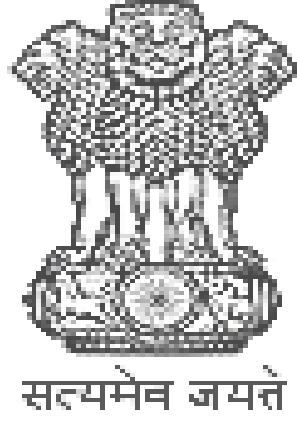




LAKSHADWEEP TB ELIMINATION MISSION

STRATEGY DOCUMENT



LAKSHADWEEP
TB ELIMINATION MISSION
STRATEGY DOCUMENT

Published by

State TB Cell (National Health Mission), Directorate of
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Kavaratti - 682555

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Acronyms and abbreviations

ACF	Active Case Finding
ACSM	Advocacy Communication and Social Mobilisation
ADR	Adverse Drug Reactions
AIC	Air borne Infection Control
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
CB NAAT	Cartridge Based Nucleic Acid Amplification Technology
CHC	Community Health Centre
CRD	Chronic Respiratory Diseases
CXR	Chest X ray
DHO	District Health Officer
DMHS	Director of Medical Health Services
DMC	Designated Microscopy Centre
DR TB	Drug Resistant TB
DST	Drug Susceptibility Testing
EQA	External Quality Assurance
FBO	Faith Based Organisation
GOI	Government of India
HIV	Human Immunodeficiency Virus
INH	Isoniazid
LTBI	Latent Tuberculosis Infection
MO	Medical Officer
MPHW	Multi-Purpose Health Worker
NGO	Non-Governmental Organisation
NHM	National Health Mission
NSP	National Strategic Plan
PHI	Peripheral Health Institution
PRI	Panchayat Raj Institution
RNTCP	Revised National TB Control Program
UTL	Union Territory of Lakshadweep
VDP	Village Dweep Panchayat
WHO	World Health Organisation

फारूक खान
FAROOQ KHAN



प्रशासक
लक्षद्वीप सघं राज्य क्षेत्र
कवरत्ती - ६८२५५५

ADMINISTRATOR
UNION TERRITORY OF LAKSHADWEEP
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Foreword

TB remains as a public health scourge, a health security threat and a development challenge to the nation. On March 13th, 2018 Hon Prime Minister of India Sri Narendra Modi has declared the commitment of the nation to end TB by 2025. Accepting the Prime Minister's call to End TB in the country, Union Territory of Lakshadweep has formulated and started implementing 'Lakshadweep TB Elimination Mission' with highest administrative commitment.

U T of Lakshadweep has many favourable factors to eliminate TB and be a forerunner in TB Elimination Mission of the nation. Entire TB services here is well integrated with the general health system. U T of Lakshadweep has lower prevalence of many of the key determinants of TB like malnutrition, smoking, alcohol and there exists presence of a fair equity in standards of living among general population.

As envisioned by Hon. Prime Minister, Lakshadweep TB Elimination Mission will be linked to the development plan of the UTL with major focus on improvement in socioeconomic conditions of the population, providing better housing conditions and assuring quality health care. All stakeholders will be brought together for achieving the desired goal much ahead.

The strategy document is the affirmation of the UTL Administration to achieve TB Elimination. It is a 5-year strategy document and aims to achieve a rapid decline in TB incidence, prevalence, morbidity, mortality and build systems to equip UT of Lakshadweep to achieve TB Elimination. I am sure that this will mark a major mile stone in Global TB Elimination.

(FAROOQ KHAN)



Vijendra Singh Rawat IAS

COLLECTOR & SECRETARY

UNION TERRITORY OF LAKSHADWEEP

KAVARATTI 682555

Responding to the calls on governments to achieve Sustainable Development Goals and adapt and implement the End TB strategy, Government of India has formulated National Strategic Plan for TB Elimination by 2025 with high-level commitment and financing. With an emphatically accelerated fight against, GOI is planning to end TB five years ahead of the target fixed by UN.

Union Territory of Lakshadweep is already heading towards achieving TB Elimination. Despite the highest efforts to find cases, Union Territory of Lakshadweep notifies the least number of TB cases in the country. Many of the islands here have already notified zero cases in last year. Treatment success have been 100% over the years and there is not even a single case of drug resistant TB case reported in last three years.

TB Elimination in UTL is synonymous with strengthening health system further. Health system will be geared to reduce major TB vulnerabilities including Diabetes, Chronic respiratory diseases and tobacco use. The strategy focussing on diagnosing all cases of TB earlier by setting a strong surveillance system and screening and treating Latent TB Infection in high risk groups will help UTL in achieving TB Elimination in true sense.

I thank all the officials and subject experts who contributed towards developing this document. I am sure that every child born in UTL will breath air free of Mycobacterium Tuberculosis within a few years.

(Vijendra Singh Rawat, IAS)
Collector & Secretary (Health)

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DR. M. K. MOHAMMEDASLAM
DIRECTOR



Administration of the
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TB is one of the Communicable disease which threaten the public very much and largest population in India is having the disease affected. Hon'ble Prime Minister of India has declared the commitment over the Nation to End TB by 2025, in the National END TB Summit convened in the month of March 2018.

Lakshadweep is the very smallest place where the Elimination of TB can be achieved very fast by taking effort since TB scenario in Lakshadweep is much better when compared to the rest of the Nations.

Aiming towards END TB by the year 2025, the strategy document is prepared for achieving the END TB Strategy may help the Department of Health Services, U. T. of Lakshadweep in a very fruitful way. The 5 year strategy document is aimed to fight against TB incidence, prevalence, morbidity, mortality and build systems to equip UT of Lakshadweep to achieve TB Elimination.

This document may help us to think and act against the TB burden and strategy of Elimination.

A handwritten signature in blue ink, appearing to read 'M. K. M.', with a horizontal line underneath.

DR. M. K. MOHAMMEDASLAM



**Administration of the
Union Territory of Lakshadweep
(Department of Health Services)
Kavaratti-682555**



**DR. K. SHAMSUDHEEN
MISSION DIRECTOR
NATIONAL HEALTH MISSION**

TB is one of the major Public Health threat in the Country. During the National Summit – “END TB” on 13.03.2018, Hon’ble Prime Minister of India has declared the commitment over the Nation to End TB by 2025, five year in advance of the declaration of WHO to END TB.

Lakshadweep islands are the tiniest Uni-district Union Territory of India have excellent Health index for the last many years. TB scenario in Lakshadweep is also much better when compared to the rest of the Nations.

Facilitate the aim of END TB by the year 2025, the strategy document is prepared for achieving and in affirmation of the Department of Health Services, U. T. of Lakshadweep to achieve TB Elimination. The 5 year strategy document is aimed to fight against TB incidence, prevalence, morbidity, mortality and build systems to equip UT of Lakshadweep to achieve the goal of TB Elimination by the year 2025.

DR. K. SHAMSUDHEEN

Introduction

India is now better prepared to address TB better than ever before. It possesses advanced and effective interventions and technologies for diagnosis, treatment and care of TB. National Strategic Plan for 2017– 25 for TB elimination in India embraces these opportunities to leverage its full potential and proposes transformational changes to TB care service delivery.

Union Territory of Lakshadweep is geographically isolated from mainland reducing risks for exposure and re-exposure to TB. TB control is fully integrated with the health system. Government is the sole health provider and there is no private sector. Population is captive and there is no in-migration.

Union territory of Lakshadweep has lower prevalence of many of the key determinants of TB like malnutrition, smoking, alcohol and there exists presence of a fair equity in standards of living among general population.

From a phase of voluntary reporting of symptoms of TB in UT of Lakshadweep, attempts to find more TB cases led to a phase of active case search among the among the entire population for last two years. With a good quality sputum smear microscopy in the background, despite high and sustained presumptive TB examination rate, notification started falling in UTL. The notification rate of microbiologically confirmed TB cases is around 35/lakh population with zero reported cases in some of the islands. The program has also demonstrated strength in case holding. Treatment support and retrieval of interrupting patients

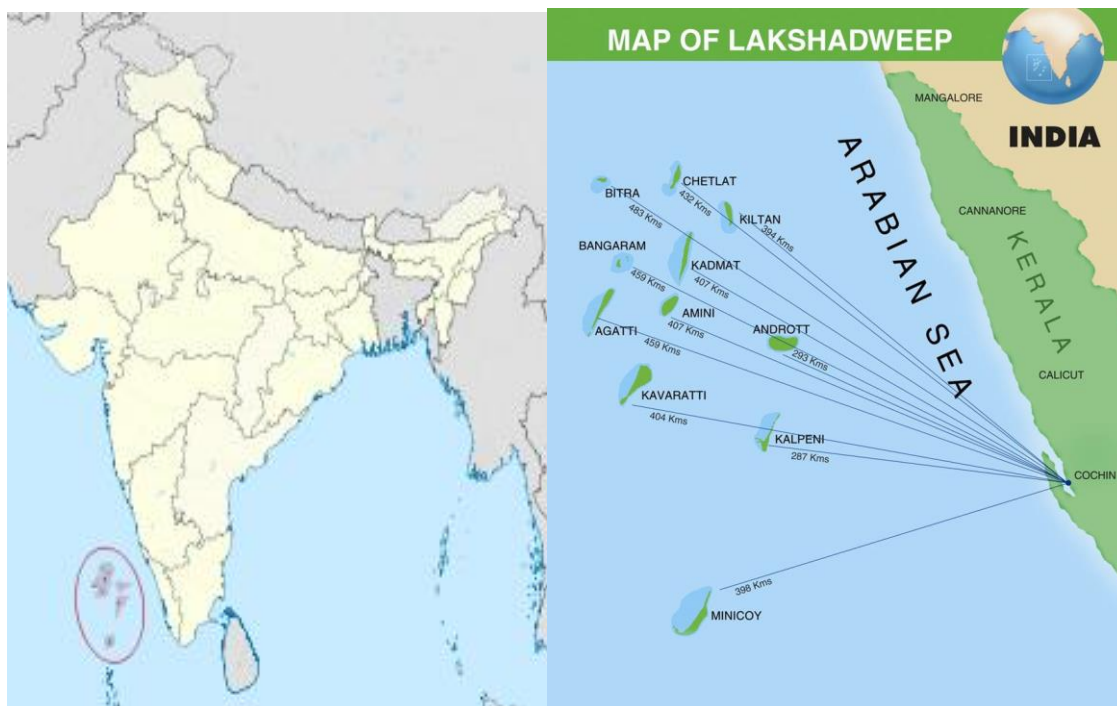
are decentralized to PHI level staff. The impact of case holding efforts are demonstrable as proportion of cases developing resistance and re-registration for treatment is low.

Key policy makers of UTL are committed to end TB. Program managers at various levels are oriented to the great task. This strategy document details bold and innovative steps to move towards TB elimination in UT of Lakshadweep. It is a 5-year strategy document and aims to achieve a rapid decline in TB incidence, prevalence, mortality, morbidity and build systems to equip UT of Lakshadweep to achieve TB Elimination. This document is brought out with joint efforts of administrators, policy makers and experts. It will mark a milestone in Global TB Elimination.

I. Geography & Demographics

Lakshadweep is a group of islands located 200 to 440km off the south western coast of India scattered in the Arabian Sea, between 8° and 12° 30' north latitude and 71° and 74° east longitude. Lakshadweep Union Territory forms the smallest Union Territory of India and is also the establishment with the least population.

Fig 1 (a): Map of India with Lakshadweep marked; (b) Islands of Lakshadweep



Ten of the islands are inhabited while another 26 are uninhabited. Agatti has an airport with direct flights from Kochi. Temperature ranges between 23⁰ C – 33⁰ C with average annual rainfall of 1612 mm.

Kavaratti is the head quarter. Land area is less than 1% of total area of Lakshadweep. Total land mass area of 32 Sq. Kms, are surrounded by around 4,200 Sq.Km territorial sea area. There is no road connectivity between islands. The inter-island distance varies from about 10 to 200 kilometres. Only routine way to travel between islands in Lakshadweep is through sea.

Table 1: Details of inhabited islands in Lakshadweep

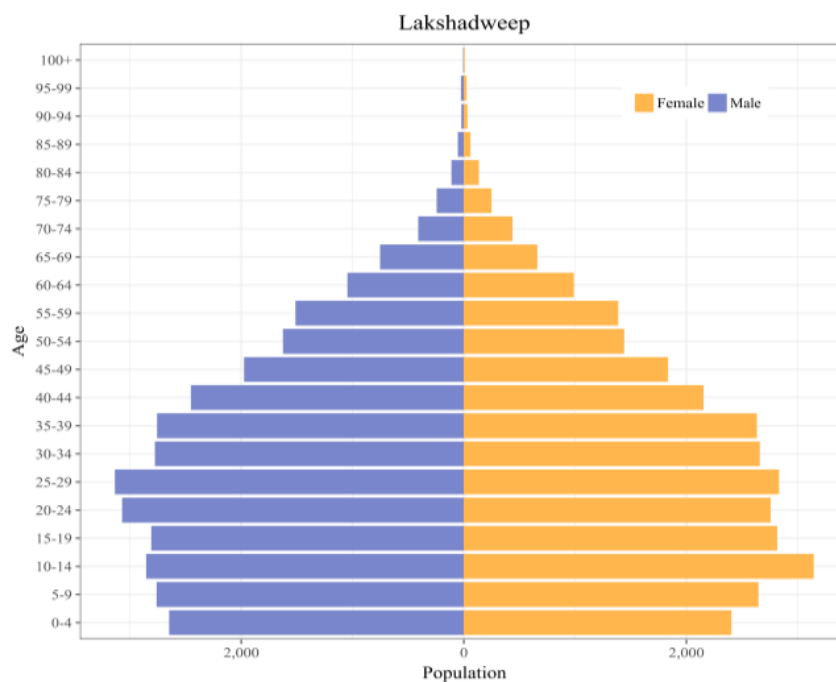
Name of Island	Land area (km²)	Population	Location
Chetlat	1.14	2,347	11°42'N 72°42'E
Bitra	0.10	271	11°33'N 72°09'E
Kiltan	2.20	3,946	11°29'N 73°00'E
Kadmat	3.20	5,404	11°14'N 72°47'E
Amini	2.59	7,661	11°06'N 72°45'E
Agatti	2.70	7,566	10°50'N 73°41'E
Androth	4.90	11,191	10°50'N 73°41'E
Kavarathi	4.22	11,221	10°33'N 72°38'E
Kalpeni	2.79	4,419	10°05'N 73°38'E
Minicoy	4.80	10,447	08°32'N 73°17'E

With population of 64,473 (Census 2011), living in total surface area of just 32km², it has a high population density of over 2000. When it comes to population growth, Lakshadweep beats every other region with a positive

growth rate, with minimum population increment rate of around 6. The rate has been reduced down from around 18 %, as compared to census 2001. The projected population in Lakshadweep in 2018 is 65,680.

Lakshadweep has 6 inhabited towns and 6 villages. There are no slums or cities. There are 11541 households. Urban population constitute 78.07% and 94.8% belong to scheduled tribes. The majority of the indigenous population is Muslim.

Fig 2. Population pyramid of Lakshadweep



Average literacy rate of Lakshadweep is 91.85 percent. Lakshadweep has a sex ratio of 946 females for every 1000 males. School enrolment is 100% with no

drop outs till 6th standard. Nearly all households have electricity and improved sanitation facilities. Around 35% households use only clean fuel for cooking.

Industry activity in Lakshadweep revolves around small scale industries of coir and fish. The main occupation of the people is fishing and coconut cultivation, with tuna being the main item of export. The economy of Lakshadweep depends largely on coconut cultivation, fishing, coir industry and tourism. The gross domestic product of Lakshadweep amounted to US\$ 80 million in 2010.

The terrestrial fauna is mostly domestic animals like the goat, cow and cat. Livestock census shows that there were 4373 cattles in the island.

II. Governance

The entire Union Territory of Lakshadweep is considered as one district. The Administrator appointed under Article 239 of the constitution is the head of this Union Territory. For the purpose of implementing community development schemes the territory is divided into five Community Development Blocks with Kavaratti, Amini, Andrott, Minicoy and Kiltan as block head quarters. To bring Administration closer to the people there are eight Sub Division Officers and two Deputy Collectors posted on all inhabited islands.

Gram Panchayats or Village (Dweep) Panchayats in Lakshadweep are responsible for preparation of their annual budgets for the schemes entrusted to them by the Lakshadweep Administration for operation and also for preparations of its own Development Plan. There are 10 Village (Dweep) Panchayats with 79 elected members and one district panchayat.

III. Health Care System

Lakshadweep has no private hospitals. Lakshadweep has 1 speciality hospital (PPP scheme), two hospitals, 2 community health centres and 4 Primary health centres. The details of the health institutions including bed strength were shown in Table below. Doctor population ratio is 1:2454 and nurse population ratio is 1:2071.

Table 2. Details of health care institutions in Lakshadweep

Health Institutions	No. Of institutions	Name of institutions	No. of Beds
Speciality Hospital	1	1. Rajiv Gandhi Sepeciality Hospital, Agatti	100
Hospitals	2	1. Indira Gandhi Hospital, Kavaratti.	50
		2. Govt. Hospital, Minicoy.	20
Community Health Centres	2	1. CHC, Androth.	30
		2. CHC, Amini	30
Primary Health Centre	4	1. PHC, Kalpeni.	10
		2. PHC, Kadmath.	10
		3. PHC, Kilthan.	10
		4. PHC, Chetlat.	10
First Aid Centre	1	1. FAC, Bitra.	Nil
Sub Centre	14		Nil
Ayurvedic Dispensary	2	Attached to IGH Kavaratti and CHC, Androth.	
Homeopathic Dispensary	1	Attached to CHC Amini	-

Patients requiring specialist consultation and surgery are evacuated either to Agatti/ Kavaratti referral hospitals or to mainland by the ambulance helicopter.

ISRO has provided telemedicine facility at I.G. hospital Kavaratti.

Lakshadweep is a “front runner” in composite health index

Birth rate is 11.8 and death rate is 3.6/1000 population. Infant Mortality Rate is less than 10 and immunisation coverage (UIP vaccines) is nearly 100%. Life expectancy is 67.3 years.

NITI AYOOG has rated States and UTs based on a composite health index. The Index is a weighted composite Index based on indicators in three domains: (a) Health Outcomes; (b) Governance and Information; and (c) Key Inputs/Processes, with each domain assigned a weight based on its importance. The indicator values are standardized (scaled 0 to 100) and used in generating composite Index scores and overall performance rankings [Base year 2014].

In terms of overall performance, Lakshadweep (65.79) ranked at the top among UTs. Lakshadweep with the highest overall performance is categorized as Front-runner. Lakshadweep is the most improved UT and ranked at the top with good incremental progress registered from base to reference years for indicators such as institutional deliveries (76 to 85 percent), TB treatment success rate (87 to 91 percent) and transfer of Central NHM funds from State Treasury to implementation agency (143 to 0 days).

IV. Determinants of TB

Standard of Living

The Lakshadweep people enjoy a reasonably good standard of living and better human development. Lakshadweep adjudged 0.682, 0.649 and 0.456 in Life Expectancy index, Education Index and Expenditure Index respectively, while national average was 0.677, 0.499 and 0.416 respectively. 45 per cent household achieved high level of human development, . moderate level of human development is attained by 57.5 per cent households while the rest 2.5 per cent account for low level of human development. The inter-household variation in the level of human development in Lakshadweep island is relatively low.

Around 45% of household have a salaried job. The Gini Coefficient for both urban and rural population for the UTL is among the lowest in the country, indicating the prevalence of a fair degree of equity among the population

Malnutrition

Prevalence of malnutrition is lower in Lakshadweep. Proportion of babies born with low birth weight was just 5.5%. NFHS 4 showed that 12.5 % adult women and 7.4% adult men had a BMI less than 18.5 kg/m².

Diabetes

Though accurate estimates of prevalence of diabetes mellitus are not available from Lakshadweep, NFHS 4 survey indicates that proportion of people with high sugars (>140 mg %) was comparatively very higher in Lakshadweep at 17.2% among women and 19% among men.

Tobacco and Alcohol

NFHS 4 reports that 24% men and 15% of women in Lakshadweep use any kind of tobacco while 6% men consume alcohol. Culture of Lakshadweep does not promote smoking. Sale and consumption of alcohol is prohibited by law in Lakshadweep.

Air pollution

Lakshadweep is a “No Industry District” of the country in view of the fragile ecology of the islands. There are only around 5000 motor vehicles registered in Lakshadweep and more than three fourth are two wheelers. 80% of the islanders are using coconut by-products for cooking which produce the highest level of Green Gas in island. The analysis of Air Quality Index values by Central Pollution Control Board as a part of National Ambient Air quality monitoring

indicates that the people in these areas have minimal impact of air pollution.

[PM2.5- 15.45 $\mu\text{g}/\text{m}^3$, AQI 15; PM 10- 29.73 $\mu\text{g}/\text{m}^3$, AQI 29]

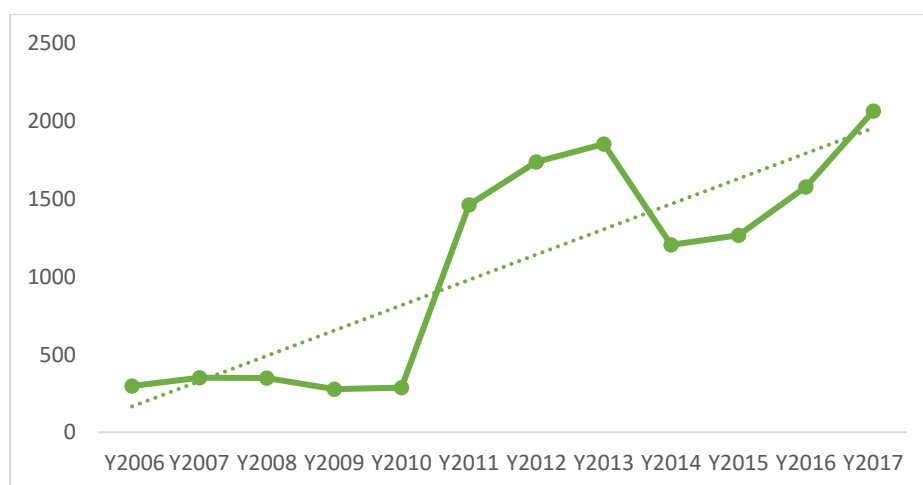
Migration

It is an isolated and captive population. As a result of the conscious steps taken by the government (Restricted Entry Permit & Land Laws) to check migration and to create positive disincentives for migrants to come over to the islands and stay here permanently, immigration is minimal. Roughly 7000 tourists arrive at Lakshadweep annually. All provisions to the island are supplied from Kochi and it is connected to Kozhikode and Mangalore. People from Lakshadweep used to go to mainland mainly Kerala for better employment opportunities. National Sample Survey Organisation found out-migration from Lakshadweep at a rate of 94/100000 annually and is the highest among UTs.

V. TB Scenario in Lakshadweep

All sanctioned positions of Medical Officers and ANMs at PHCs and CHCs are filled. All inhabited islands have health facilities like Hospitals/CHCs/PHCs with facilities like X-ray and Laboratory. National Tuberculosis Control Programme is being implemented by integration with the general health care system. Nine Designated Microscopy centres are in place at all CHCs, PHCs and hospitals in Lakshadweep. There is a CB NAAT machine at IG Hospital, Kavarthi installed in last quarter of 2016.

Fig 3. Presumptive TB Examination rate/ 100000 population [2006-2017]



Presumptive TB examination rate has gone up above 2000 per one lakh in 2017.

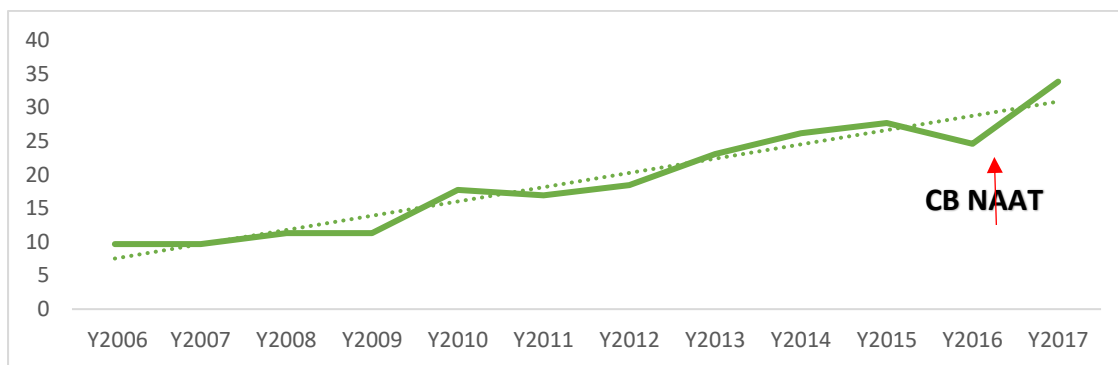
Team from National Reference Laboratory, Chennai and Intermediate

Reference Laboratory, Thiruvananthpuram have visited various DMCs of

Lakshadweep in 2018 for Onsite Evaluations and has reported reasonably good quality of smear microscopy.

Number of cases detected has also gone up over the years. In 2017, when the active case finding from community was strengthened, there were 22 microbiologically confirmed new cases notified in the island with a notification rate of 34/100000 population. Total there were 46 cases [70/100000] notified in 2017 of which 21% were extrapulmonary, 17% paediatric, 3% retreatment. However, the notification declined in 2018 despite more efforts to find TB.

Fig 4. Microbiologically confirmed Incident TB notification per 100000 population [2006-2017]



Number needed to test to detect one microbiologically confirmed case was above 60 in last few years.

Fig 5. Number Needed to Test to detect one Microbiologically confirmed TB case

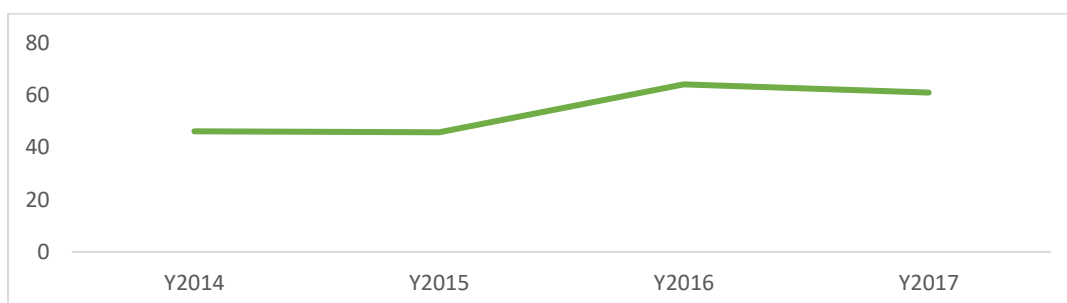


Fig 6. Falling Notification Rate despite high presumptive TB examination

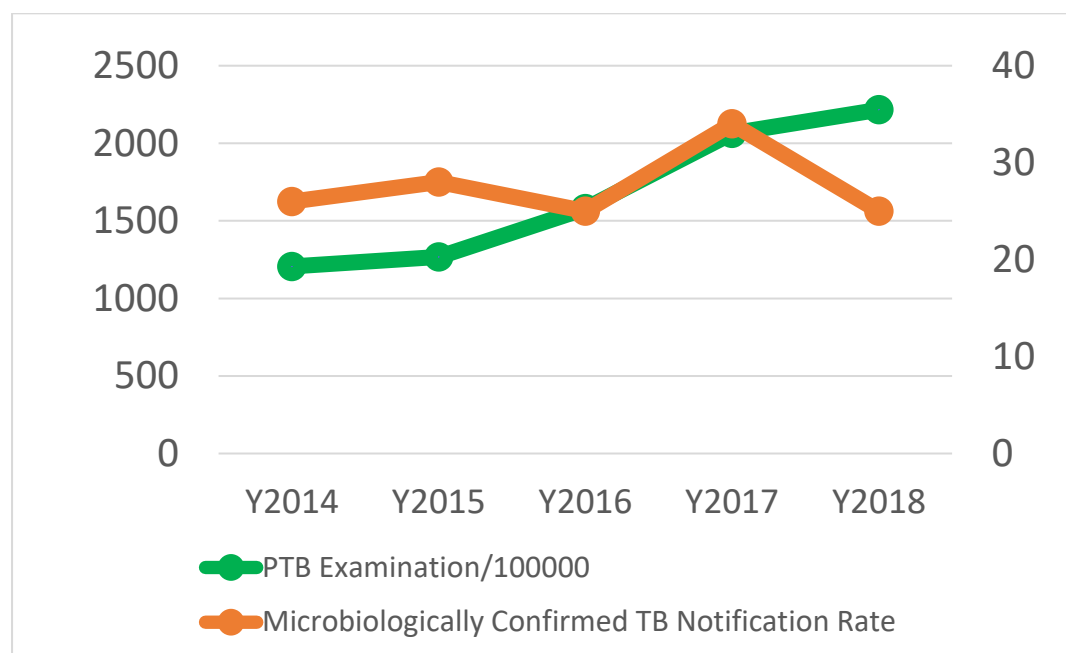
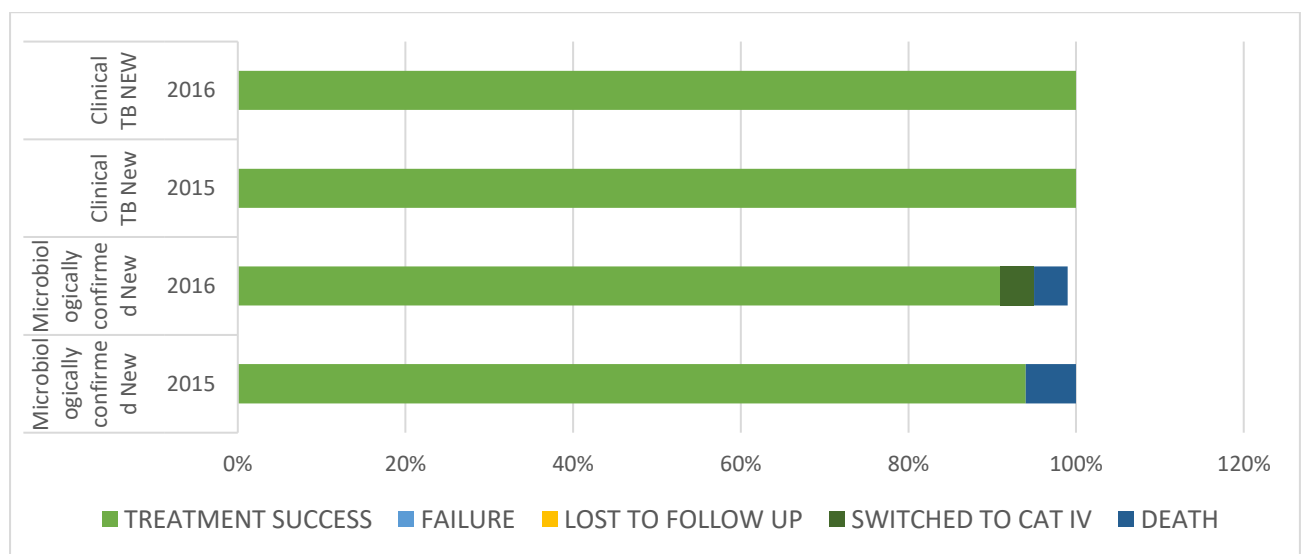


Table 3. Island wise TB case Notification Rate in 2018

Name of the Island	TB disease Total Notification Rate (per 100000)	Population of the island
Bitra	0	271
Chethlath	43	2347
Kiltan	102	2946
Kalpeni	0	4419
Kadmath	19	5404
Agatti	13	7566
Amini	26	7661
Minicoy	10	10447
Androth	71	11191
Kavaratti	53	11221

Treatment outcomes

Treatment success for the 2016 cohort of microbiologically confirmed new cases was 94%, and clinically diagnosed cohort was 95% and for 2015 cohort the figures were 91% and 100% respectively. There was no lost to follow up of any cases.



Drug Resistant TB

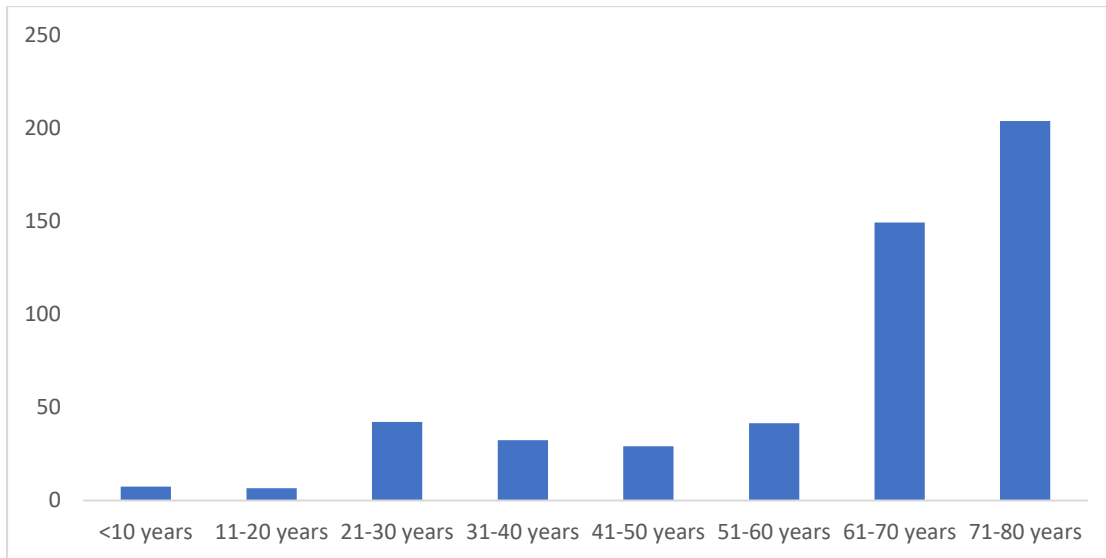
Only one drug resistant TB case in Lakshadweep was there over past five years. In 2017, 174 and in 2018 [Jan -Sep] 198 CB NAAT tests were performed and no one turns to be Rif resistant.

Age specific notification of TB

Age specific notification of microbiologically confirmed TB case has shown the highest rate in elderly age group [150/100000 among 60-70-year-old and 200/100000 among those who were 70 years old].

Fig 8. Age specific notification of microbiologically confirmed TB cases

2017



VI. While moving towards elimination in Lakshadweep

A. What are the strengths of Lakshadweep UT to achieve TB Elimination?

- Geographically isolated from mainland reducing risks for exposure and re-exposure to TB
- High Political and Administrative commitment for TB Elimination
- TB control is fully integrated with the health system
- Government is the sole health provider and there is no private sector
- Lost to follow up is not an issue
- No in-migration
- Surrounded by sea with good air and with no industries
- Lower prevalence of key determinants of TB like malnutrition, smoking, alcohol and presence of a fair equity in standards of living among general population.

B. What are the major challenges while moving towards elimination in Lakshadweep?

- Wide dispersal of the population in small islands scattered far away from each other and from the mainland in the Arabian Sea making transport and communication difficult.
- High out migration to mainland for better employment opportunities

- High population growth rate
- Rising trend of diabetes mellitus
- Absence of UT specific TB burden

C. Will it be possible to bring down incidence to elimination levels in Lakshadweep?

The World Health Organization defines TB elimination as <1 case of TB disease per million population annually and defines a low incidence region as <100 cases per million. Currently Lakshadweep notifies around 250 per million microbiologically confirmed cases.

Most of the cases in UT had a clear contact of TB within the household. TB in Lakshadweep is now a mainly disease of elderly and household contacts. A strategy focussing on diagnosing all cases earlier by a strong surveillance system focussing on major vulnerabilities especially household contacts and screening for and treating LTBI in high risk groups might drastically bring down TB in Lakshadweep. Lakshadweep is an ideal setting to achieve TB Elimination in true sense.

VII. Principles for TB elimination in Lakshadweep

Four core principles lay foundation to the strategies for TB elimination in Lakshadweep. Each foundational principle is further divided into subprinciples

1. Stop new TB infections

1.1. Airborne Infection Control in health facilities, households and community

1.2. Find and treat cases as soon as they occur

2. Prevent active breakdown of disease among the infected

2.1. Detect and Manage Comorbidities

2.2. Manage risk factors including smoking and substance abuse

2.3. Prevent and manage malnutrition

2.4. Detect and treat Latent TB Infection

3. Diagnose TB early and completely

3.1. Identify individuals vulnerable to develop TB in the community

3.2. Actively search for TB among vulnerable periodically

3.3. Universal access to TB diagnostics and Drug Susceptibility Testing

4. Treat TB correctly and completely

4.1. DST guided regimen for treatment

4.2 Detect and Manage co-morbidity among the TB patients

VIII. Strategies for TB Elimination in Lakshadweep

The strategy has nine components.

1. Advocacy, Communication, and Social Mobilization for generating demand and awareness
2. Airborne infection control in health facilities, households and community
3. Establish a robust TB active surveillance system facilitating early diagnosis, treatment and public health actions.
4. Complete treatment of all forms of TB including drug resistant TB
5. Universal access to drug susceptibility testing and DST guided treatment
6. Screening for comorbidities including HIV and their management
7. Establishment of cross-border collaboration with private hospitals in Kochi and Kozhikode
8. Addressing major TB vulnerabilities including tobacco, malnutrition and indoor air pollution
9. Plan for targeted testing and treatment of Latent TB Infection

Fig 9:Strategies for TB Elimination in Lakshadweep



1. Generation of awareness and demand through advocacy, communication and social mobilization

ADVOCACY: Each village (Dweep) panchayat and district panchayat needs to be sensitized on the need, locally appropriate methodology and outcomes of TB elimination. This is (1) to piggyback TB elimination with other development initiatives in the jurisdiction for value addition (2) to ensure popularity and acceptance for the interventions (3) to ensure civic compliance to the intervention (4) to strengthen active surveillance and notification and (5) to provide social support to diagnosed TB patients when needed, to complete treatment successfully. Sensitization will be done by the public health team in the local Primary Health Centre. Outcome of this sensitization is a Village (Dweep) TB Elimination Task Force and a local plan for all the 10 islands.

COMMUNICATION: Sustained, repeated, simple messages on TB must be given to all citizens at their residences. Peripheral health workers and Accredited Social Health Activists (ASHA) equipped with prefixed tools to impart TB education to all households. These communication activities are linked to the continuous surveillance discussed elsewhere. TB elimination hoardings to be erected at all major islands at popular meeting places (boat jetty).

SOCIAL MOBILIZATION: Civil society movements in each village (dweep) is to be coordinated by the people's' representative to the Local Self Government and opinion leaders. Social mobilisation increases demand for TB elimination.

2. Airborne infection control (AIC) in health facilities, households and community

HEALTH FACILITIES: Establish hospital infection control committee. Assess and certify all health facilities for AIC compliance. Training on National AIC Guidelines will be imparted to all health staff and health facility administrators. Sensitization messages and masks/hand kerchiefs/tissue for patients' use will be ensured in institutions.

HOUSEHOLDS: Designated peripheral health worker and ASHA responsible for home based public health support should observe, document, modify and reinforce patients' compliance with AIC and ensure provisions of an AIC kit (Five cloth masks/spittoon and disinfectant solution) to cover cough and disinfect sputum.

COMMUNITY: Messages on cough etiquettes as a component of communication strategy to all citizens in the district followed by promotion and enforcement by Dweep (Village) Panchayats

3. Establish robust TB active surveillance system

A. Individual risk-based surveillance for early diagnosis of TB

Surveillance is one of the fundamental public health activities necessary for the control and elimination of TB. A robust surveillance system should be able to identify individuals with risk to develop TB and monitor them lifelong for developing TB disease.

Each ASHAs will be provided with a handheld device installed with the surveillance application. During the initial door to door survey, which is a one-time activity completed with the help of ASHA, the vulnerable individuals in each Dweep have been identified. It is important to see that the individuals so identified are not stigmatised. A database of vulnerable individuals by name and unique identification details is to be maintained for this purpose at each dweep. Vulnerability at individual level will be identified using risk scoring which include contacts of TB patients; severely malnourished, patients with comorbidities like diabetes, renal/hepatic failure, on immunosuppressive drugs and chronic respiratory diseases, aged and chronic smokers. The information collected will be centralized around the concept of following up a high-risk individual through phases of infection, disease, treatment and long term follow up. Active Case Finding includes symptomatic screening of individuals based on vulnerability scores every three months by ASHA/ANM. Testing of

biological specimens mobilised through active surveillance need to be done using Molecular techniques with higher sensitivity.

B. Case based Surveillance of TB disease

100% notification of all TB cases in Lakshadweep diagnosed within the island or at mainland and the public health actions of all notified cases including correct and complete treatment, chemoprophylaxis for eligible members, contact investigation, airborne infection control at household, Direct Benefit Transfer for nutritional support will be ensured. The case, after treatment, will be kept under surveillance to detect recurrence or reinfection at the earliest.

C. Surveillance for Prevalence of TB disease and LTBI

Prevalence of TB disease need to be estimated and periodically assessed every third year to monitor the trend in prevalence of TB. This could be done using screening all adults above 18 years using X-ray and testing using molecular tests. Monitoring LTBI prevalence trend is needed once the policy to detect and treat LTBI is formulated at national level.

D. Addressing TB among guest workers

Though minimal, there are many workers from mainland coming to UTL for working for short term periods. A declaration of TB status may be made

mandatory by the administration while issuing permit to enter UT. Those declared to have TB will be offered all medical and public health support by the health services machinery of UTL.

4. Complete treatment of all forms of TB including drug resistant TB

Complete treatment of all forms of TB including drug resistant TB. It is prompt initiation of treatment with the right regime, regular intake of all doses, prevent or manage factors adversely affecting a good treatment outcome like adverse reactions to drugs (ADR), comorbidities, social inclusion issues, substance abuse, smoking and unfavourable occupations so that the patient becomes healthy by all means. It is important in preventing long term morbidity and mortality due to TB.

Strategy for complete treatment includes, (a) Prompt initiation of treatment of TB including drug resistant TB (b). Patient support through treatment support groups (c). Monitoring and promotion of adherence (d). Early detection and management of ADR (e). Institutional management of seriously ill patients (f).
Early detection and management of comorbidities

5. Universal access to drug susceptibility testing and DST guided treatment

UNIVERSAL ACCESS TO DST: All diagnosed TB cases should undergo DST to Rifampicin and INH before initiation of treatment. Currently rifampicin

resistance is being tested using CB NAAT at Kavarathi. Being centrally located, it is difficult for the samples to reach the site especially during monsoon season. TRUE NAAT at each island is proposed. All samples are being sent at baseline to IRL Kerala for doing FL LPA, the results of which will determine the course of further testing and treatment. When the human resource capacity of IRL Kerala develops, resistance to FLDs and quinolones and SLIs need to be done at baseline itself.

DST GUIDED TREATMENT: Standard first line regimen should be started for all cases that are not found to be Rifampicin resistant at the time of diagnosis. Standard FL regime should be modified according to extended DST report. Standard second line regimen should be started for all Rifampicin resistant cases, to be modified according to extended DST report.

6. Screening for comorbidities including HIV and their management

SCREENING FOR DIABETES: All TB patients need to be screened for diabetes using a sensitive test like HbA1C.

MANAGEMENT OF DIABETES: Diabetes among the TB patients need to be managed properly and they need to be additionally screened for drug interactions, adverse reactions to drugs etc

SCREENING AND MANAGEMENT OF CRDs: Chronic respiratory diseases are to be managed with a patient centred approach in the primary care setting.

INTENSIFIED TB and HIV CASE FINDING: It relates to bidirectional screening among TB cases for HIV and TB among PLHIV.

SMOKING CESSATION: Smoking cessation services need to be offered to all TB patients who are smokers. Capacity building of all staff need to be done in this regard.

7. Establishment of cross-border collaboration

All provisions to the island are supplied from Kochi, Kozhikode and Mangalore. People from Lakshadweep used to go to mainland mainly Kerala for better employment opportunities. NSSO found out-migration from Lakshadweep at a rate of 94/100000 annually and is the highest among UTs. Those who migrated out for employment used to come back regularly to their home island. Also, people from many islands depend on private hospitals at Kochi and Kozhikode for treatment as it is easy for them to reach there as compared to visiting specialist hospitals at Kavarathi. A cross-border collaboration with District TB Elimination task force of Ernakulam and Kozhikode and major private hospitals there is needed for ensuring complete TB notification, early diagnosis and free of cost TB services to citizens of

Lakshadweep. It should also address confidentiality, treatment adherence, disease surveillance, LTBI detection and management and long term follow up.

8. Addressing major TB vulnerabilities including Diabetes, tobacco, malnutrition and indoor air pollution

Prevention of vulnerability through poverty reduction, improvement in nutritional status; prevention of indoor air pollution, smoking and substance abuse is needed. Administration will integrate TB elimination with other development initiatives in the jurisdiction- poverty alleviation, LPG schemes and other social welfare schemes.

Strengthening health system for prevention and management of NCDs

Diabetes may increase the risk for TB infection, active TB disease, unfavourable outcomes including relapse. Chronic respiratory diseases (CRDs) may increase the risk and pose threat to effective TB treatment.

Prevention of NCDs through improving life skill education, promoting physical activity, nutrition education and system for early diagnosis using risk scores, treatment at primary health centre level using clinical protocols, adherence support mechanisms and screening for complications need to be strengthened.

Effective collaboration will be established with Non-Communicable diseases prevention and control program and National Tobacco Control program for

reducing individual vulnerability to develop TB as well as to implement population strategy for reducing the incidence of these risk factors.

9. Plan for targeted testing and treatment of LTBI

Diagnosis and treatment of latent TB infection may help to reduce the reservoir of infection that eventually may drastically reduce incidence of TB disease.

LTBI detection and treatment in these settings may be worth an attempt.

Accelerating impact for elimination needs to carry this intervention at the community level. Running a community-based screening program requires set criteria for probability. Thus, all the vulnerable individuals in the low case settings, who are mapped and targeted for active surveillance may be tested for LTBI. Strategy of community-based screening for diagnosis and treating LTBI would be the most resource intensive. Additionally, it throws queries of acceptance, civic rights, compliance and methodology. Hence what would be recommended is testing close contacts. Since the objective is to prevent active breakdown and onward transmission, treating LTBI may be considered among these populations. Treatment will be 'offered' to those individuals, they will be encouraged to opt for treatment and monitored for adherence and completion of a course of treatment.

IX. Activity Plan

Lakshadweep TB Elimination Mission is a Five year long intensive fight against TB. It comprises of four important phases.

Phase	Major Focus during the Phase	Timeline
I	TB Vulnerability Mapping of the entire population	1 st November 2018- 31 st December 2018
II	Active Surveillance for TB facilitating early case finding	1 st April 2019 – 31 st December 2022
III	Vulnerability Reduction at individual and community level	1 st January 2020 - 31 st December 2022
IV	Detection and Management of Latent TB Infection	1 st November 2019 - 31 st December 2022

Activity 1	Formation of UTL TB Elimination Board
Concept	TB Elimination Board is the apex body to take policy decisions on strategy, operations, resources and timelines for TB Elimination. It is the direct demonstration of Administration's stewardship for TB elimination. It monitors implementation of TB elimination strategy at all levels and adopts appropriate corrective measures on recognition of shortfalls or gaps
Constitution	Chief Patron: Hon. Administrator Patrons: Hon. Member of Parliament Hon. District Chief Counsellor Chair: Secretary (Health) Members: Director of Medical Health Services Mission Director, National Health Mission District Health Officer State TB Officer (Convenor) WHO Consultant
Terms of Reference	The Board meets once in three months. It takes policy decisions on strategy, operations, resources, and timelines TB elimination. It takes decisions on appropriate local adaptation of national guidelines for Revised National Tuberculosis Control Program [RNTCP], and seeks resources beyond the budgeted resources in RNTCP PIP.
Timeline	TB Elimination Board need to be constituted before 1 st November 2018
Monitoring Indicator	Number of meetings of the board conducted during current year? Were actions taken on all decisions of previous meetings?

Activity 2	Formation of UTL TB Elimination Task Force
Concept	TB Elimination Task Force plays the lead role in executing various activities for TB Elimination. It plans, executes, supervises, monitors, reviews activities and reports to State TB Elimination Board
Constitution	Chief Executive Officer: Mission Director, National Health Mission Chief Operating Officer: State TB Officer Members: Nodal Officer [NCD] Nodal Officer [NTCP] DEO, RNTCP Health Education Officer State IEC Officer, RNTCP Assistant Director, LACS STS STLS
Terms of Reference	The TB Elimination Task Force plans, executes, supervises, monitors, reviews activities and reports to State TB Elimination Board. It prepares RNTCP state PIP and TB elimination activity plan every year. It compiles reports from all island level task forces. The TB Elimination task force need to meet every month and submit report to TB Elimination Board.
Timeline	Taskforce to be formed by 1 st November 2018
Monitoring Indicator	Has the TB Elimination task force met and submitted reported monthly to TB Elimination board? Were all actions taken based on previous minutes?

Activity 3	Formation of Dweep (Island) level TB Elimination Board
Concept	TB Elimination boards need to be formed in all islands. It plans, executes, supervises, monitors, reviews activities of each island and reports to State TB Elimination Board.
Constitution	Chair: Sub Divisional Officer/Deputy Collector Members: Dweep Panchayat Member Medical Officer-In-Charge Medical Officer (TB Elimination)- Convenor NGO representative/ Youth Club/ FBO leader
Terms of Reference	The Board meets once in three months. It takes policy decisions on strategy, operations, resources, and timelines TB elimination. It takes decisions on appropriate local adaptation of national guidelines for Revised National Tuberculosis Control Program [RNTCP], and seeks

	resources beyond the budgeted resources in RNTCP PIP. Dweep TB elimination board submits quarterly reports to UT TB elimination board. Convener prepares the reports on actions taken on the minutes of previous meeting and submits to UT with approval of the Chairperson.
Timeline	Island level TB Elimination Board need to be constituted before 1 st November 2018
Monitoring Indicator	Number of meetings of the board conducted during current year? Were actions taken on all decisions of previous meetings?

Activity 4	Designated MO-TE at all islands
Concept	To strengthen supervision and monitoring activities and coordination of TBE activities at island level, a medical officer needs to be designated as MO TE (Medical Officer TB Elimination) at all nine islands.
Terms of Reference	MO TE can be MO In-charge of island or another medical officer. MO TE will help MO- In-Charge to supervise, monitor and co-ordinate TB Elimination activities and report to MO i/c.
Process	Officer Order designating MO TE for all Nine islands
Timeline	All islands should have designated MOTE by 31 st December 2018
Monitoring Indicator	Number of islands with MO TE

Activity 5	Training of all RNTCP key officials and island MO -TE
Concept	All 9 MO TE and RNTCP Key staff to be master trainers of Lakshadweep TBE Mission
Target Audience	All 9 MO TE and RNTCP Key staff
Process	6 days training for MO TEs and RNTCP key staff on Lakshadweep TB Elimination Mission
Timeline	Training need to be completed before 31 st January 2019
Expected outcome	All MOTE and RNTCP key staff could lead the TBE Mission successfully
Monitoring Indicator	Number of RNTCP key officials and MO TE trained out of those listed

Activity 6	Sensitisation of Program Officers at headquarters level under DMHS and NHM
Concept	TB elimination demands close integration of most of the national programs. On one hand the integration enhances efficacy of activities and on the other, it optimises resources by pooling and piggybacking. All head quarter program officers are to be sensitized on principles, strategies and activity plan of TBE Mission.
Target Audience	Nodal Officers of all National Programs, Key program officers of LACS, NTCP, NCD, NHM and key program officers of DMHS.
Process	Half a day sensitisation in NHM Conference hall using PowerPoint presentation
Timeline	Sensitisation need to be completed before 31 st January 2019
Monitoring Indicator	Number of officers/key program staff sensitised out of those listed

Activity 7	Sensitisation of island level key policy makers and administrators
Concept	Dweep Panchayat Presidents are to be sensitized on TB elimination and empowered to lead the battle against TB in their respective jurisdiction. The deputy collectors are to be sensitized on the principles, strategies, activity plans and resources and monitoring indicators.
Target Audience	Sub Divisional Officers, Deputy Collectors, VDPs.
Process	DO letter from Administrator One to one sensitisation by MO i/c/ MO TE
Timeline	DO letter to be sent before 31 st January 2019
Expected outcome	Key policy makers aware about TBE Mission
Monitoring Indicator	Are listed activity completed according to schedule?

Activity 8	Training of MPHWs and ANMs
Concept	All MPHWs and ANMs need to be trained in strategies for TB Elimination Mission
Target Audience	MPHWs, ANMs
Process	One day training to MPHWs and ANMs
Timeline	Training to be completed before 31 st March 2018
Expected outcome	All MPHWs and ANMs could implement the activities as intended
Monitoring Indicator	Proportion of MPHWs, ANMs trained in Lakshadweep TBE Mission

Activity 9	Training of ASHAs
Concept	All ASHAs need to be trained in strategies for TB Elimination Mission
Target Audience	ASHAs
Process	One day training to ASHAs
Timeline	Training to be completed before 31 st March 2018
Expected outcome	All ASHAs could implement the activities as intended
Monitoring Indicator	Proportion of ASHAs trained in Lakshadweep TBE Mission

Activity 10	Sensitisation for doctors in other system of medicine
Concept	All doctors in other system of medicine need to be trained in strategies for TB Elimination Mission
Target Audience	Doctors in other system of medicine
Process	Half day sensitisation to Doctors at islands
Timeline	Training to be completed before 31 st March 2018
Expected outcome	All doctors in other system of medicine support TBE Mission
Monitoring Indicator	Proportion of doctors in other system of medicine sensitised in Lakshadweep TBE Mission

Activity 11	Sensitisation of all Medical Officers
Concept	All doctors need to be trained in strategies for TB Elimination Mission
Target Audience	Doctors in UTL
Process	Half day sensitisation to Doctors at islands
Timeline	Training to be completed before 31 st March 2018
Expected outcome	All doctors understand strategies of TBE Mission. They should be able to conduct active case detection in hospital settings, reduce individual vulnerability to develop TB and screen co-morbidity and manage TB with co-morbidities
Monitoring Indicator	Proportion of doctors sensitised in Lakshadweep TBE Mission

Activity 12	Mapping of Dweep wise TB Cases for past five years
Concept	To prioritize TB elimination activities, it is important to have panchayat/municipality/corporation wise mapping of TB cases.
Process	From the TB registers/Nikshay, each case registered/ notified is assigned to the respective dweep according to the residential address. Non-RNTCP TB cases notified from private sector in main land are also to be mapped.
Timeline	Mapping to be completed by March 31 st 2019
Expected outcome	The map will be used for epidemiologic analysis and also as an advocacy tool to VDP members
Monitoring Indicator	Availability of TB spot map

Activity 13	TB Elimination hoardings at all islands
Concept	Lakshadweep TB Elimination Mission hoardings to be placed at key locations of all islands as a sign of Administration's commitment
Process	Hoardings with TB Elimination mission, vision to be placed at key location of all islands
Timeline	Before March 31 st 2019
Expected outcome	Helping everybody to reiterate their commitment for TB Elimination
Monitoring Indicator	Number of islands with hoardings installed

Activity 14	Football match for social mobilisation for TB Elimination
Concept	Football is the main attraction of all in the island. Spirit for football among the people could be sublimated for TB Elimination brand building and social mobilisation.
Process	There are local football teams in each island. Intra island match followed by inter island football tournament titled “End TB Football tournament” will be organised as ACSM activity. Brand building for Lakshadweep TB Elimination Mission will be done by prior publicity, posters, WhatsApp videos and commentary and cut outs at foot ball grounds. All team members and viewers will take a pledge to eliminate TB before each game. One show match will be organised where all policy makers and politicians play for TB Elimination mission.
Timeline	Before November 30 th 2019
Expected outcome	Brand building and Social Mobilisation for TB Free Lakshadweep
Monitoring Indicator	Has the activity happened as intended?

Activity 15	Facility Airborne Risk Assessment and Hospitals
Concept	Hospitals are potential sources of cross infection. All hospitals are to be assessed for compliance with airborne infection control guidelines with a checklist
Process	MO TE to do AIC risk assessment of all hospitals using a checklist and assess risk of infection in the most vulnerable areas [ICU/CCU/Laboratory/IP wards/ OPD] and submit recommendations to hospital management. Hospital Management to take corrective actions accordingly.
Timeline	Facility risk assessment to be completed by April 30 th 2019 All hospitals to be made compliant by August 31 st 2019
Expected outcome	All hospitals are AIC compliant and no cross infections occur from hospitals
Monitoring Indicator	Proportion of hospitals underwent Facility risk assessment Proportion of hospitals compliant with AIC Proportion of non-compliant institutions/facilities made compliant to AIC

Activity 16	Airborne infection control kit to all TB patients
Concept	Majority of the new TB cases reported in UTL are among the household contacts of TB cases. Prevention of airborne infection to the members of the patients' house needs specific interventions. These are education, assistance for improved ventilation and support for cough etiquette and safe disposal of sputum
Process	Every diagnosed TB patient is provided with a kit containing a disposable spittoon, one litre of disinfectant solution to use diluted in the spittoon, and 5 washable cotton face masks for reuse during the initial home visit by health worker. Health worker educates the patient on infection control processes. During every house visit, the health worker ensures that the patient uses the materials and observes cough etiquette
Expected outcome	All TB patients receive infection control kit and observe cough etiquette thereby reducing transmission within households
Monitoring Indicator	Proportion of patients received AIC kit
Timeline	Ongoing activity to be implemented from April 2019

Activity 17	Air borne infection control in community
Concept	Behaviour Change Communication strategy to be in place for following cough hygiene by all citizens in UTL
Process	Cough etiquette to be taught for 30 minutes in all schools by the class teacher. Children should make their family members aware. Class wise poster competition to be conducted in all schools on AIC. Thrust on inter personal communication while doing house visit for ACF in 2019 will be AIC.
Expected outcome	All citizens are aware of and practice cough etiquette
Timeline	Activity need to be completed before 31 st December 2019

Activity 18	House to house campaign for awareness generation, assessing vulnerability and active case finding
Concept	Objective is to personally meet 68000 individuals in UTI in two months to (1) generate TB awareness in every member, (2) to assess the TB vulnerability of every member and to generate a vulnerability data base for TB surveillance.
Process	Trained ASHA workers will visit each individual over November 1 st to December 31 st . They will collect individual vulnerability to develop TB using a proforma. They will hand over a pamphlet regarding TB key messages to each household.
Timeline	November 30 th 2018- December 31 st 2018
Expected outcome	<ol style="list-style-type: none"> 1. Entire population to be aware of TB 2. Vulnerability data of entire population need to be captured 3. ACF among entire population will happen
Monitoring Indicator	<p>Proportion of individuals with TB vulnerability data</p> <p>Proportion of</p> <ol style="list-style-type: none"> 1. Symptomatic identified during ACF 2. Reached health facility 3. Underwent testing 4. Found to be TB

Activity 19	Vulnerability data compilation
Concept	TB Vulnerability data of entire population will help to target high risk individuals for active case finding.
Process	<p>Island wise vulnerability data will be entered in Excel. MO TE will cross validate 2% of the entered data.</p> <p>Vulnerability factors will be given weighted scores as follows: Household Contact (5), immunosuppressive therapy (4), malnutrition (5), Health Care Worker (3), Diabetes (3), Organ dysfunction (3), Chronic Lung disease (2), Smoking (2), alcoholism (2), Migrant (2), Age above 60 (2). Total score for each individual will be calculated.</p>
Timeline	Data entry to be completed by March 31 st 2019
Expected outcome	Vulnerability data will give clear idea about major vulnerabilities and help to plan targeted active case finding and vulnerability reduction strategies.
Monitoring Indicator	<p>Proportion of individuals with TB vulnerability data entered in Excel sheet</p> <p>Quality of data entry in terms of correctness and completeness</p>

Activity 20	Quarterly active case finding among the vulnerable individuals
Concept	Quarterly active case finding among vulnerable individuals will facilitate early case finding and improve system efficiency
Process	Individuals with vulnerability to develop TB [score above 5] will be visited every three months by ASHA worker and will be screened for TB symptoms. Anybody with TB symptoms will be seen by a medical officer and will be tested using a rapid molecular tests and Chest X ray. If the total score is 1 to 5, the person is moderately vulnerable and to be screened for symptoms once every year
Timeline	Need to happen quarterly from 1 Qtr. 2019 to 4 Qtr. 2020.
Expected outcome	All cases will be diagnosed from community earliest facilitating cutting transmission of the infection.
Monitoring Indicator	Proportion of individuals with TB vulnerability screened for TB symptoms- Quarter wise Out of screened, proportion of <ol style="list-style-type: none"> 1. Symptomatic identified 2. Reached health facility 3. Underwent testing 4. Found to be TB

Activity 21	Universal DST
Concept	All patients should know their susceptibility status to at least rifampicin and INH at baseline.
Process	All TB patients not diagnosed through rapid NAAT technology, but with appropriate specimen available need to undergo drug susceptibility testing with NAAT to detect any resistance to Rifampicin. All TB patients diagnosed as Rifampicin sensitive to undergo Line probe assay at IRL Trivandrum to detect resistance to INH. If the patient is resistant to Rifampicin, another sample is to be collected and sent for confirmation and second-line DST to IRL. Sputum collection and transportation system for sending LPA need to be established with the help of NGOs in each island.
Expected outcome	Any resistance to rifampicin or INH will be picked up at the baseline itself and appropriate regimen initiated.
Monitoring Indicator	Proportion of microbiologically confirmed cases with rifampicin status known Proportion of microbiologically confirmed case with INH status known

Activity 22	Comorbidity screening for all TB patients
Concept	Comorbidity like complications of diabetes, cardiovascular diseases, liver and kidney diseases, COPD are the major causes of deaths among TB patients
Process	All patients should be screening for HIV, diabetes, cardiovascular diseases, liver and kidney diseases and COPD. Once diagnosed, patients need to be managed according to NCD treatment protocol. All TB patients to be reviewed clinically by a medical officer once in a month to look for clinical improvement, detect adverse events if any and screen and manage co-morbidity.
Expected outcome	All TB patients to undergo co-morbidity screening and management. This will reduce mortality among TB patients.
Monitoring Indicator	Proportion of patients underwent screening for co-morbidities
Timeline	Ongoing activity to begin from April 2019

Activity 23	Monthly clinical review of all TB patients
Concept	All TB patients (drug sensitive and drug resistant) on treatment should be clinically reviewed by the medical officer of the PHI at least once in a month to assess progress, detect adverse reactions to drugs, ensure adherence to treatment, manage substance abuse if any, ensure timely follow up investigations and to ensure treatment support.
Process	All TB patients to be reviewed clinically by a medical officer once in a month to assess progress, detect adverse reactions to drugs, ensure adherence to treatment, manage substance abuse if any, ensure timely follow up investigations and to ensure treatment support. and documented in treatment card. If patient is unable to travel, medical officer should visit him/her at home.
Expected outcome	All TB patients to undergo monthly clinical review. This will improve treatment adherence, lead to early detection of adverse events, prompt management of co-morbidity and prevent deaths.
Monitoring Indicator	Proportion of patients received monthly clinical review
Timeline	Ongoing activity to begin from April 2019

Activity 24	Formation of cross border collaboration with private hospital consortiums and TB Elimination task forces in Kochi, Kozhikode and Mangalore
Concept	The information about a resident of UTL diagnosed and treated with TB at private or Government health facilities in Kochi, Kozhikode or Mangalore need to reach State TB Cell, Lakshadweep at the earliest. This will enable the UTL Health services to provide all public health actions and services to the patient in discussion with the treating hospital and patients.
Process	Communication to all Hospital Administrators of important hospitals in Kochi, Kozhikode and Mangalore by State TB Officer. Ensuring commitment from private hospital consortiums formed in Kochi and Kozhikode for smooth communication and information transfer.
Timeline	Request letter with key contact information to be sent before 31 st January 2019. Request to be sought from DTO, IMA DTF and JEET program officer for establishing smooth communications. Communication with nodal officers in private hospitals to be established by STS of UTL before 28 th February 2019
Expected outcome	Free and rapid information transfer will happen and patient will receive all public health services
Monitoring Indicator	<p>Are the listed activities happened according to schedule?</p> <p>Are all cases diagnosed at mainland informed to STS of UTL by respective hospital within 48 hours?</p> <p>Do all patients belonging to UTL diagnosed at mainland receive all public health actions?</p>

Activity 25	Special initiative to support guest workers with TB
Concept	Though minimal, there are many workers from mainland coming to UTL for working for short term periods .
Process	A declaration of TB status may be made mandatory by the administration while issuing permit to enter UT. Those declared to have TB will be offered all medical and public health support by the health services machinery of UTL.
Expected outcome	Health system knows all guest workers with TB and all of them receive all public health actions

Monitoring Indicator	System for declaration of TB to be in place while entering the UT for guest workers.
Timeline	System need to be established before October 2019

Activity 26	Surveillance for prevalence of TB disease
Concept	An estimate of prevalence of TB to be known to monitor the impact of interventions.
Process	Prevalence will be estimated in routine conditions by visiting every individual and symptom screening using a sensitive symptom screening. Subjects with any pulmonary TB symptom will be subjected to X ray and NAAT. The results will be carefully interpreted based on diagnostic accuracy of symptom complex screening and NAAT.
Expected outcome	An estimate of TB disease prevalence is available for the year 2019 and 2022
Timeline	First round before 31 st December 2019 and second round before 31 st December 2022

Activity 27	TB Vulnerability reduction for individuals
Concept	Vulnerability to develop TB (Diabetes, Tobacco) need to be reduced at individual level.
Process	Individuals identified with vulnerability to develop TB will be referred to Health centre/Hospital by ASHA/ANM/MPHWs for reducing the vulnerability. Smoking cessation services and NCD management services need to be strengthened at all hospitals/health centres. TB Co-morbidity committee to monitor the same quarterly.
Expected outcome	System will proactively try to reduce TB vulnerability of individuals through personalised interventions.
Monitoring indicator	Proportion of individuals with vulnerability referred to health centre for reducing vulnerability Proportion of individuals using tobacco received tobacco cessation services
Timeline	Ongoing activity to systematically start from Jan 1, 2020

Activity 28	Community level interventions for TB Vulnerability reduction
Concept	Vulnerability to develop TB (Diabetes, Tobacco, indoor air pollution) need to be reduced at community level.
Process	Banning public smoking through legislation, rising taxation of cigarettes, BCC at schools for good life styles including healthy diet and physical activity, creating and empowering women groups for behavioural change communication at community level for healthy diet and increasing physical activity and strengthening systems for proper management of NCDs in all hospitals. TB Co-morbidity community to monitor the same quarterly.
Expected outcome	Reduction in incidence of tobacco users, right shift in mean age of diabetes mellitus, reduction in proportion of uncontrolled diabetes status among diabetes and reduction in incident TB.

Activity 29	Diagnosis and management of Latent TB Infection
Concept	To drastically reduce the pool of infection, all the vulnerable individuals who are mapped and targeted for active surveillance, may be tested for LTBI and offered treatment
Process	Every vulnerable individual in the vulnerability data base especially contacts may be offered LTBI screening. Those who are found infected, may be offered treatment for LTBI. Finalising the strategy will be based on National policy. LTBI testing and management will be piloted in two islands with lowest transmission starting from 1 st November 2019 and will be scaled up to all islands based on the lessons learnt.
Expected outcome	Drastic reduction in incidence of TB disease

X. Additional Budget for TB Elimination Mission (INR)

Sl No	Activity	Budgetary Provision	2019-20	2020-21	2021-22	2022-23
1	UTL TBE Board	RNTCP ACSM head	6000	6000	6000	6000
2	UTL TBE Task force	RNTCP ACSM head	6000	6000	6000	6000
3	Dweep level TBE Board	RNTCP ACSM head	18000	18000	18000	18000
4	MO TE at all islands	-	-	-	-	-
5	Training of key officials	RNTCP Training head	25000	30000	10000	10000
6	Sensitisation of program officers	RNTCP Training head	10000	15000	10000	10000
7	Sensitisation of policy makers	RNTCP Training head	20000	10000	10000	10000
8	Training of MSW	RNTCP Training head	35000	35000	18000	18000
9	Training of ASHA	RNTCP Training head	20000	20000	20000	20000
10	Training Other system	RNTCP Training head	20000	-	20000	-
11	Training all MOs	RNTCP Training head	35000	15000	35000	15000
12	Mapping of cases	RNTCP Printing	10000	-	-	-
13	Hoardings at all islands	RNTCP ACSM	100000	100000	-	-
14	Major ACSM activity	RNTCP ACSM	300000	310000	315000	320000
15	AIC Facility	RNTCP Program Management	10000	10000	10000	10000
16	AIC household	RNTCP Patient support	12000	10000	8000	4000
17	AIC Community	RNTCP ACSM	25000	40000	30000	20000

18	House to house campaign	RNTCP ACSM	175000	-	20000	23500
19	Vulnerability data compilation	RNTCP ACSM	70000	5000	75000	5000
20	Quarterly ACF	RNTCP Community interventions	640000	720000	840000	960000
21	UDST	RNTCP NGO PP	600000	100000	80000	50000
22	Co-morbidity screening	RNTCP Patient support	50000	20000	20000	20000
23	Clinical Review of TB patients	RNTCP Patient support	20000	10000	10000	10000
24	Cross border collaboration	RNTCP NGO PP	30000	30000	35000	37500
25	Guest worker surveillance	RNTCP NGO PP	-	42000	12100000	3500000
26	Surveillance for prevalence of TB	RNTCP Procurement of equipment	28,50,000	-	-	20,00,000
27	Vulnerability Reduction for individuals	NCD	-	1000000	600000	400000
28	Community intervention for vulnerability Reduction	Poverty Alleviation	-	2200000	3000000	4500000
29	Diagnosis and Management of LTBI	RNTCP Community interventions	3500000	15000000	22000000	10500000
	Total		8587000	19752000	39296000	22473000