program's performance with respect to the core principles of the PforR instrument.

3.2 Methodology Adopted for ESSA

16. The ESSA was prepared based on field visits, consultations with various stakeholders in the field and desk review of existing information and data sources. In addition, primary data collection/assessment was undertaken through consultations/ interviews/ discussions with key stakeholders to capture opinions, anecdotal evidence, functional knowledge, and concerns. Field visits were undertaken in three districts (Chennai, Tiruvallur and Kancheepuram) covering five hospitals⁴, upgraded PHC and Medical Colleges and one Common Treatment Facility (CTF).
17. The desk review focused on understanding the existing policy, operational procedures, institutional capacity and implementation effectiveness relevant to the activities under the Program. The desk review also covered the legal and regulatory requirements including those on environmental conservation, pollution control, occupational health and public safety, building construction codes, social inclusion and transparency and accountability mechanism, and social and cultural aspects related to the programme, etc. The desk review included available documents, reports, data, websites etc.
18. The primary data collection and assessment involves consultation/ discussion/ interviews with key stakeholders including the key department/ agency including TNHSP, Directorate of Family Welfare (DFW), Directorate of Public Health and Preventive Medicine (DPH), Directorate of Medical and Rural Health Services (DMRHS), Tamil Nadu State Health Society (TNSHS) including key staff members from NHM and NUHM, Directorate of Medical Education (DME), nodal officer for HMIS, Social Welfare Department, and Land Administration Department. Comments, suggestions and areas that require strengthening was sought during the free and prior informed consultation with NGOs working on tribal health and member of tribal community during the stakeholder consultation on 24th October 2018.
19. The program design also benefited from the extensive consultation done under the earlier TNHSP project with tribal community in setting up agenda for tribal health program and which was mainstreamed and expanded under the NHM after the project closure. The Tribal Plan was developed based on extensive consultations with various NGOs working on tribal health issues, tribal community and their ‘sangams’, and field visits to tribal areas, and also various government departments including the Health, Tribal Welfare and Forest Departments etc.. Further discussion with NGOs working on tribal health during the preparation of current program suggests improvement in access to health services and need for continuing the tribal health program to achieve desired results.

3.3 Consultations and Disclosure

20. Multiple consultations were undertaken with relevant departments, including TNHSP, Directorate of Family Welfare (DFW), Directorate of Public Health and Preventive Medicine (DPH), Directorate of Medical and Rural Health Services (DMRHS), Tamil Nadu State Health Society (TNSHS) including key staff members from NHM, Directorate of Medical Education (DME), Social Welfare Department, and Land Administration

⁴ (i) Government Taluk Hospital Tambaram, Kancheepuram (ii) Rajiv Gandhi Govt General Hospital-Chennai and (iii) Government Taluk Hospital, Tiruvallur: (iv) Sundaram Medical Foundation (Private Hospital); and (V) Sri Ramachandra Hospital, Chennai (Private Hospital)

Department. A free and prior informed consultation with non-government entities and member of tribal community among other stakeholders was conducted on 24th October in Chennai and included various NGOs working on health and/or with tribal and vulnerable population from different parts of the state and neighbouring areas including from Chennai, Puducherry, Selam, Vellore, Nilgiris, and Ooty; and members of tribal community including members from Nilgiris Particularly Vulnerable Tribal Group (PVTG) Council and Irula tribal society of Nilgiris. The representation from NGOs as well as from tribal community included both men and women. Their comments and suggestions are also being incorporated and integrated into the program design.

21. The draft report of the ESSA was disclosed through a state-level consultation workshop on October 24, 2018 at Chennai. The draft report was finalized after incorporating relevant suggestions from the stakeholders during the consultation workshop as presented in Annex-2 of this report. The final report of the ESSA will be disclosed on the website of the Health Department (GoTN) and at World Bank's external website.

4 INSTITUTIONAL ASSESSMENT

4.1 Borrower's Past Experience in Managing Environmental and Social Risks

22. GoTN has had more than four decades of experience in working with World Bank and with more than 40 projects (both national and state projects) over this period clearly shows their prior experience in implementation of Bank safeguard policies. GoTN has had a continuous and long engagement with the Bank on health and nutrition projects among other projects. Apart from various national level health programmes that are supported by the World Bank where Tamil Nadu is also one of the states for implementation, the TNHSP started in 2005 and closed in 2015. While the TNHSP project is closed, the institutional setup is still functional and active with other development partner projects. Over the years, access to health services has increased within the state and management of BMW has also seen considerable improvement at all levels of healthcare facilities. This is indicative of good borrower capacity to deal with the environmental and social aspects of the proposed program. However, since closure of the previous project, there is no technical specialist in TNHSP for managing the environmental risks and impacts of the proposed program. However, under the proposed program two specialists (one Environmental Specialist and one Social Safeguard Specialist) are to be recruited in the PMU.

4.2 Assessment of Institutional Roles and Capacity Gaps

23. Notwithstanding the already built capacity within the borrower's institutions, a detailed assessment of all the relevant institutional stakeholders was undertaken to identify any critical and/or significant gaps, as well as smaller shortcomings for effectively managing the environmental and social issues of the health sector in Tamil Nadu. In addition to assessing the institutions at the national and state level, the ESSA also looked into some of the ongoing national health programs. The institutional assessment has contributed in coming up with recommendations, program actions and one disbursement linked indicator that will support the further building of borrower capacity. The table below gives the findings of the institutional assessment.

Table: Capacity Gap Analysis of Relevant Institutions Related to the Proposed Program

Institution	Roles and Responsibilities	Capacity Gap Analysis
<i>National Level Institutions</i>		
<p><u>Department of Health, Ministry of Health and Family Welfare (MoHFW)</u></p>	<ul style="list-style-type: none"> ▪ Deals with health care, including awareness campaigns, immunisation campaigns, preventive medicine, and public health services ▪ Administratively control many national health programmes such on HIV/ AIDs, TB, Cancer, Filaria, Iodine deficiency, Leprosy, Mental health, Blindness and Deafness, Tobacco Control, Vector Borne Diseases, on Prevention and Control of Diabetes, CVD and Stroke, and Universal immunization ▪ Heads many statutory bodies, such as, Medical Council of India (MCI), Indian Nursing Council, Dental Council of India, and Pharmacy Council of India (PCI) 	<ul style="list-style-type: none"> ▪ No significant gaps identified, as health schemes are quite inclusive and well implemented ▪ Provides funds under NHM for BMWM
<p>Department of Family Welfare Under MoHFW</p>	<ul style="list-style-type: none"> ▪ Deals with issues like reproductive health, maternal health, paediatrics, information, education and communications; cooperation with NGOs and international aid groups; and rural health services ▪ Responsible for various institutions including the 18 Population Research Centres (PRCs) at six universities and six other institutions across 17 states, National Institute of Health and Family Welfare (NIHFW), International Institute for Population Sciences (IIPS), Central Drug Research Institute (CDRI), and Indian Council of Medical Research (ICMR) 	<ul style="list-style-type: none"> ▪ No significant gaps identified at the national level, a scheme implementation is at the state level ▪ Institutions under its aegis provide technical support and guidance for better implementation of national schemes and programs
<p>Ministry of Tribal Affairs</p>	<ul style="list-style-type: none"> ▪ Nodal Ministry for overall policy, planning and coordination of programmes for development of STs 	<ul style="list-style-type: none"> ▪ No significant gaps identified, as the mandate and functions of the ministry support welfare of indigenous people

Institution	Roles and Responsibilities	Capacity Gap Analysis
Ministry of Social Justice and Empowerment	<ul style="list-style-type: none"> ▪ Responsible for bringing marginalized sections of the society viz. Scheduled Castes, Backward Classes, Persons with Disabilities, Aged persons etc. into the mainstream of development by making them self-reliant ▪ Through the Scheduled Castes Development Bureau, implements Scheduled Caste Sub-Plan (SCSP) which is an umbrella strategy to ensure flow of targeted financial and physical benefits from all the general sectors of development for the benefit of SCs 	<ul style="list-style-type: none"> ▪ No significant gaps identified ▪ Support for marginalized section is well mainstreamed in sector programs ▪ Investments by the ministry do not result in any adverse environmental impacts and/or risks
<i>State Level Institutions</i>		
Tamil Nadu Health Systems Project (TNHSP)	<ul style="list-style-type: none"> ▪ Established in 2005 to implement World Bank funded TNHSP ▪ Supporting other bilateral programmes on health sector with JICA ▪ Will play a key role in the proposed new program 	<ul style="list-style-type: none"> ▪ No significant gaps identified on managing social risks and impacts ▪ Need to further strengthen the inter-institutional coordination mechanism ▪ Successfully created an agenda of focusing on tribal health which are being followed by the department even after closure of the programme under their own budgetary process ▪ On the environmental management side, need to develop technical capacity through recruitment of an expert for overseeing BMWM
Directorate of Family Welfare (DFW)	<ul style="list-style-type: none"> ▪ Helps implement the National Family Welfare Programme in the state to provide maternal and child health care ▪ Monitors prevention of female foeticide and female infanticide 	<ul style="list-style-type: none"> ▪ No significant capacity gap identified

Institution	Roles and Responsibilities	Capacity Gap Analysis
Directorate of Public Health and Preventive Medicine (DPH)	<ul style="list-style-type: none"> ▪ Responsible for the implementation of various National and State Health Programmes ▪ Plans and implements measures to prevent the occurrence of communicable diseases ▪ Provisions of primary health care, including the Maternity and Child Health Services, Immunisation of children against vaccine preventable diseases, control of communicable diseases, control of malaria, filaria, Japanese encephalitis, elimination of leprosy, iodine deficiency disorder control programme, prevention of food adulteration, health check-ups of school children, health education of the community and collection of vital statistics under birth and death registration system and environmental sanitation 	<ul style="list-style-type: none"> ▪ No significant gaps identified on the social side, as services have adequate coverage ▪ On the environment side, need to improve reporting on BMWM form healthcare services ▪ Need to strategize on dealing with wastes other than BMW
Directorate of Medical and Rural Health Services (DMRHS)	<ul style="list-style-type: none"> ▪ Responsibility for rendering medical care services to the public through the Non-Teaching Medical Institutions ▪ Provides medical services through the grid of 25 District Head Quarters Hospitals, 162 Taluk Hospitals, 79 Non-Taluk Hospitals, 12 Dispensaries and 11 Mobile Medical Units. ▪ Besides 23 District T.B. Centres, 5 T.B. Hospitals and 2 TB Clinics and 1 Leprosy Hospital 	<ul style="list-style-type: none"> ▪ Gaps in institutional capacity to address geographical inequity in accessing health care ▪ Need to improve monitoring and reporting on BMWM ▪ Improve efficiency in energy and water use at the facility level
National Health Mission (NHM)	<ul style="list-style-type: none"> ▪ Works to pool all resources available in implementation of the programmes ▪ All National Health Programmes at the State and District level are brought under one umbrella of NHM ▪ Provides funding support for BMWM through CTFs ▪ Has six financing components i.e. (1) NRHM-RCH Flexi pool, (2) NUHM Flexi pool, (3) Communicable disease Flexi pool, (4) Flexible pool for Non-communicable disease (NCD) including Injury and Trauma, (5) 	<ul style="list-style-type: none"> ▪ No significant gaps identified on the social side ▪ While adequate funding is provided, need to improve monitoring of BMWM

Institution	Roles and Responsibilities	Capacity Gap Analysis
	Infrastructure and Maintenance, and (6) Family Welfare Central Sector components	
Directorate of Medical Education (DME)	<ul style="list-style-type: none"> ▪ Responsible for teaching, training and research programmes in the medical field and patient care services ▪ Establishes and maintains well-equipped teaching institutions, which are the premier referral centres with state-of-the-art equipment and technology 	<ul style="list-style-type: none"> ▪ Capacity for supporting continued medical education (CME) requires additional efforts ▪ Gap in provisioning of continued training and refresher training on BMWM for healthcare staff for all levels
Public Works Department (PWD)	<ul style="list-style-type: none"> ▪ Constructs and maintains buildings of various Government Departments ▪ Will construct or rehabilitate and repair healthcare facilities 	<ul style="list-style-type: none"> ▪ Need to enhance capacity in managing issues related to contracted labor ▪ Need to improve health and safety of workers at construction sites and follow good construction management practices
Adi Dravidar and Tribal Welfare Department	<ul style="list-style-type: none"> ▪ Implements the programmes related to the welfare of Scheduled Caste and Scheduled Tribe population in the state for their socio-economic advancement ▪ Nodal department for the formulation and implementation of TSP at State Level 	<ul style="list-style-type: none"> ▪ No significant gaps identified ▪ TSP planning and implementation with detailed guidelines and budgetary process being done well
Social Welfare Department	<ul style="list-style-type: none"> ▪ Entrusted with ensuring the welfare of the poor, the down-trodden, Women, Children, Senior Citizens and trans-genders ▪ Promotes empowerment and improvement of social status of women 	<ul style="list-style-type: none"> ▪ No significant gaps identified
State Pollution Control Board	<ul style="list-style-type: none"> ▪ Provisioning of licence to CTF for operating Bio-medical treatment facility ▪ Monitoring of compliance with BMWM Rules and other relevant regulatory instruments 	<ul style="list-style-type: none"> ▪ Generally, under staffed for adequate monitoring ▪ No capacity gaps in terms of technical capacity and role clarity

4.2.1.1 Relevant National Programs

24. ***The National Cancer Control Programme:*** The National Cancer Control Programme was initiated in the year 1975. Subsequently it was revised in the year 1984-85 with emphasis on primary prevention and early detection of cancer. Various schemes were introduced under the programme in order to strengthen cancer control activities in the country. Under the programme Regional Cancer Centres (RCCs) have been established to improve availability of cancer treatment facilities. In order to further enhance the treatment facilities across the country and reduce the geographical gap in the availability of cancer care facilities, newer RCCs are being recognized.
25. ***The National Mental Health Programme (NMHP):*** The Government of India has launched the National Mental Health Programme (NMHP) in 1982, keeping in view the heavy burden of mental illness in the community, and the absolute inadequacy of mental health care infrastructure in the country to deal with it.
26. ***National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS):*** The Non-Communicable Diseases (NCDs) like Cardiovascular Diseases (CVD), Cancer, Chronic Respiratory Diseases, Diabetes and other NCDs are estimated to account for around 60% of all deaths, thus making them the leading causes of death. Therefore, the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched in 2010 in 100 districts across 21 States, in order to prevent and control the major NCDs. The main focus of the programme is on health promotion, early diagnosis, management and referral of cases, besides strengthening the infrastructure and capacity building.
27. ***Tribal sub plan and Scheduled Caste sub plan:*** The strategy of Tribal Sub Plan (TSP) has been in force since 1974, to ensure adequate flow of plan resources for the development of Scheduled Tribes, while the strategy of Scheduled Castes Sub Plan (SCSP) (earlier known as the Special Component Plan for Scheduled Castes) has been in force since 1979-80, to ensure proportionate flow of plan resources for the development of Scheduled Castes. The revised 2014 guideline for implementation of TSP and SCSP suggests all Central Ministries and Departments to (a) Earmark funds under SCSP and TSP from the plan outlay at least in proportion to the percentage of Scheduled Caste and Scheduled Tribe population in the country, (b) Place the funds earmarked for SCSP and TSP under a separate Minor Head '789' and '796' to ensure their non-diversion to any other scheme, (c) Include only those schemes under SCSP and TSP which ensure direct benefits to individuals or families belonging to Scheduled Castes and Scheduled Tribes, and (d) Only include in the SCSP and TSP outlay for area-oriented schemes which directly benefit hamlets/villages which have more than 40 percent Scheduled Castes and Scheduled Tribes population.

4.2.2 Key findings of the institutional assessment on environment and social aspects

28. ***Management of Biomedical Waste.*** The primary environmental risks and impacts of the program centers on the management of BMW generated at the healthcare facilities in the State. The previous Bank funded project built good capacity and made significant advances in management of BMW. The compliance with the provisions of the main regulatory

instruments, the Bio-Medical Waste Management Rules, 2016 and the Bio-Medical Waste Management (Amendment) Rules, 2018, is generally adequate. Within the healthcare premises, sharps, blood and other human tissues, infected materials are disinfected and treated as per regulatory requirements. Consumables, such as, colored bins and other required items at the healthcare facility levels are available and optimally used. At the hospital level waste segregation is practiced and segregated waste is properly stored temporarily within designated dedicated storage room in the healthcare premises from where it is picked regularly and transported to the Common Treatment Facilities (CTF) for final disposal. However, no performance audits for the CTFs have been undertaken. The management of BMW are also the focus of the review by the TNPCB. Despite improvement in BMWM in the State, there is inadequacy in dealing with liquid wastes generated from hospitals.

29. ***Management of other hazardous wastes, including risk of exposure to radiation.*** Documentation, procedures and capacity are in place to manage the radiation impacts and risks. On radiation exposure to medical workers and communities, in healthcare facilities, there are proper protection ware and shelter, and portable detectors are provided to monitor and control radiation leakage. For medical radiation equipment, the licensing, safe use, work-site detection, maintenance, emergency response and decommissioning are specifically required and regulated. For radiation contaminated wastes, specific requirements on collection, separation, storage, packaging, transport, and final disposal are required as well. While larger hospitals are equipped with protocols and kit to handle mercury spills, this capacity is required to be built in some of the PHCs.
30. ***Management of other categories of wastes from healthcare facilities.*** These is limited institutional capacity to deal with other kinds of wastes generated at healthcare facilities, such as solid wastes, hazardous wastes, E-wastes and plastic wastes. These issues are gaining prominence and will require an integrated approach to manage all kinds of wastes.
31. ***There is good institutional capacity for addressing inequity, inclusion and gender issues of the health sector.*** Within the Department of Health and Family Welfare, a few of the Directorates and Societies are the critical actors in implementation of programme activities and achievement of results. With the implementation of earlier World Bank supported health project in Tamil Nadu, the DoHFW in general, and the TNHSP Society in particular has experience in efficiently coordinating with other Directorate and societies including DMRHS, DME, DPH, NHM, DIMH and TNFSDA and with other departments to implement the program activities including addressing inequity, inclusion issues, gender issues and other social aspects. TNHSP had also coordinated the implementation of Tribal Health program under the earlier Bank supported project in an effective manner and helped mainstreamed that into the departments programme after the closure of the project. However, with the change in the financing instrument i.e. PforR, there is a need to further strengthen the inter-institutional coordination mechanism.

5 LEGAL AND REGULATORY FRAMEWORK APPLICABLE TO THE PROGRAM

5.1 Environmental and Social Laws, Regulations and Policies

32. Several relevant national and state level laws, regulations and policies were analysed to for the proposed program. The analysis covered whether there are some significant gaps that prevent to realize the environmental and social objectives as included in the ESSA core principles. Table gives the detailed analysis of the legal and regulatory framework applicable to the program.
33. Adequacy of legislative framework on social aspects. The existing legislative framework is adequate to ensure social sustainability and the interest of marginalized and vulnerable population including the SC and ST population. It ensures (a) protection of the interest of SC and ST population, (b) non-discrimination based on religion, race, caste, and gender, and (c) transparency with right to information, (d) right to fair compensation in case of land acquisition. Tamil Nadu also has separate act for eviction of unauthorized occupants from public premises which defines the process and powers to various authorities in order to evict the unauthorized occupants along with nature of penalty and liabilities. However, a small gap emerges on the policy and legislative frame for eviction of squatters where the World Bank's policy takes a more humanitarian approach and provides for assistance in terms relief and rehabilitation of squatters. Though, it is unlikely that any additional land is required beyond the current footprint of the health facility, there is an outer chance that health facilities need to evict squatters in order to expand services.
34. Adequacy of legislative framework on environmental aspects. The provisions of the existing environmental legal and regulatory framework are adequate but require enabling institutional and technical capacity to comply with. While the provisions of the Biomedical Waste Management & Handling) Rules, 1998 – as amended up to March 2018 are being implemented, provisions of other relevant environmental Acts, such as, hazardous, solid, plastic and E-waste Rules 2016 require additional capacity building efforts. Efforts are required to improve the monitoring of the management of different kinds of wastes. The ambit of the rules has been expanded to include:
- (a) camps for vaccination, blood donation, surgical or any other healthcare activity;
 - (b) Phasing out chlorinated plastic bags, gloves and blood bags within two years;
 - (d) Training and immunization for all health care workers regularly;
 - (e) Bar-Coding for bags or containers containing bio-medical waste for disposal;
 - (f) Reporting major accidents;
 - (g) More stringent standards for incinerator to reduce emission of pollutants;
 - (h) Existing incinerators to achieve the standards for retention time in secondary chamber and Dioxin and Furans within two years;
35. Setting up of Common Treatment Facilities for Bio-Medical Wastes. BMW is listed as hazardous waste due to its infectious characteristics. Any activities from temporary storage,

transportation, utilizing and final disposal/treatment requires valid license. Government Regulation No. 101/2014 on Management of Toxic and Hazardous Waste regulates the proper management of hazardous waste covering; (i) method of identifying, reducing, storing, collecting, transporting, utilizing, processing, and disposing of hazardous wastes; and (ii) risk mitigation and emergency responses to address environmental pollution caused by hazardous waste. The State Pollution Control Board plays an important role in granting consent to establish and operate licence to the CTF operators, which are largely private sector players. The State has clearly defined procedures and provisions to establish new/additional CTFs for BMW disposal or other facilities (such as landfill) for managing non-hazardous wastes.

Table: Environmental and Social Laws, Regulations and Policies that are relevant to the Proposed program

Sl. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Program and key Findings
1	The Constitution of India (especially, Articles 15,16 and 46)	The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the Scheduled Castes and the Scheduled Tribes and also directs the state to protect them from social injustice and all forms of exploitation.	Relevant to the overall Program
2	Bio-medical Waste Management(Amendment) Rules,2018	<p>Schedule 1: Categorization and Management Schedule 2: Standards for treatment and disposal of BMW Schedule 3: Prescribed Authority and duties Schedule 4: Label of containers, bags and transportation of Bio-Medical waste</p> <p>The provisions under the rules provide for both solid and liquid medical wastes. Liquid waste should be treated with 1% hypochlorite solution before discharge into sewers. Hospitals not connected to municipal WWTPs should install compact on-site sewage treatments (i.e. primary and secondary treatment, disinfection) to ensure that wastewater discharges meet applicable thresholds</p>	<p>Highly relevant</p> <p>As per Accreditation requirements, healthcare facilities are required to develop Standard Operating Procedures (SOPs) in the handling of medical solid, liquid and radioactive wastes.</p> <p>On solid BMW there is good overall capacity and compliance. On liquid BMW, there are significant gaps in treatment and disposal of wastewater from hospitals.</p> <p>The requirements in MoEFCC Notification-G.S.R.234(E), dated 28th March,2016 are found to be equivalent to the WBG EHS Guidelines for Healthcare Facilities as they cover good international industry practice</p>

Sl. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Program and key Findings
			(GIIP) such as labelling and symbols for hazardous materials and waste, waste reduction, segregation, storage, transportation (manifest), treatment and handling (with autoclave, incineration), health workers occupational health and safety and public health and safety. The effluent standards are also equivalent or better than the WBG EHS Guidelines for Health Care Facilities (Performance Monitoring); for example, 100mg/L for COD (India) and 250 mg/L (WBG Guidelines).
3	E-Waste (Management and Handling) Rules 2011 as Amendment up to 2018	To address leakage of e-waste to informal sector at all the stages of channelization. The 2016 Amendment brought health care facilities (with turnover over INR 20 crore or more than 20 employees).	Relevant as it is applicable for consumers or bulk consumer. The disposal of E-wastes to be done at the specified collection centers and reported annually.
4	Plastic Waste Management Rules 2016	All institutional generators of plastic waste, shall segregate and store the waste generated by them in accordance with the Solid Waste Management Rules, and handover segregated wastes to authorized waste processing or disposal facilities or deposition centers, either on its own or through the authorized waste collection agency	Relevant as hospitals are generators of large quantity of plastics, including non-reusable types.
5	Water (Prevention and Control of Pollution) Act 1974 Air (Prevention and Control of Pollution) Act 1981 Environment Protection Act (nd Rules), 1986 and 1996	Provisions are largely to prevent air and water pollution by not releasing untreated effluents and harmful emissions. Most provisions are already discussed under the Bio-Medical Waste Rules.	Relevant and largely complied with

Sl. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Program and key Findings
6	Indian Penal Code (IPC)	Section 278 (making atmosphere noxious to health) and Section 269 (negligent act likely to spread infection or disease dangerous to life, unlawfully or negligently)	Relevant Although individuals would require providing evidence
7	The Indian Medical Council Act 1956 The Indian Medical Council (Professional Conduct, Etiquette and Ethics Regulations 2002)	Provisions are applicable to practising doctors and medical professionals to provide quality service to the patients or healthcare seekers.	Relevant
8	Right to Information Act, 2005	Provides a practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out (a) obligations of public authorities with respect to provision of information; (b) requires designating of a Public Information Officer; (c) process for any citizen to obtain information/disposal of request, etc. (d) provides for institutions such as Central Information Commission/State Information Commission	Relevant as all documents pertaining to the Program requires be disclosed to public.
9	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Aims to ensure, a humane, participative, informed and transparent process for land acquisition with least disturbance to the owners of the land and other affected families and provide just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or those that are affected by such acquisition and make adequate provisions for their rehabilitation and resettlement and for ensuring that the cumulative outcome of compulsory acquisition should be that affected persons become partners in development leading to an improvement in their post-acquisition social and economic status.	Not applicable as no land acquisition or resettlement is anticipated.
10	The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013	An act that aims at providing a sense of security at the workplace that improves women's participation in work and results in their economic empowerment. It requires an employer to set up an "Internal Complaints Committee" (ICC) and the Government to set up a 'Local	Relevant and applicable to all health directorates and most of the health care facilities.

Sl. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Program and key Findings
		Complaints Committee' (LCC) at the district level to investigate complaints regarding sexual harassment at workplace and for inquiring into the complaint in a time bound manner. The ICC need to set up by ever organization and its branches with more than 10 employees.	
11	The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	The act aims at providing social security and livelihood rights to street vendors. It provides protection of legitimate street vendors from harassment by police and civic authorities, and demarcation of "vending zones" on the basis of "traditional natural markets", proper representation of vendors and women in decision making bodies, and establishment of effective grievance redressal and dispute resolution mechanism.	Relevant as it becomes applicable if the squatters to be removed comes under the preview of this act.
12	Tamil Nadu Public Premises (Eviction of Unauthorized Occupants) Act 1975	The act provides for the eviction of unauthorized occupants from public premises and for certain incidental matters. It defines the process and powers to various authorities in order to evict the unauthorized occupants along with nature of penalty and liabilities.	Applicable – There is a chance find that health facilities in order to expand services may require additional land owned by them and which are occupied by squatters.
13	The Tamil Nadu Street Vendors (Protection of Livelihood and Regulation of Street Vending) scheme and Rules, 2015	It draws from the national act i.e. The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. And provides social security and livelihood rights to street vendors. It provides protection of legitimate street vendors from harassment by police and civic authorities, and demarcation of "vending zones" on the basis of "traditional natural markets", proper representation of vendors and women in decision making bodies, and establishment of effective grievance redressal and dispute resolution mechanism.	Relevant as it becomes applicable if the squatters to be removed comes under the preview of this act.

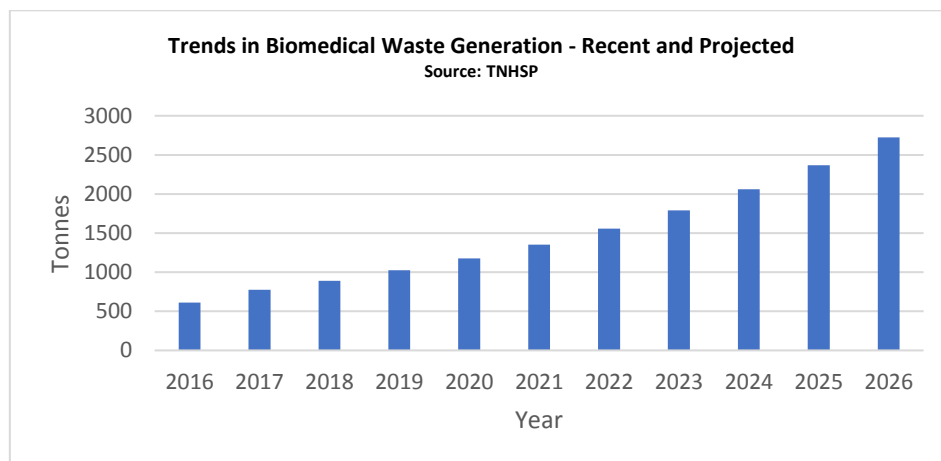
6 ASSESSMENT OF ENVIRONMENT AND SOCIAL MANAGEMENT SYSTEMS

6.1 Assessment of Environment Management Systems

36. The assessment of environmental management system is based on the analysis of the applicability of the regulatory framework, potential impacts of the proposed program and institutional capacities to manage the risks and adverse impacts and to scale up positive outputs and outcomes.

6.1.1 Environmental management systems in State Programs

37. *Generation of biomedical wastes across the healthcare facilities is projected to grow.* With the objectives of providing quality care and better service delivery, the generation of BMW are projected to grow exponentially over the next 6 to 8 years. The current waste management infrastructure will require substantial investments to handle, store, manage and dispose the wastes of the health sector to accommodate increased BMW.



6.1.2 Potential Environmental Benefits

38. The proposed program is expected to scale up positive environmental benefits in the health sector. It will help improve quality of health services covering aspects of better environmental hygiene and waste management. Along with the improvement and specialization of health services, it is expected that standardized hospital management practices for medical waste, occupational safety and health, and that the collection and transportation of medical wastes in rural areas will be improved.

6.1.3 Potential Environmental Opportunities

39. The proposed program offers several opportunities to build technical capacity of healthcare facilities and staff in reducing threats and risks of environmental pollution and infections. It will pave the way to create liquid waste management infrastructure in the state, support hospitals to undertake improvements of its infrastructure for reducing its energy and

emission footprint, provide training for control of infection and personal safety from occupational hazards and improve reporting on waste generation and management.

6.1.4 Potential Environmental Impacts

40. Bulk of the proposed activities to be supported under the proposed programs will not have any significant negative impacts. These are not expected to take place in and/or encroach/degrade sensitive habitats, be located in sensitive areas of high biodiversity value, or affect areas protected for physical cultural resources. Nonetheless, some of the activities supported under the PforR have potential negative impacts and risks associated with construction of the physical infrastructure, including rehabilitation and upgradation and operation of existing healthcare facilities.

41. **Construction Impacts.** Environmental impacts, including dust, noise, non-hazardous solid waste, wastewater, and social disturbance such as traffic safety and congestion, and construction safety concerns may occur during construction/rehabilitation of the limited physical works supported under the program. These impacts are envisaged to be low to moderate, temporary or site-specific and can be mitigated with readily available measures. The table below gives a summary of possible adverse impacts and risks.

Table: Potential Environment Effects and Risks Associated with Construction Activities

Environmental Issues	Potential Program Activities	Level of Concern
Dust, noise, general solid waste, wastewater	Construction of physical works within healthcare facilities will cause dust, noise, wastewater and general solid waste. Given the location of the works, the visitors and patients, particularly the inpatients, may be exposed to noise and dust during construction/rehabilitation of the structures within the facilities.	Level of concern: Minimum Such effects are site-specific and can be effectively mitigated by measures such as water spray, dust-net, site-fencing, vehicle cleaning; use of low-noise equipment. Prohibition of construction during night time, construction site settling tanks and effluent discharge municipal sewers, and collection and transportation of general solid waste in a timely manner. The construction contract should include relevant clauses to address this issue and the contractor shall be supervised to avoid such potential impacts.
Social disturbance, including influx of workers, traffic safety and congestion, construction safety	Healthcare facilities may be located in densely populated urban area, and the construction of the structures/rehabilitation will be within the boundary of the hospitals. The safety of the patients, visitors and staff will be affected by the transportation of materials and the construction activities.	Level of concern: Minimum Given the limited scale of construction activities, no significant influx of labor is anticipated during construction.

42. **Operational Impacts and Risks.** The activities under the program include the operation of mostly existing health facilities, procurement of medical equipment and delivery of diagnostic, surgical and related medical services. The operational phase may have certain impacts and risks, including: (i) medical and other solid and liquid waste within healthcare facilities; (ii) transport and disposal of medical solid wastes; (iii) radiation leakage, handling of radiation contaminated wastes; (iv) medical waste water; and (v) air emissions in healthcare facilities. If not well managed, these activities will pose a threat to the environment, public health and occupational safety. The table below gives a summary of possible adverse impacts and risks.

Table: Level of Concern with Potential Environment Impacts and Risks Associated with Operation and Use of Healthcare Facilities

Environmental Impacts/ Risks	Current Status	Level of Concern
Infections, hygiene, odour from BMW within healthcare facilities	Quantum of medical solid waste is likely to increase with expansion of services in hospitals. For healthcare facilities below District levels, while the quantity will increase, the composition of the medical solid waste will not change substantially. For the HCF at state and municipal levels, the quantity and composition of the medical solid waste to be generated are expected to be slightly changed.	Level of concern: Moderate In most district level healthcare facilities, medical waste is collected and packaged by medical workers, and temporarily stored at designated places. Below district level, there is a need to strengthen BMWM systems, including medical waste categorization, waste management plan, trainings and reporting.
Infections and pollution from untreated liquid BMW released from healthcare facilities	Most hospitals are not treating liquid wastes before releasing into the municipal drains or release into the environment; only 14 hospitals are having ETPs. This has adverse impacts and risks for surface water, groundwater, streams and wetlands.	Level of concern: Substantial New ETPs and upgrading of some of the older ones (as necessary) is required for ensuring that treated effluent will meet applicable standards. The flow and composition of the medical wastewater should be monitored regularly. A strategy is required for addressing this risk.
Exposure to radiation	Use of medical imaging or radiotherapy equipment, if not well managed or protected, can lead to radiation exposure and/or radiation contaminated materials (including liquids, paper, medical gloves), resulting on concerns for public and community health. The risk is higher in urban areas where such equipments are available.	Level of concern: Moderate Procedures and capacity are in place in terms of managing the radiation impacts and risks. For equipment, the licensing, safe use, work-site detection, maintenance etc. are generally being done. For radiation contaminated wastes, specific requirements on collection, separation, storage, packaging, transport, and final disposal are in place.
Air emissions:	Separate boiler for heating system are operated to provide heating for inpatient building and hot water for laundry and bathing, as well as	Level of concern: Moderate Energy footprint can be substantially lowered by switching healthcare facilities to solar power systems.

Environmental Impacts/ Risks	Current Status	Level of Concern
	steam for sterilization. Both electric and fuel-based boilers are being used. Diesel generators for back-up power are also used resulting in occasional emissions.	

6.1.5 Gaps and Risks in the Environmental System

43. ***No state level health policy that define clear goals and objectives to deal with the environmental issues of the health sector.*** The issue of growing loads of wastes generated from healthcare facilities, especially large hospitals, requires focused attention. Apart from management of biomedical wastes, other solid, hazardous, plastic and liquid wastes⁵ are not managed adequately. The health sector is conspicuous in missing from the Tamil Nadu State Environment Policy 2017 which stresses on integrating environmental concerns in five development sectors.
44. ***Continuous education and training on biomedical waste management is lacking.*** Apart from inclusion of modules on BMW management in the formal medical education, there are inadequate opportunities for continuous training of medical staff. It is difficult to assess the level to which personal safety standards, especially when working with infectious diseases, chance needle pricks etc., are being adhered to.
45. ***The efficacy of the functional CTFs has not been assessed.*** While CTFs are now operational to handle final management and disposal of BMW, no assessment of their performance has been undertaken. It is critical to assess this, as new CTFs will be required with the expansion of the healthcare facilities and expected higher generation of BMW.

6.2 Assessment of Social Management Systems

6.2.1 Stakeholder Analysis

46. The key stakeholders for the program include DoHFW along with its various Directorates and societies including TNHSP, DMRHS, DME, DPH, NHM, DIMH, TNFSDA, and the Department of Finance (DoF). While the PMU is housed in TNHPS, the DMRHS is primarily responsible for secondary health care facilities (i.e. District and regional health care facilities), the DME is responsible for tertiary health care facilities (i.e. medical and nursing colleges and associated facilities) and the DPH is responsible for the primary health care facilities (i.e. PHC, CHC and sub -centres). The NHM state health society implements that national health mission program and involve health care facilities managed by other directorates to deliver the program. The DIMH implements the Indian system of medicine related programs and TNFSDA is responsible for food safety and drug administration related aspects of health care services. The primary stakeholders include the community as

⁵Only 14 out of a total of 90 healthcare facilities with a bed strength of over 100 have Effluent Treatment Plans

a whole (including the tribal population), and the civil society actors working on health especially in poor and vulnerable pockets and in tribal areas.

47. As mentioned above, the TNHSP, DMRHS, DME and NHM will be responsible for implementing activities related to quality of care improvements (Results Area 1); TNHSP, DMRHS, DME, DPH and NHM will be responsible for implementing activities related to NCDs and injuries (Results Area 2); TNHSP, DPH, NHM, DIMH and TNFSDA will be primarily responsible for implementing the activities related to closing equity gaps (Results Area 3).
48. There is satisfactory institutional capacity among the functionaries of the participating health directorates on implementing the program activities and addressing the social concerns including the tribal health components of the ongoing program. The guidelines and procedures are defined and being followed. However, the proposed program intends to build overall capacity of the health care functionaries of all participating Directorates and society by promoting continued medical education (CME) and helping develop policy and strategy to strengthen the gap areas in quality health care service provision.

6.2.2 Key Social Issues and Concerns

49. The program has low likelihood of any negative social impacts. The key social issue identified is related to inequalities in health care services in different districts in Tamil Nadu and is prioritized under the equity component of the program. The key sub-topics assessed under the ESSA is as below to assess the applicability of the ESSA's core principles.

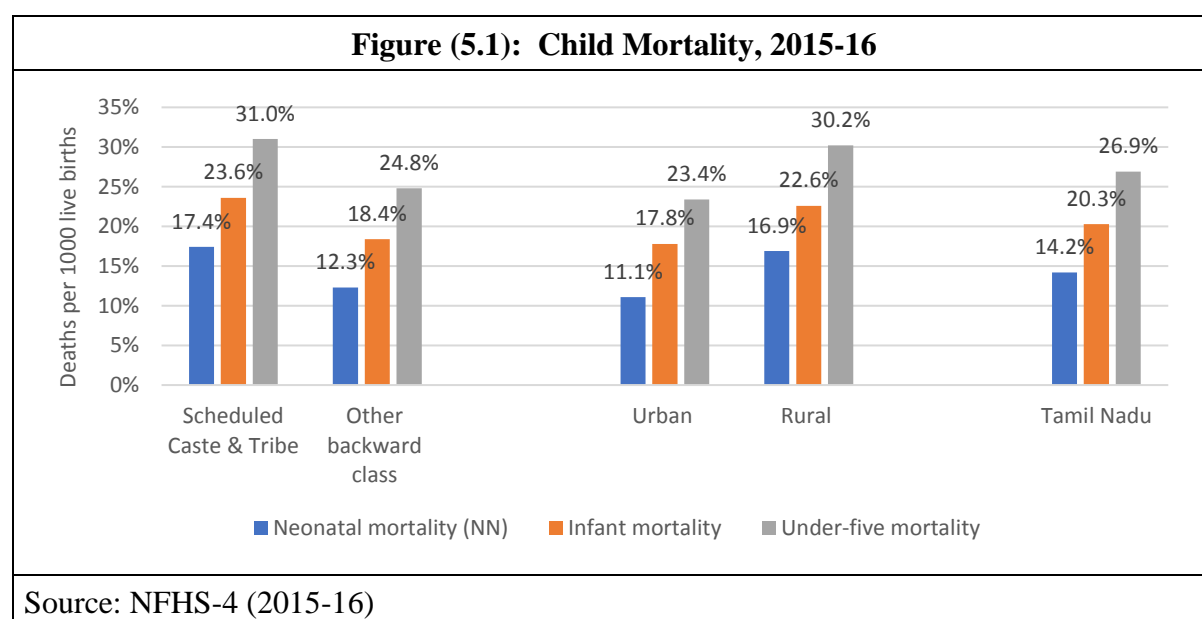
6.2.2.1 Tribal Health Program in the State

50. The World Bank supported TNHSP programme during (2005-15) had successfully created an agenda of focusing on tribal health which are being followed and expanded by the department of health and family welfare even after closure of the programme under their own budgetary process. A total of 173 PHCs and 611 health centres serves the predominant tribal population living in Tamil Nadu. The ongoing programme includes (a) provision of Accredited Social Health Activists (ASHAs) in tribal/ difficult areas and about 2650 ASHAs are engaged in tribal/ hilly/ remote /difficult PHCs to motivate community especially pregnant mother towards ante natal care; (b) Birth waiting room in 17 PHCs to ensure tribal mother reach the delivery point on time and can be admitted two weeks before the delivery date. This is further linked with four-wheel drive 108 ambulances; (c) Tribal Mobile outreach services – there are 396 Mobile Medical Units are being operated in Tamil Nadu, and to Mobile Outreach Services in tribal areas additional 20 mobile medical units are being operationalized through NGOs in tribal blocks; (d) Referral Services in Tribal Districts - the state has a well-established emergency referral transport system established through TN-EMRI to transport from health facility to another health facility for emergency care; (e) Tribal Counsellors - Tribal Counsellors have been placed in the 10 Government Hospitals in the tribal districts to create awareness on health and its determinants among tribal community; and (f) Screening of adolescent tribal children studying in 10th, 12th standard and unmarried school dropouts above the age of 14 in 30 selected tribal blocks in 13 Districts since November 2017 for Hemoglobinopathies for early detection of Sickle Cell, Anaemia & Thalassemia which are common diseases among tribal population. While

there have been several initiatives being implemented, there is still a long way to bridge the gap.

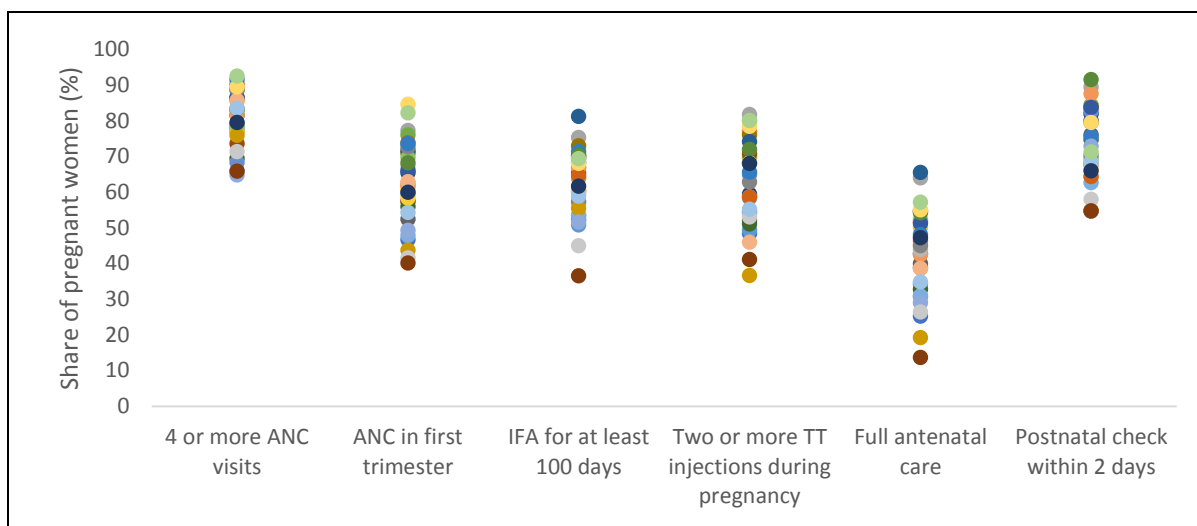
6.2.2.2 Inequality in Health

51. At the aggregate level, Tamil Nadu performs well on health indicators relative to other states in India; however, the disaggregated data reveal poorer health outcomes, access to and utilization of health services among tribal populations, urban poor, and those living in select districts, reflecting socioeconomic, geographic and ethnic disadvantages. Child mortality, for example, is substantially higher among the Scheduled caste and tribes and those residing in rural areas (see Figure 5.1).



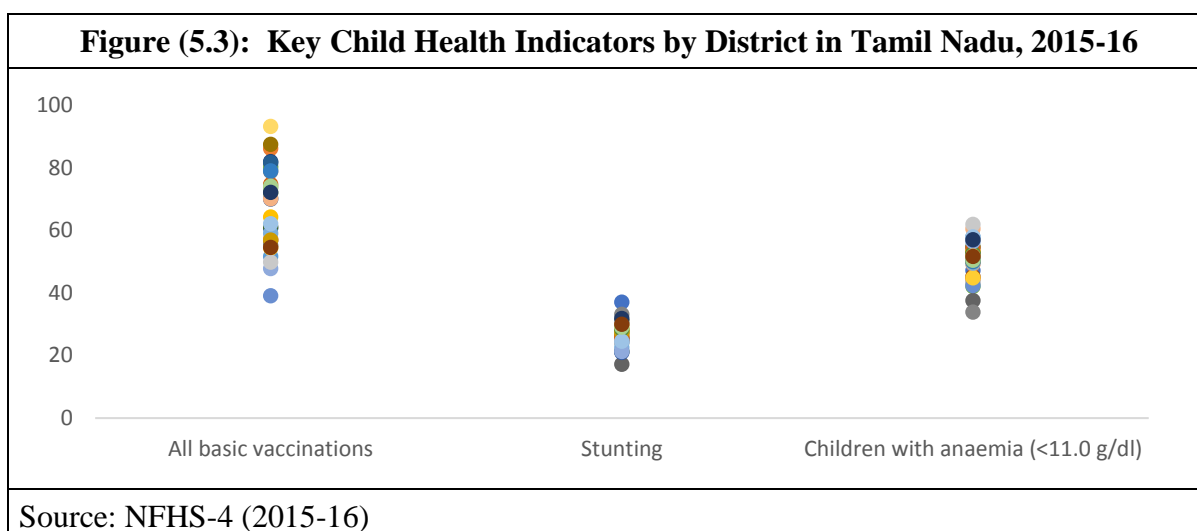
52. Quality of antenatal care also varies by district. While on average only 43 percent of pregnant women receive all recommended services during ANC, this ranges from 14 percent in Virudhunagar to 66 percent in Krishnagiri (Figure 5.2). Similarly, only 40 percent women in Virudhunagar seek antenatal care in the first trimester compared to 84 percent of women in Tirupur.

Figure (5.2): Components of antenatal care by district, 2015-16



Source: NFHS-4 (2015-16)

53. Similar variation is observed for child health indicators, with coverage of basic vaccination among children 12-23 months ranging from 39 percent in Nagappatinam to 93 percent in Tirupur. Stunting varies from 17 percent in Kanyakumari to 37 percent in Ariyalur.



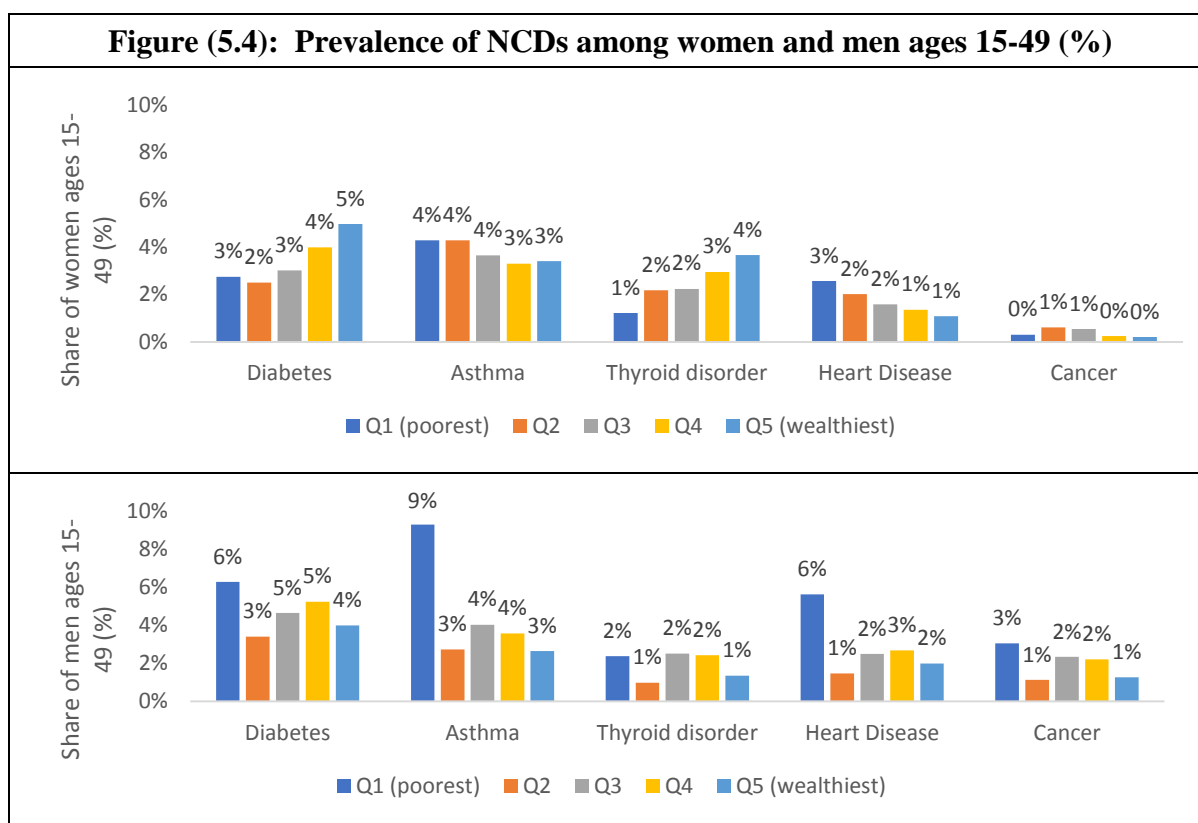
Source: NFHS-4 (2015-16)

54. Utilization of health services is slightly lower among the Scheduled Tribes. For instance, 77 percent of pregnant women attend four or more ANC visits as compared to the state average of 81 percent. The timing of ANC also differs, with only 56 of pregnant women from Scheduled Tribes seeking ANC in the first trimester. While almost all women are given IFA during ANC, uptake of this intervention is low – only half of women from the Scheduled Tribes take IFA for at least 100 days during pregnancy (compared to the state average of 64 percent).

	4 or more visits	ANC in first trimester	Two or more TT injections during pregnancy	IFA for at least 100 days	Full ANC
Scheduled caste	79.6%	63.4%	66.7%	61.6%	44.2%
Scheduled tribe	77%	55.5%	51%	52.8%	33.4%
Other backward class	81.9%	64.2%	65.3%	65.2%	45.6%
Other	85.6%	75.9%	64.1%	68.9%	50.7%
Tamil Nadu	81.2%	64.0%	65.4%	64.0%	42.7%

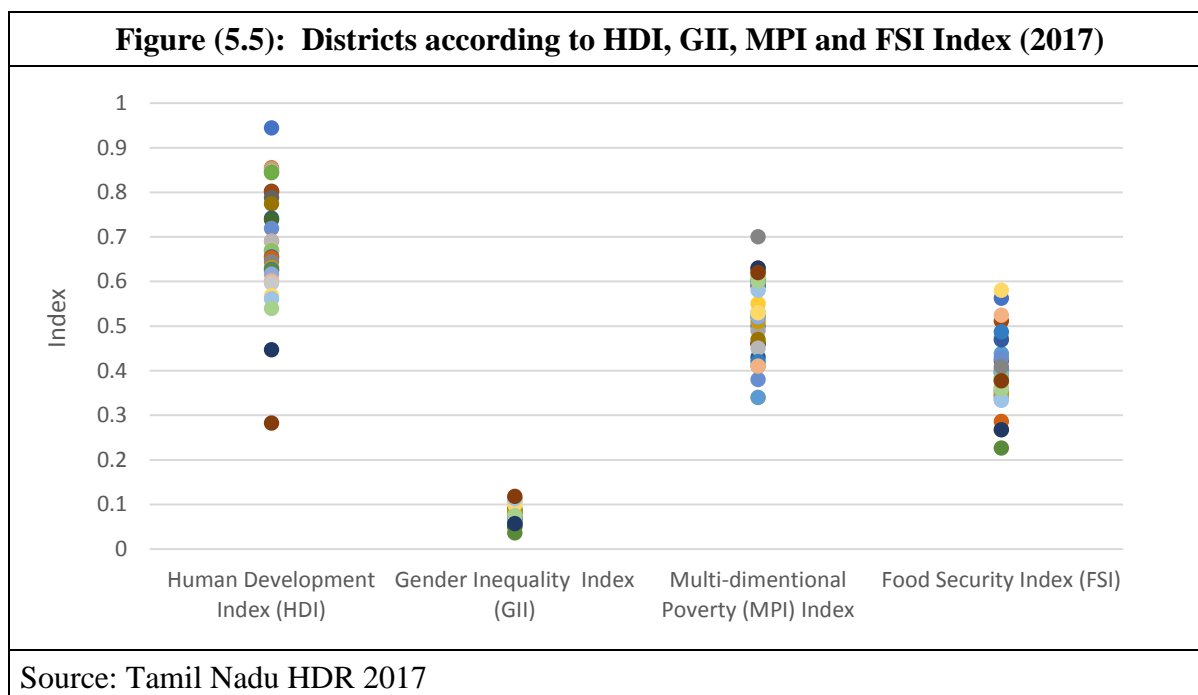
Source: NFHS-4 (2015-16)

55. There are notable differences in the incidence of NCDs by gender and socio-economic status. The incidence of diabetes and cancer is slightly higher among men than women. While the prevalence of NCDs appears to be more concentrated among the wealthier quintiles for women, the opposite is true for men. The prevalence of asthma and heart disease is almost three times higher among men in the poorest quintile than in the richest quintile (Figure 5.4).



56. Other factors contributing to health outcomes are also emerging from level of education, standard of living, income disparities and poverty, and gender inequalities. While many of the sub-indicators are interlinked, the human development index, the gender inequality index and the multidimensional poverty index showcase the poorer districts contributing

more towards overall health outcomes. Districts such as Ariyalur, Perambalur, Theni, Villupuram, Tiruvannamalai, and Nilgiris falls in the bottom of most of the indices.



57. In addition, to the inequalities, which are evident from the various indicators above, on average, there is roughly a 30-percentage point difference between the top 20% and bottom 20% of districts on the use of reproductive health services. In addition, the quality of health care has been a concern and varies across primary, secondary and tertiary care and across districts which are also being addressed by the program.

58. The program has identified, nine priority districts to address geographic disparities on account of MCH and quality related issues, special focus will be maintained in select nine priority districts which constitute the bottom quintile of the MCH indicators in the state and other poorer districts with relatively larger proportion of tribal population, and includes Virudhunagar, Thoothukkudi, Tirunelveli, Theni, Ramanathapuram, Ariyalur, The Nilgiris, Dharmapuri, and Tiruvannamalai district.

6.2.3 Gender Gap Assessment

59. Women in Tamil Nadu have experienced mixed progress. While the maternal mortality in the state is low at 66 (per 100000 live births) and declining. Moreover, women in Tamil Nadu are better educated than in many other states, with reduction in gender gap from 18 percent in 2001 to 13.4 percent in 2011. While there is no gender gap in schooling up to higher secondary level, there is marginal gap of 6-10 percent in higher education. The female workforce participation in Tamil Nadu is higher than the national average at 40 percent. Participation in decision making by women is also high in Tamil Nadu with more than three-fourths of women participate in decisions about their own health care, major

household purchases (76% each) and visits to their own family and relatives (78%)⁶. In addition, while the local bodies election in Tamil Nadu in 2011 resulted in 7 percent higher women than the mandated one-third reservation, the Tamil Nadu government has further passed bill in June 2016 for 50 percent reservations for women in local bodies election⁷.

60. Preliminary analysis of data suggests that there are three distinct areas which suggests gender gaps in health care services and includes (1) Services for specific diseases related to women, such as cervical or breast cancer, (2) Utilization of health insurance among female patients, and (3) Health sector response to gender based violence.
61. With respect the project and the health sector in Tamil Nadu, the key gaps identified is the services for specific diseases related to women, such as cervical and breast cancer. The National Cancer Control program describes common sites for cancer in India are oral cavity, lungs, oesophagus and stomach in males and cervix, breast and oral cavity among females. Also, over 70 percent of the cases report for diagnostic and treatment services in advanced stages of the disease, resulting in poor survival and high mortality rates. In Tamil Nadu, it accounts for 4.6 percent – 10.9 percent of all the deaths in 2016⁸.

(1). Gaps in Preventive and Curative Services for Cervical or Breast Cancer:

62. Both breast and cervical cancer is a major cause of cancer mortality in women and more than a quarter of its global burden is contributed by developing countries. Cervical cancer and breast cancer are the most common cancer among women in India. While the breast cancer constitutes about 19 – 34 percent of all cancers among women in India, the cervical cancer contributes to approximately 6 – 29 percent of all cancers in women. Screening for cancer is known to reduce mortality by early detection and treatment. In Tamil Nadu, 23 percent of women have ever undergone an examination of the cervix, 15 percent have ever undergone a breast examination, which is among the lower side compared to other southern states and closure to central, eastern and north-eastern states.

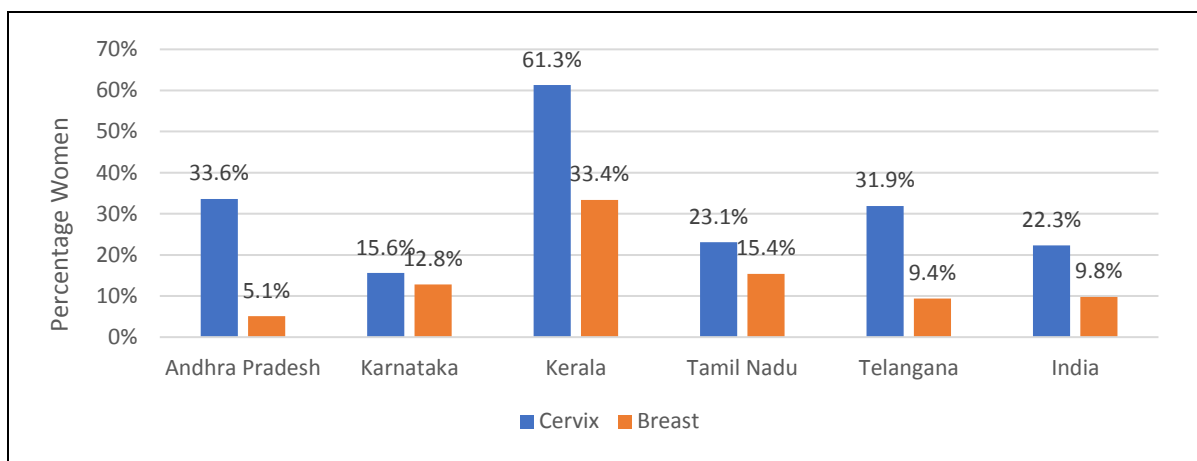
Figure (5.6): Percentage of women age 15-49 who have ever undergone Cervix or Breast examinations

⁶ NFHS-4 (2015-16)

⁷ <https://timesofindia.indiatimes.com/city/chennai/65000-women-to-hold-power-in-Tamil-Nadu-local-bodies/articleshowprint/52646684.cms>

⁸

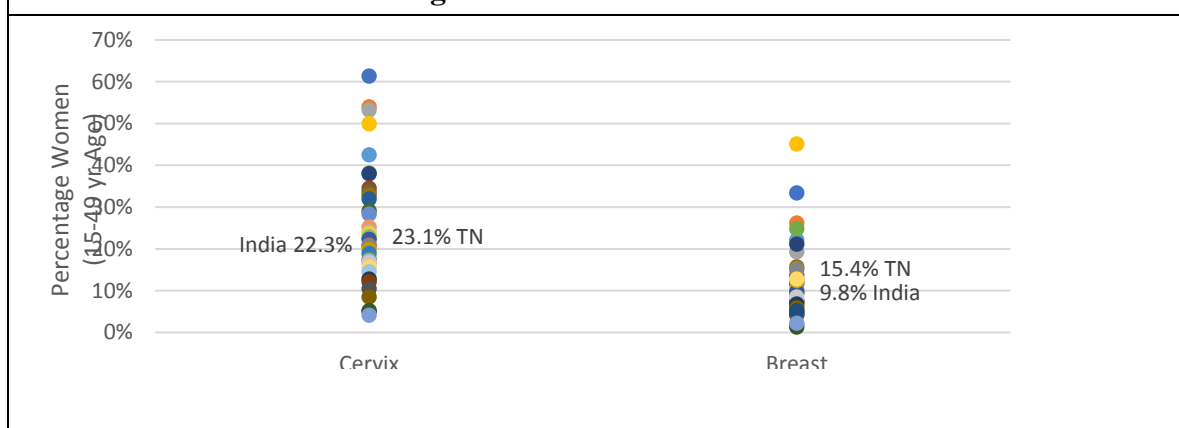
https://www.healthdata.org/sites/default/files/files/policy_report/2017/India_Health_of_the_Nation%27s_States_Report_2017.pdf



Source: NFHS-4 (2015-16)

63. Distribution of states with proportion of women between the age group of 15-49 years have ever gone through the screening of cervix and/ or breast for cancer, suggests Tamil Nadu figure very much close to national average, which is a sharp contrast of Tamil Nadu's performance on other health indicators.

Figure (5.7): Distribution of States with Percentage of Women age 15-49 who have ever undergone Cervix or Breast examinations



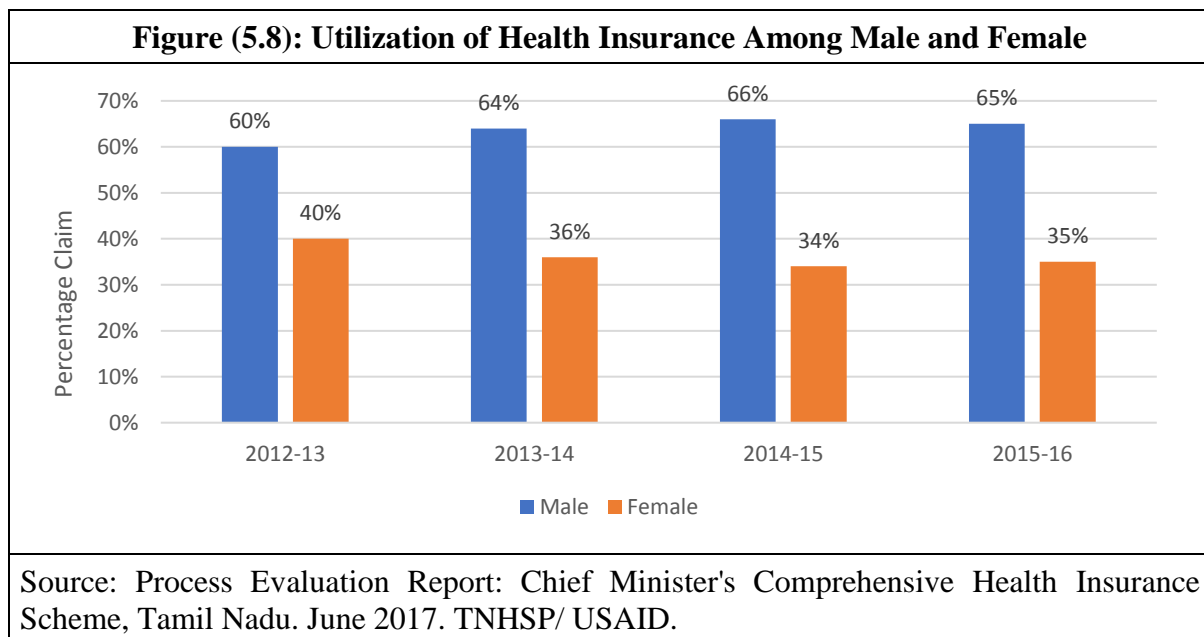
Source: NFHS-4 (2015-16)

(2). Gender Gap in Utilization of Health Insurance in Tamil Nadu

64. While the universal healthcare coverage provides healthcare and financial protection to all citizens and expected to help facilitate gender equity in health care. However, various studies across India and from Tamil Nadu suggests a gender gap in utilization of health insurance. The process evaluation of the Chief Minister's Comprehensive Health Insurance Scheme (CMCHIS), Tamil Nadu, suggests that over the 2012-13 to 2015-16 period, the overall claims have grown by 38.2 percent. In absolute terms, the claims by male and female beneficiaries have increased by 50.0% and 20.4%, respectively, over the same years⁹. The rate of increase in claims by males is greater than that of females, and as result,

⁹ Process Evaluation Report: Chief Minister's Comprehensive Health Insurance Scheme, Tamil Nadu. June 2017. https://www.researchgate.net/profile/VR_Muraleedharan/publication/317492205_Process_Evaluation_Report_

the share of female beneficiaries to the total claims has fallen from 39.7% (in 2012-13) to 34.6% (in 2015-16).



65. Discussion with CMCHIS suggests, that the earlier system had a pull-down menu for male and female for the claim, and given the card is in the name of the head of the family (mostly male) the default entry for every card no. is the head of the family and their corresponding gender i.e. mostly male. In case of claim if it is not changed for the particular member of the family, it takes the default, which actually skews the data in favour of male. Noticing this, CMHIS has recently corrected the software. However, CMHIS do agree that there is gender gap in utilization of health insurance, and to which they have already initiated measures such as awareness generation using mass IEC campaigns and social mobilization using Village Health Nutrition Day (VHND) mechanism.

(3). Health sector response to gender-based violence

66. In Tamil Nadu the areas that also needs attention for the health sector response is gender-based violence and more specific the domestic violence or intimate partner violence (IPV) especially when it is about 45.6 percent of women between the age group of 15-49 years have faced either physical or sexual violence at least once in their lifetime (NFHS-4, 2015-16) and of which about 8 percent faced sexual violence. Majority of ever married women facing physical violence is on account of spousal violence or IPV (40 percent) which is marginally lowered from 42 percent during the NFHS-3 (2005-06) period. What is more surprising is the comparative sketch with some of the low-income states. While there is drastic drop in spousal violence in States such as Bihar, Assam, Madhya Pradesh, Tripura and West Bengal, there was only a 1.3 percent (41.9 to 40.3 percent) drop in Tamil Nadu between 2005-06 to 2015-16 period¹⁰.

Chief_Minister's_Comprehensive_Health_Insurance_Scheme_Tamil_Nadu/links/593bd312458515e398ed313e/Process-Evaluation-Report-Chief-Ministers-Comprehensive-Health-Insurance-Scheme-Tamil-Nadu.pdf

¹⁰ NFHS-4, 2015-16

67. About one-quarter of women who have experienced spousal physical or sexual violence have suffered injuries as a result of the violence, and the most common type of injury is cuts, bruises, or aches. However, the long-term consequences of intimate partner abuse have been well documented and resulting in post-traumatic stress disorder (PTSD) and depression. Only 14 percent of women who have ever experienced physical or sexual violence by anyone have sought help. Over three-fourths (76 percent) of women have neither sought help nor told anyone about the violence. Abused women who have sought help most often seek help from their own families. Only 1 percent of abused women who sought help for the violence sought help from the police (NFHS-4).

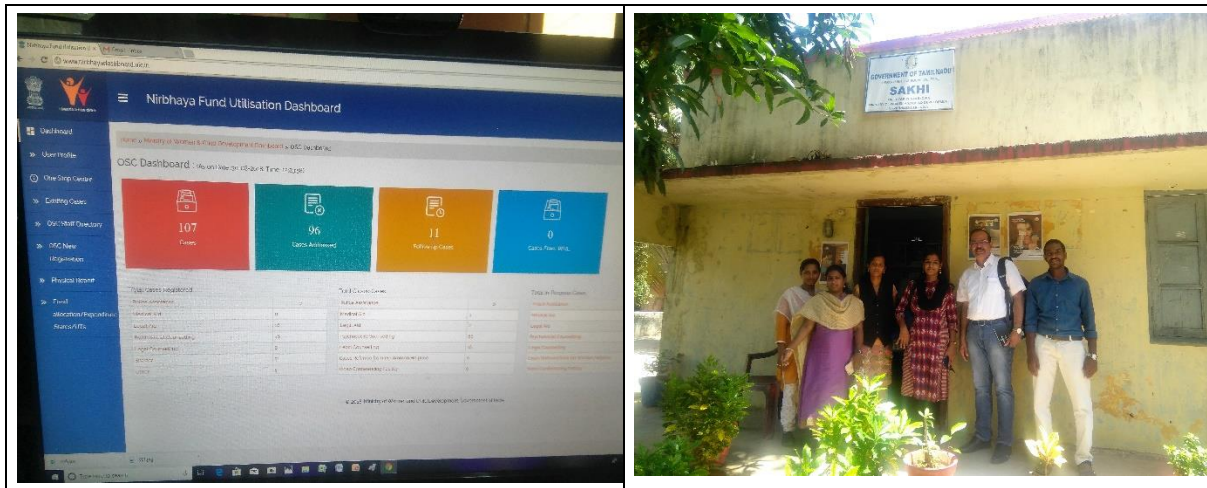
68. There have been several health care service provision examples of screening for domestic violence and providing services and/or referrals within the primary or secondary health care settings in India and other neighbouring countries. The recent one being the Sakhi – One stop centre¹¹ initiated by Ministry of Women and Child, Government of India in April 2015, to provide a comprehensive service to the aggrieved and have already sanctioned about 236 such OSCs till FY 2017-18 (of which 170 was operational by 1st Jan 2018), and another 198 in FY 2018-19 and plans to sanction additional 284 in FY 2019-20. With these 718 OSCs, it plans to ensure at least one in each district. Of the 6 such centres sanctioned in Tamil Nadu till FY 2017-18, only one was operational on 1st Jan 2018¹².

69. Discussion with Joint Director (JD), Social Welfare Department (SWD), Tamil Nadu looking after the ‘Sakhi-One Stop Services’ informed that of the 6 OSC centres sanctioned, one in Tambaram (Chennai) is functional (in a temporary facility) as the new centre is under construction, on the remaining five the land and people are identified, and they are being initiated. However, for the remaining 26 districts place for OSC is identified and proposal is forwarded to Govt. of India. In each of these centres it is currently staffed by five persons i.e. a centre administrator, two family councillors, a legal councillor, an IT person and a Multipurpose worker. A department is request for Government order (GO) for permanent position of a person from police and a permanent legal person. The JD SWD informed that in order to create awareness both mass media (poster at prominent places, in Metro trains and buses, radio jingles etc, and inter personal communication is being used. Experience from Tambaram OSC suggests that over the last one year about 107 cases have registered. A linkage has also been setup with Tambaram hospital where the CMO and another doctor has been nominated as the point person for all health services to the Tambaram OSC centre.



¹¹ <http://wcd.nic.in/schemes/one-stop-centre-scheme-1>

¹² <http://nari.nic.in/sites/default/files/170-Operational%20OSCs-10.1.2018.pdf>



70. Across the country, most of the OSCs are setup inside hospital settings and in some states in District Collectors office or other Government offices, and already collaborated with health sector for necessary responses e.g. Tambaram OSC has linked with Tambaram Hospital with CMO and another doctor acting as point person for all necessary services. While the OSCs in each district are still being established and made operational, it is too early to identify gaps in collaboration with health.

6.2.3.1 Addressing Gender Gap

71. With respect to the project and the health sector in Tamil Nadu, the key gender gap identified is the health services for specific diseases related to women such as cervical and breast cancer. The poor screening for cervical and breast cancer so far has been largely because of lack of awareness about the disease as well as lack of screening and diagnostic services being available at the health care facilities. To address this, the project prioritized cervical, breast and oral cancer screening, detection and treatment by strengthening health care facilities, lab services for diagnostics, building capacity of the health care providers on non-communicable disease (NCD) services including cervical, breast and oral cancer, developing and implementing associated guidelines and protocols, and awareness generation among community especially among women on the risks associated through social and behaviour change communication (SBCC). This is evident from the project result chain with the key outcome indicator on NCD (Ref: Result Area #2 indicator) reflecting improved utilization of diagnostic services for cervical, breast and oral cancer among others. The NGOs participated in the stakeholder consultation workshop highly appreciated the program agenda of working on Cervical and Breast cancer as that being one of the key areas that they have been pursuing with Government for quite some time.

72. In addition, another gap area identified includes status of reproductive health in low-performing districts. While the state average for these mother and child care (MCH) indicators i.e. full ante-natal care (ANC), prevalence of modern contraceptive method, and full vaccination looks good, there is roughly a 30-percentage point difference between the top 20% and bottom 20% of districts on the use of these services. This is largely because of lack of awareness and knowledge among women in the reproductive age about modern contraceptive methods, quality of antenatal care (ANC) being poor across districts, and lack

of knowledge about the immunization schedule. The project is also trying to close this equity gap in priority (low-performing) districts by enhancing specific services by undertaking gap analysis and reasons for the same to inform the facility improvement plans, conducting household survey in priority districts to assess demand-side constraints in MCH service utilization across communities, establishment of maternity stay wards in PHCs in remote and hilly tribal areas, and strengthening mobile dispensaries for urban poor, slum and remote areas. To bridge the equity gap, the demand side interventions of the program includes the development and implementation of the SBCC strategy tailored to the target community and the priority districts. These are embedded in results area #3 on equity with outcome indicator being “Reduced inequities in utilization of select MCH services between top and bottom quintile of districts”.

73. While the Gender based violence (GVB) has been identified as one of the initial challenges in Tamil Nadu, another program lead by MWCD (GoI) nationally and by Social Welfare department (GoTN) in Tamil Nadu with more comprehensive response strategy to address this gap through One Stop centre (OSCs) - a sub-scheme of Umbrella Scheme for National Mission for Empowerment of Women. Popularly known as *Sakhi*, being implemented since 1st April 2015. These OSC Centres are being established across the country in each district to provide integrated support and assistance under one roof to women affected by violence, both in private and public spaces in phased manner. The OSC Centres are integrated with a Women Helpline to facilitate access to services. The services includes – (a) Emergency Response and Rescue Services - OSC will provide rescue and referral services to the women affected by violence, (b) Medical assistance in collaboration with nearest health facility, (c) Assistance to women in lodging FIR / NCR/ DIR, (d) Psycho - social support/ counselling, (e) Legal aid and counselling, (f) Provide temporary shelter facility to aggrieved women, and (g) Provide video conferencing facility - to facilitate speedy and hassle free police and court proceedings.

74. Within this strategy, the role of health department is limited to providing linkage of One Stop Centers (OSC) to nearest health facility for any medical assistance such as women affected by violence would be referred to the nearest Hospital for medical aid/examination which would be undertaken as per the guidelines and protocols developed by the Ministry of Health and Family Welfare. Discussion with Tambaram OSC in Chennai and Social Welfare Dept, GoTN, suggests no felt gap with health facility linkages. And hence, no additional response designed under the proposed program for GBV.

6.2.4 Key Social Impacts

75. Overall the program has low likelihood of any negative social impacts . There is no land acquisition anticipated under the program. The program does not support any major construction and it is limited to minor renovation and repairs of existing building. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility. The program further aims to enhance positive social outcome by addressing the issues related to inequalities in health services and quality of health care provision in poorer and backward districts are being addressed through quality of care and equity component of the program. The table below presents the key social risks and gaps with respect to main activity clusters of the program and potential measures to align with ESSA core principles.

6.3 Key Risks and Gaps and Potential Measures to Align with ESSA Core Principles

Sl. No.	Activity Cluster	Key Risk and Gaps	Potential Measures to align with ESSA Core Principles
Result Area-1: Quality of care			
1	Accreditation for primary-, secondary-, and tertiary-level health facilities in the public sector - National Quality Assurance Standards (NQAS) for primary- and secondary-level facilities and National Accreditation Board for Hospitals & Healthcare Providers (NABH) for tertiary-level facilities (medical colleges).	<p>Environment Accreditation process involves improving the BMWM and other environmental hygiene so it will be beneficial. Not all facilities are ready for accreditation and will require substantial investments; there is no intermediate certification to improve on environmental parameters.</p> <p>Social The proposed activities will benefit the people at large with improved quality of health care infrastructure and services.</p>	To align with core principle #1, an environment strategy is proposed that will have enabling provisions to fill the identified gaps
2	Program also supports interventions that form a comprehensive set of approaches in achieving the quality of care and include (a) strengthening continuous medical education; (b) developing and disseminating clinical protocols/guidelines and clinical decision support tools; (c) monitoring quality of care using facility dashboards for public reporting; (d) introducing and scaling up quality improvement initiatives (including performance-based incentives, quality committees, hospital quality networks and other interventions).	<p>Environment Lack of adequate training facilities and low frequency of refresher trainings on BMWM and OHS</p> <p>Social Low likelihood of any negative social risks with the proposed activities.</p>	To align with core principles #1 and #3, training facilities will be expanded, and refresher trainings will be introduced; hospital accreditation will be supported and overall environmental hygiene will be improved
Result Area-2: Management of Non-Communicable Diseases and Injuries			
3	Continuation and further scaling-up of the NCD initiatives previously supported by the World Bank, mainstreamed into Tamil Nadu's health sector activities and fed into the National Programme for Prevention and Control of	<p>Environment Enhanced diagnostic abilities and facilities do not pose any specific environmental risk or impact. Systems to manage of BMW will be strengthened in the healthcare facilities.</p>	To align with core principles #1 and #3, training facilities will be expanded, and refresher trainings will be introduced; hospital accreditation will be supported and overall

Sl. No.	Activity Cluster	Key Risk and Gaps	Potential Measures to align with ESSA Core Principles
	<p>Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS); Tracer conditions for NCD response supported by the Program include hypertension, diabetes, cervical cancer, breast cancer, oral cancer, and mental health. And development of NCD care cascades for selected tracer conditions (for example, hypertension and diabetes); Strengthening NCD service delivery at the lowest level through health and wellness centres and PHCs; Strengthening of lab services; Improving health provider capacity to address mental health; Improving data on NCDs and mental health for better planning and management.</p>	<p>Social Low likelihood of any negative social risks with the proposed activities.. Some of the activities related to enhancing the screening services for cervical and breast cancers will help address the gender gap identified.</p>	<p>environmental hygiene will be improved.</p>
4	<p>Strengthening social and behavior change communication (SBCC). As part of the SBCC strategy, patient support groups and other patient empowerment mechanisms will be established to transform patients, especially those with chronic conditions, from being passive recipients of care into proactive participants who are equipped with knowledge and skills for self-management of their conditions.</p>	<p>Environment No environmental risks and gaps</p> <p>Social No social risk and gaps.</p>	<p>Not Applicable</p>
5	<p>Implementation of the Emergency Medical Services (EMS) work plan, including emphasis on further strengthening the 108 ambulance service to improve pre-hospital care, provision of 24x7 trauma care services at Level 1 and Level 2 emergency departments to improve in-hospital care, and establishment of a trauma registry.</p> <p>Initiative to provide Level 3 and Level 4 training to emergency department trauma care providers and other health care</p>	<p>Environment No environmental risks and gaps. BMW generated during emergency services and patient transfer in ambulances are addressed at the hospital, up on arrival of the ambulance</p> <p>Social No social risk and gaps.</p>	<p>Not applicable</p>

Sl. No.	Activity Cluster	Key Risk and Gaps	Potential Measures to align with ESSA Core Principles
	workers to strengthen both pre-hospital and in-hospital care.		
Result Area-3: Closing Equity Gaps in Reproductive and Child Health			
6	<p>Reduce inequities between districts focus on a combination of supply- and demand-side interventions to support increased utilization of RCH services.</p> <p>Supply-side interventions include improved budget allocations for priority districts, better provision of RCH services as measured by NQAS accreditation of primary and secondary care facilities and establishment of maternity stay wards in remote areas. Demand side interventions include the development and implementation of the SBCC strategy tailored to these priority districts.</p>	<p>This will help bridge the inequity between the bottom quintile districts with top quintile districts on reproductive child health services. However, in order to upgrade the infrastructure for NQAS accreditations, some of the facilities may need to undertake minor civil works towards repair and renovations. And hence, there is an outer chance that the facility requires its own land and there may be squatters on the same.</p>	<p>Already aligned with ESSA core principle #5 with culturally appropriate SBCC tailored to priority districts and special focus to nine poorer districts including the districts with tribal population.</p>
Cross-cutting Areas			
7	<p>Program also supports systematic, cross-cutting reforms which will impact the above three results areas as well as the health sector more broadly. These include: (a) strengthening HMIS, (b) increasing transparency and accountability with increased quantity, better quality and better use of data; (c) strengthening health administration and management at different levels, including improving integration/ coordination between different health directorates as well as between centrally-sponsored schemes and state-financed efforts (d) conducting annual district and state health assemblies which are civic forums built on the Panchayati Raj system to boost citizen voice and agency and catalyse a social movement in health and (e) supporting operational research, implementation research, and</p>	<p>Environment No specific environmental risks or gaps identified.</p> <p>Social The activities related to enhancing the citizen engagement through district and state health assemblies which are civic forums built on the Panchayati Raj system to boost citizen voice and agency.</p>	<p>Integration of BMW reporting with HMIS will align with core principle #1. Already aligned with core principle #5 by giving special focus to community voice and agency to monitor the program outcome.</p>

Sl. No.	Activity Cluster	Key Risk and Gaps	Potential Measures to align with ESSA Core Principles
	health system research to inform decision-making, enable course corrections and generate lessons for Tamil Nadu as well as other states.		

6.3.1 Key issues concerning Institutional Strengthening

76. As mentioned earlier, there is satisfactory institutional capacity among the functionaries participating health directorates on addressing the social concerns including the tribal health components of the ongoing program. The guidelines and procedures are defined and being followed. However, the proposed program intends to build overall capacity of the health care functionaries of all participating Directorates and Society(ies) by promoting continued medical education (CME) and helping develop policy and strategy to strengthen the gap areas in quality health care service provision. In addition, with the change in the financing instrument i.e. PforR, there is a need to further strengthen the inter-institutional coordination mechanism for better program outcome. The institutional capacity to address environmental issues will require strengthening on some specific areas. For example, in the management of liquid wastes from hospitals and improved capacity for monitoring and reporting on the BMWM across the healthcare facilities.

7 ASSESSMENT OF PROGRAM CONSISTENCY WITH CORE PRINCIPLES IN THE POLICY ON PROGRAM FOR RESULTS FINANCING

7.1 Environment

7.1.1 Core Principle 1: Assessment of the degree to which the Program Systems promote environmental sustainability in the Program design; avoid, minimize or mitigate against adverse impacts; and promote informed decision-making relating to a Program's environmental effects.

77. This is determined as applicable. Certain interventions under the program would require mitigation actions and sustainable approaches to better manage program's environmental effects. These include, among others: (i) Issues related to generation, collection, segregation, storage, transport, management and disposal of Biomedical, Solid and Hazardous wastes. This is particularly relevant for facilities in peri-urban and rural areas; and (ii) Reducing the risk of contracting infections within healthcare facilities. The upkeep, cleanliness and hygiene of public conveniences in several of the healthcare facilities is deficient and inadequate resulting in sub-optimal infection control.

7.1.2 Core Principle 2: Assessment of the degree to which the Program systems avoid, minimize, and mitigate against adverse impacts on natural habitats and physical cultural resources resulting from the Program

78. This is determined as applicable. Whereas interventions proposed under the program would not impact natural habitats and physical cultural resources, lack of pollution management infrastructure, particularly to treat and release effluents from large hospitals pose the risk of adversely impacting aquatic habitats.

7.1.3 Core Principle 3: Assessment of the degree to which the Program Systems protect public and worker safety against the potential risks associated with (a) construction and / or operation of facilities or other operational practices developed or promoted under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

79. This is determined as applicable. Certain interventions under the program could expose healthcare providers and beneficiaries to risks associated with exposure to hazardous materials, infections, radiation as well as risks related to construction activities, personal safety etc. This would require integrating mitigation actions in the operational manuals, SOPs, procedures etc. These include, among others: (i) Improving occupational health and safety practices at healthcare facilities through infrastructure design, construction management, infection control, protocols for addressing accidental spills; (ii) Providing protective clothing and personal safety equipment, as required; (iii) Ensuring safe storage, segregation, transport and disposal of hazardous wastes; (iv) Environmental considerations:

waste management; (v) worker and public health and safety focusing on emergency response; patient safety focusing emergency response.

7.2 Social

7.2.1 Core Principle 4: Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.

80. Though there is no land acquisition and/or resettlement is anticipated under the program, as the program does not support any major construction and it is limited to minor renovation and repairs of health facilities. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility. Screening will be conducted in health facility where any repair, renovation and expansion is planned to avoid any adverse social impact.

7.2.2 Core Principle 5: Due consideration is given to cultural appropriateness of, and equitable access to, Program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.

81. The Tribal Health program initiated under the World Bank supported TNHSP project during 2005-15 has been effectively mainstreamed into the departments program and expanded after the closure of the project and includes regular activities such as provision of ASHAs in tribal/ difficult areas, creating birth waiting rooms in tribal PHCs and linking with 108 ambulances to ensure tribal mother reach the delivery point on time, running mobile medical units in tribal areas, placing of tribal counsellors in government hospital in tribal districts, strengthening emergency referral system from tribal PHCs, and screening of adolescent tribal children and unmarried school dropouts above the age of 14 in 30 selected tribal blocks in 13 Districts for early detection of Sickle Cell, Anaemia & Thalassaemia which are common diseases among tribal population.

82. The proposed program further intends to strengthen the health care delivery across state including in the districts with tribal population overall quality of health care in primary, secondary and tertiary health care facilities, and addressing inequities in MCH service utilization in nine priority districts which constitute the bottom quintile of the MCH indicators in the state and other poorer districts with relatively larger proportion of tribal population, and includes Virudhunagar, Thoothukkudi, Tirunelveli, Theni, Ramanathapuram, Ariyalur, The Nilgiris, Dharmapuri, and Tiruvannamalai district. This is further supported by with a more comprehensive SBCC strategy that includes multiple layers of engagement with patients, health providers and communities through various channels of communication tailored to the priority districts.

7.2.3 Core Principle 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

83. Not Applicable, as the state has no conflict affected or territorial dispute area. The team does not expect any exclusion of any groups in terms of caste, religion, and/ or geography by the program activities. In addition, the state has been considered as generally a peaceful state in India with rare incidence of any civil strife or communal violence.

8 CONSULTATION AND DISCLOSURE

8.1 Consultation during the ESSA

84. As part of the ESSA preparation, discussions and consultations were conducted with key stakeholders including the key departments/ agency including TNHSP, Directorate of Family Welfare (DFW), Directorate of Public Health and Preventive Medicine (DPH), Directorate of Medical and Rural Health Services (DMRHS), Tamil Nadu State Health Society (TNSHS) including key staff members from NHM, Directorate of Medical Education (DME), Social Welfare Department, and Land Administration Department. Comments, suggestions and areas that require strengthening was sought during the free and prior informed consultation with NGOs working on tribal health and member of tribal community during the stakeholder consultation on 24th October 2018.

8.2 Disclosure and Consultation on the Draft ESSA

85. The findings of ESSA were disclosed in a disclosure workshop organized in Chennai on 24th October 2018. The participants included representative from various Government Departments including from TNHSP Society, NHM, CMCHIS, Social Welfare Department, State Resource Centre for Women (SRCW, Tamil Nadu) and One Stop Centre (OSC), DPH, DMS, DMRHS, DHFW, Tribal Welfare Directorate, Tamil Nadu State AIDS Control Society (TANSACS), ELCOT, PWD, and TNUHP; health facilities and research Institutions such as Madras Medical College and General Hospital Tambaram (Chennai); representatives from various NGOs working on health and/or with tribal and vulnerable population – SAATHII (Chennai), Community Seva Centre (Puducherry), Bharthi (Selam), Sudar Oli Trust (Vellore), Nilgiri Adivasi Welfare Association (NAVA), Kotagiri (Nilgiris), Toda women sangam federation (Ooty); and members of tribal community including members from Nilgiris Particularly Vulnerable Tribal Group (PVTG) Council and Irula tribal society Nilgiris. Representative from health Directorates also included officer responsible for planning and implementation of Bio-medical waste management in the health facilities. Details are presented in Annex -2.

8.3 Disclosure of the Draft and Final ESSA Reports

86. The final report of the ESSA will be disclosed on the website of the Health Department (GoTN) and at World Bank's external website prior to appraisal.

8.4 Citizen Engagement and Grievance Redress Mechanism

87. **Citizen Engagement.** The program aims to improving accountability and empowering citizens through the Annual District and State Health Assemblies and are aligned with best global practices. This will improve voice and agency of citizens through collective action while also raising the visibility of the health concerns and needs of communities. In the first year of the program, a framework and detailed plan will be developed to convene State and District Health Assemblies each year. Subsequently, one District Health Assembly would be organized annually in each district and one State Health Assembly would be convened annually. The Assemblies will be organized in a timely manner such that all the district events are completed before the State Health Assembly. This is embedded in the intermediate result indicator #5 and DLI #11 of the program. Through these state and district health assemblies, the program also aims to achieve vertical integration of accountability by providing a platform for citizens to engage in health policy. In addition, under the Program, the State will develop policies and guidelines for quality and introduce open-access dashboards for monitoring progress on quality, that will also help in building citizen's trust in the health systems. This will be further strengthened with a more comprehensive SBCC strategy that includes multiple layers of engagement with patients, health providers and communities through various channels of communication. As part of the SBCC strategy, patient support groups and other patient empowerment mechanisms will be established to transform patients (especially those with chronic conditions) from being passive recipients of care into proactive participants who are equipped with knowledge and skills for self-management of their conditions. To bridge the equity gap, the demand side interventions of the program includes the development and implementation of the SBCC strategy tailored to the priority districts.
88. **Grievance Redressal Mechanism.** Along with the Complaint Cell set up by the health ministry of Tamil Nadu (i.e. <http://www.tnhealth.org/complaintcell.htm>), the 104 health helpline has been providing holistic health information, advice and service improvement to the public. On an average, it receives 2,600 calls a day. From December 2013 to June 2017, the Health Department's 104 helpline has received a total of 9,18,688 calls from across the State. The person wishes to redress any grievance calls 104 and inform the control room staff. The control room staff records the grievance/ suggestions in the automatic recorder. For the grievances which are to be redressed immediately, the control room staff calls the district grievances cell officer over phone who will in turn contact the hospital concerned to solve the problem. At present, a majority of the complaints are related to delay in the provision of care, the district grievances cell officer nominated for the month are instructed to be responsive to the call swiftly and take action. If grievance cell officer notices any delay even after his/her intervention, s/he would call the state grievances cell officer who would intervene and sort out the issue¹³. In addition, in case of medical colleges, for registering grievances any one can complaint to Resident Medical Officer (RMO) who takes necessary action for redressing the grievances and report back to the Dean of the medical college in periodic manner. If not satisfied with redressal, one can escalate the matter to the Dean for redressal.

¹³ http://cms.tn.gov.in/sites/default/files/gos/hfw/hfw_e_90_2008.pdf

9 CONCLUSION AND RECOMMENDATIONS

89. The ESSA concludes that the program has a moderate environmental risk and moderate social risk. The program risks on dealing with BMW are reasonably covered but will require efforts to address other environmental challenges emerging from the health sector. The institutional setup has the potential to develop required capacity to deal with the potential environmental risks and challenges. The program has low likelihood of any negative social impacts. There is no land acquisition anticipated as the program does not support any major construction and it is limited to minor renovation and repairs. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility. The result areas focus on quality of health care across the state and bridging inequalities in priority districts and bottom most quintile on MCH indicators and other poorer tribal districts. In addition, members/ representatives of tribal and other vulnerable community and civil society will be included as part of the district health assemblies to be setup under the program to review and feedback on program output and outcome during the implementation.

9.1 Program Exclusions and Recommendations on Environmental Aspects

90. *Exclusion of high risk activities.* Based on the findings and screening, ESSA has identified two potential investment areas or activities that may have high environmental risks, as these activities are likely to have significant adverse impacts on the environment and/or affected people. These two activities are not eligible for including under the Program. These are

- a. Construction of large buildings; any exception will have to be subjected to a standalone impact assessment and come up with an environmental management plan; and
- b. Support to establishing municipal landfill and establishment of Common Treatment Facility (CTF) for BMW disposal.

91. *Strengthening the capacity on Hospital Environmental Management within the TNHSRP PMU is recommended.* The program will recruit and deploy a dedicated qualified environmental expert to develop integrated waste management approach covering solid and liquid wastes and overall environmental management initiatives of the healthcare facilities. This expert will be recruited in the first year and will also support the development of the environment strategy.

9.2 Recommendations on Social Aspects

92. A Social Safeguard Screening Checklist is presented in the Annex-1 of this report that will be applied for where renovations and/or expansions are planned to rule out any adverse social impact. The screening will be conducted by the health facility in charge under the guidance of social safeguard specialist in TNHSP-PMU.

93. PMU will recruit and deploy a dedicated and qualified Social Safeguard specialist to oversee the implementation of social safeguard measures especially the screening for any

adverse social impacts and coordinating implementation of other social safeguard measures planned under the program.

94. The project has low likelihood of any negative social impacts. . Based on the assessment, table below presents the key social issues identified and recommendations or the way forward for the same.

Key Social Issues Identified	Assessment/ Key Findings	Recommendations/ Way Forward
Tribal health services	The Tribal Health program initiated by the earlier World Bank project in Tamil Nadu has been mainstreamed and further expanded to meet the health care requirements.	While the ongoing program on tribal health meets the current requirements, the proposed program will further strengthen it with enhancing quality of health care and bridging the inequity in health services among the most backward and poorer districts in Tamil Nadu including some of the district with tribal population.
Inequalities in health sector services across districts	The program has identified inequalities in health care services related to MCH as there is roughly a 30-percentage point difference between the top 20% and bottom 20% of districts on the use of reproductive health services.	The program has already plan to address this through the equity component of the program with identifying nine priority districts for specific focus on MCH services. This is embedded in the result are #3 and DLI #8.
Quality of health care services especially in poorer districts	Quality of health care services has been identified as one of the key issues across the state and in poorer districts of the state.	The program has already plan to address this through the quality of care component of the program. This is embedded in the result are #1 and DLI #2 and DLI #3.
Addressing gender gap in health care services	The key gender gap identified are the health services for specific diseases related to women such as cervical and breast cancer, and status of reproductive health in low-performing districts.	The program has already plan to address this through the quality of care component of the program. This is embedded in the result are #2 and #3 and DLI #8.

9.3 ESSA’s Recommendations to Program Action Plan

ESSA DLI/Program Actions

95. The ESSA proposes the following DLI/Program Actions.

- **DLI: Develop an Environment Strategy for the Health Sector in Tamil Nadu.** The proposed environment strategy for Tamil Nadu will include provisions/ways to improve the efficiency of healthcare delivery by addressing issues such as waste management, resource efficiency, type-design of healthcare facilities, especially the wellness centers proposed by the State, effluent and hazardous pollution by expanding the pollution management set-up, particularly Effluent Treatment Plants, greenhouse gas emission footprint etc. The strategy will include an institutional capacity building plan, including a human resource plan and integration of healthcare waste management with the State's HMIS. Wider consultations with a range of stakeholders will be undertaken during the preparation of the environment strategy. Adequate budget will be ensured for preparation and implementation of the strategy as it is part of the expenditure framework.
- **Program Action 1: Introduce continuous refresher trainings on biomedical and other wastes management.** Develop new facilities and/or upgrade existing ones to provide targeted training and refresher training for staff at all levels and cross all healthcare facilities in managing biomedical, hazardous, plastic and other solid wastes. Extend the training program to NGOs providing healthcare services in remote rural, tribal and hilly areas.
- **Program Action 2: Performance audits of CTFs.** Carry out annual audit of CTFs, to assess the performance of BMW segregation, collection and transportation, performance of CTFs in line with the BMW Rules, 2016 and overall environment management of CTFs.

Action	DLI/PAP	Due Date	Responsible Agency	Completion Measurement
<i>Develop an Environment Strategy for the Health Sector in Tamil Nadu</i>	DLI	Year 1 strategy finalized and adopted by the State; and YR2-5, Strategy implemented	TNHSP	Environment Strategy Published, Adopted and under implementation
<i>Introduce continuous refresher trainings on biomedical and other wastes management</i>	PAP	Year 1 Finalization of training modules and schedules Year 2-5 concurrent refresher training started	TNHSP DME	New refresher training course rolled out for healthcare staff across all healthcare facilities
<i>Performance audits of CTFs</i>	PAP	Year 1 Agency contracted for performance audit	TNHSP	Annual performance audit reports publicly disclosed

		Year 2-5 Annual audits conducted		
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ANNEX 1

SOCIAL SAFEGUARD SCREENING CHECK LIST FOR PRELIMINARY ASSESSMENT OF HEALTH CARE FACILITIES

(This screening format needs to be filled under the guidance of health care facility in-charge i.e. Medical Superintendent for District/Regional Hospitals and/or Medical College Hospitals, Medical Officer for CHCs and PHCs, and the ANM for the SCs to rule out any adverse social impacts due to program intervention.)

1	Name of the District	
2	Name of the Block	
3	Name of the Health Facility	
4	Category of health facility	
5	Requirement of Land for any construction beyond exiting land available with the health facility	Yes/ No (If Yes, give details below; In case No – Q.6 to Q.11 are not applicable)
6	Is the site identified for the proposed activities under the program	Yes/ No (If Yes, give details below)
7	Area Required (specify unit – acres/ sq.mt/ sq.ft. etc.)	
8	Type of Land and ownership details	
9	Currently in possession of	
10	Number as per land record	
11	Is there a need to acquire the land for proposed activities	Yes/ No If No, go to Q.No. 13
12	Proposed mechanism for acquiring the land	Through Land Acquisition Process/ Direct Purchase/ Lease/ Other mechanism (specify)
13	Are there any squatters living on the land proposed	Yes / No (If Yes, give details below)
14	Are there any commercial structures on the land proposed	Yes/ No (If Yes, give details below)
15	Is the land being used as common property resources - such as water supply structure; sanitation structures; power supply infrastructure etc. or approach way	Yes/ No (If Yes, please write details about the structure and its use by local residential/ commercial/ institutions)

16	Is there any encroachment or any claim on the proposed land	Yes/ No (If yes, give details of from when and what kind)
		If Yes, report to TNHSP-PMU for necessary action
17	Any other specific information related to land	Give details
18	Is the photograph of the additional construction site/ land enclosed	Yes/ No
19	Does the proposed activities require any land acquisition as per point #11 above	Yes/ No
		If Yes, Report to TNHSP-PMU for necessary action
20	Has there been any 'Yes' answer to any of the screening point # 13,14 and 15 above	Yes/ No
		If Yes, Report to TNHSP-PMU for necessary action

Officer In charge for preliminary screening

In-charge of Health care facility

Name.....

Name:

Designation:

Designation:

Phone No.

Phone No.

Signature

Signature.....

Date:

Date:

MINUTES OF ESSA DISCLOSURE AND STAKEHOLDER CONSULTATION WORKSHOP – CHENNAI – OCTOBER 24, 2018

The findings of ESSA were disclosed in a disclosure workshop organized in Chennai on 24th October 2018. The participants included representative from various Government Departments including from TNHSP Society, NHM, CMCHIS, Social Welfare Department, State Resource Centre for Women (SRCW, Tamil Nadu) and One Stop Centre (OSC), DPH, DMS, DMRHS, DHFW, Tribal Welfare Directorate, Tamil Nadu State AIDS Control Society (TANSACS), ELCOT, PWD, and TNUHP; health facilities and research Institutions such as Madras Medical College and General Hospital Tambaram (Chennai); representatives from various NGOs working on health and/or with tribal and vulnerable population – SAATHII (Chennai), Community Seva Centre (Puducherry), Bharthi (Selam), Sudar Oli Trust (Vellore), Nilgiri Adivasi Welfare Association (NAVA), Kotagiri (Nilgiris), Toda women sangam federation (Ooty); and members of tribal community including members from Nilgiris Particularly Vulnerable Tribal Group (PVTG) Council and Irula tribal society Nilgiris. Representative from health Directorates also included officer responsible for planning and implementation of Bio-medical waste management in the health facilities. Participants who were invited but could not join the workshop included representatives from Land Administration Department, Tamil Nadu Pollution Control Board and representatives from Common Treatment Facilities (CTFs) for Bio-medical waste management. A list of participants is appended to the minutes.

The workshop started with introductory remarks by Tmt. P. Uma Maheswari, Project Director, TNHSP followed by which the World Bank team presented the findings of Environment and Social Systems Assessment. The comments and suggestions were invited on the findings and the recommendations of the assessment. The key discussion points, comments and suggestion from the participants and next steps that emerged are given in the table below.



Comments and Suggestions from Disclosure Workshop Participants and Agreed Next Steps

S. No.	Comments/Suggestions from Participating Stakeholders	How the Program Design Addresses These	Agreed Next Steps
	<ul style="list-style-type: none"> • Prioritization of cervical and breast cancer screening and linking to treatment under the program was appreciated. • Whether vaccination for cervical cancer is included as part of the program? 	<ul style="list-style-type: none"> • The current program doesn't include vaccination, the State Government could bring it under the program. 	<ul style="list-style-type: none"> • NGOs will hold further discussion with TNHSRP for inclusion of vaccination.
	<ul style="list-style-type: none"> • NGOs providing healthcare services in remote tribal and hill areas raised the issue of limited opportunities for building their own skills. • Healthcare facilities provided by NGOs in tribal and hill areas require them to spend up to 1 Lakh on BMWM. Can the government program extend financial support for this? 	<ul style="list-style-type: none"> • At present the program design doesn't envisage technical and financial support to NGOs. • The program design includes provisions to disseminate and share technological innovations on BMWM 	<ul style="list-style-type: none"> • NGOs will be invited for technical trainings and refresher trainings, including on BMWM. • NGOs will take up the issue of financial support for BMW with TNHSRP to identify potential financial resources, including other than the State budgetary support for BMWM.
	<ul style="list-style-type: none"> • Nutritional support provided as part of the tribal health program is insufficient to address the issue of sickle cell anaemia. • Tribal, especially among the primitive tribes, don't come forward for ANCs and other health care services and require changing their behaviour to access services. 	<ul style="list-style-type: none"> • The program design emphasizes quality of care and equity and includes measures to improve the health care facilities and services including at the primary level and backed by the social and behaviour change communication (SBCC) tailored to the need and socio-cultural context of the priority districts which includes some of the tribal districts 	<ul style="list-style-type: none"> • TNHSRP will facilitate a discussion with NHM and WCD/ Social welfare Dept. on nutritional support through ICDS program on specific gaps and mechanism to address the same.

S. No.	Comments/Suggestions from Participating Stakeholders	How the Program Design Addresses These	Agreed Next Steps
	<ul style="list-style-type: none"> Participants appreciated the #108 ambulance system. The number of referrals from sub-centre to PHC to CHC/ District Hospital are high resulting in delayed treatment, discomfort to patients and often deterioration in health condition leading to fatalities. 	<ul style="list-style-type: none"> The program design includes several measures to improve the quality of health care services at the first point of contact itself. This includes improving stabilization treatment to overcome the service deficit on emergency care. The program will strengthen screening and tracking of five NCDs for monitoring quality of treatment given. The program will track the numbers of referrals made and adjust support to reduce referrals. 	<ul style="list-style-type: none"> No specific next steps.
	<ul style="list-style-type: none"> Participants appreciated preparation of several strategies, including environment strategy and asked for their participating in developing these. 	<ul style="list-style-type: none"> The program design includes provisions of stakeholder consultations while developing these strategies. 	<ul style="list-style-type: none"> TNHSRP will ensure wider stakeholder consultations.
	<ul style="list-style-type: none"> Cash incentives for institutional deliveries are limited to government recognized PHCs and healthcare facilities. This makes tribal households travel long distance for such financial incentives and during travel complications often arise, sometimes fatal. Can the government empanel other healthcare facilities run by tribal NGOs for cash incentives? 	<ul style="list-style-type: none"> At present the program doesn't include such considerations. 	<ul style="list-style-type: none"> Tribal NGOs will hold further discussions with TNHSRP and State Govt. to explore empanelling of non-government healthcare services for such incentives.
	<ul style="list-style-type: none"> Need to increase postings of doctors and nurses in tribal and hill areas. 	<ul style="list-style-type: none"> The program design emphasize quality of healthcare that will address 	<ul style="list-style-type: none"> The program will further explore improving the services of mobile clinics.

S. No.	Comments/Suggestions from Participating Stakeholders	How the Program Design Addresses These	Agreed Next Steps
	<ul style="list-style-type: none"> Rounds by mobile clinics are substantially apart leaving a gap in healthcare provisioning. 	<p>availability of qualified professionals at these facilities.</p>	
	<ul style="list-style-type: none"> Inclusion of mental health as part of the program was appreciated. What resources are being made available under the program? 	<ul style="list-style-type: none"> Program design will encourage collaboration with experienced agencies/ NGOs such as Sneha, which are already running the suicide help line. 	<ul style="list-style-type: none"> No specific next steps.
	<ul style="list-style-type: none"> The Tribal Health Resource Centre that was started under the erstwhile TNHSP is still functional and can be used/ referred further when designing activities under the program especially in priority/ tribal districts. 	<ul style="list-style-type: none"> The program welcomes this suggestion. 	<ul style="list-style-type: none"> Program will ensure that IEC material is made available at the center.
	<ul style="list-style-type: none"> One Stop Centres under the social Welfare Department can assist on addressing domestic violence and other issues related to health care services on mental health, trauma and suicide. 	<ul style="list-style-type: none"> The program welcomes this suggestion. 	<ul style="list-style-type: none"> Program will ensure collaboration with such centers.
	<ul style="list-style-type: none"> Participants suggested that best practices and successful case studies from TNHSRP should be shared with other States in India. 	<ul style="list-style-type: none"> The program design includes measures for disseminating learnings nation-wide. 	<ul style="list-style-type: none"> TNHSRP will ensure that learnings are widely shared across the country.



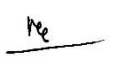
List of participants: Disclosure Workshop


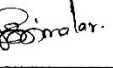


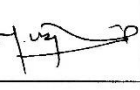



**Government of Tamil Nadu
Tamil Nadu Health Systems Reforms Project**

**Date - 24.10.2018
Time - 10.00 am to 5.30 pm**

**Venue : Hotel Sheraton Grand,
Chennai**

Attendance

S.No	Name	Designation & Office	Contact No.	E-mail	Signature
1.	Tmt. P. Uma Maheswari IAS	Project Director, TNHSP	9445030703	pdttnhsp@gmail.com	
2.	Dr. Darez Ahmed, IAS	Mission Director, National Health Mission	7873003211	rchpcni@nic.in	
3.	Dr. T.S. Selva Vinayagam	Additional Director, CNCHIS	9445030714	drsvinayagam@gmail.com	
4.	Rahul Pandey	Operations officer World Bank	8130578520	rpandey1@worldbank.org	
5.	Dr. S.K. Thirumal Kumar	JD TNHSP/TNHSP	9445030900	sktjica@gmail.com	
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