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# ***Human Resource and Skill Requirement Study for 21 Coastal Districts of India***

Prepared for:  
Sagarmala, Ministry of Shipping and  
National Skill Development  
Corporation

**Lakshadweep**

Final report

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# 1. District Profile

## 1.1. About Lakshadweep

Lakshadweep, an archipelago of 36 small islands located 220-440 kilometres off the Malabar Coast, is the tiniest Union Territory of India with just 32 square kilometres in area and a population of about 64 thousand. The population of Lakshadweep experienced a decadal growth of 6.13% during the period of 2001-2011. The demography of Lakshadweep exhibits some unique and significant features. For instance, the population density of the Union Territory is 2,013 per square kilometre which is much higher than the average of India (382 per square kilometre) and its gender ratio at 946 females per 1000 males is skewed but better than the national average of 940 females per 1000 males. Muslims constitute the largest religious community with 97% population of Lakshadweep. The entire indigenous population of this island territory has been classified as Schedule Tribe and constitutes 94.8% of the island population. The literacy rate at 82% is significantly better than the national average of 74%<sup>1</sup>.

### *Agriculture and allied sector*

Agriculture, along with fisheries, is the most widely prevalent economic activity in the territory. Coconut is the main crop in all the islands of Lakshadweep and has been grown for centuries. The total harvest of coconut varies year to year, and stood at 2,05,000 metric ton coconuts in 2014-15<sup>2</sup>. Even though it is a small region and has only 2.570 hectare land for harvesting coconut, its production of 27,591 per hectare is significantly higher than the national average of 10,345 coconuts per hectare<sup>3</sup>. Other farm produces include fruits, vegetables, tuber crops, jaggery and vinegar<sup>4</sup>. Animal husbandry in Lakshadweep mainly consists of poultry and goat rearing. In addition to being subsidiary economic activity, this also provides useful by-products for preparation of organic manure. As per the data available with the Department of Planning and Statistics, the number of cattle was 4, 347, goats 46,497, and poultry 1, 38,444 in 2013-14 and the total production of milk and eggs by government and private sector in Lakshadweep was 2795.66 thousand liters and 99.41 lakhs respectively<sup>5</sup>.

### *Port and Maritime Sector*

Lakshadweep islands are separated by deep sea and lie at an average distance of 60 kms to 300 kms which makes shipping the only source of connectivity between the islands. Given that traditional occupation of the population is fishing and coconut cultivation, all food items (rice, wheat, pulses, vegetables etc.) and essential commodities (diesel for electricity generation, clothing, building materials etc.) are transported from the mainland. The present Port facilities in various islands include jetties with lengths varying from 60m to 260 m

### *Fisheries*

Marine fisheries is one the core activities in Lakshadweep. The number of fishermen (active and allied) engaged in this sector is 14,309, which is roughly 22% of the total population in 2013-14. The number of fishermen engaged in this sector has increased from 6, 710 in 2004-5 to 14, 309 in 2013-14, an increment of 113% during the period. Of the total fishermen engaged in 2013-14, only 5, 841, which is 41% of the total fishermen, are full time active fishermen; remaining 59% are part-time fishermen engaged in fishing and allied activities. Total fish catch ranges from 11 to 15 thousand tonnes annually, with 10,512 tonnes valued at INR 21.02 crore in 2004-05 and 15,611 tonnes valued at INR 14.83 crore in 2013-14. Tuna fish constituted 86% of the total fish catch in 2013-14.

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<sup>1</sup> (Census of India , 2011)

<sup>2</sup> (6th Economic Census of Lakshadweep, 2013-14)

<sup>3</sup> (htt)

<sup>4</sup> (6th Economic Census of Lakshadweep, 2013-14)

<sup>5</sup> (Basic Statistics of Lakshadweep , 2013-14)

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## *Industries*

Industry activity in Lakshadweep revolves around coir and fish. The ecological and environment consideration prevent the setting up of large industries units in these islands as done for the mainland States. The strategy for the industrialization of Lakshadweep will have to focus on fisheries and agro-based units of medium and small scales. There are 43 government industrial units and 220 private industrial units are in Lakshadweep; all the units in the private sector are micro and small scale, dealing with coir, fish, agro-based, furniture, and various support activities. In the government sector, there are 7 fiber factory, 6 coir yarn production center, 9 printing press, 2 Tuna canning factory and 2 boat building yards, etc. The level of industrial development in Lakshadweep remains modest. The Union Territory of Lakshadweep (UTLA) faces many infrastructural challenges, which blocks its industrialization; however, certain industries have been identified to have scope for development in the islands. These are mainly based on the local resources such as agriculture and marine potential. According to 6<sup>th</sup> Economic Census<sup>6</sup> of Lakshadweep, 10,453 people are engaged in 3,404 establishment<sup>7</sup> located in the geographical boundaries of Lakshadweep, of which 22% are working in rural areas while remaining 78% are working in urban areas. Of these 10,453 workers, 44% are engaged in agricultural activities, which includes agricultural activities other than the crop production and plantation, livestock, fishing and aqua culture, while 56% are engaged in non-agriculture activities. The non-agriculture activities mainly comprise manufacturing, retail trade, transportation and storage, accommodation food services sectors.

## *Tourism*

The tourism sector has good potential for not only creating employment but also earning foreign exchange. In Lakshadweep, nature is at its pristine best. Lakshadweep is home to many rare species of marine life and it is perhaps the biggest underwater zoo in the world<sup>8</sup>. Sea water is calm and ideal for water sports such as diving, snorkeling, windsurfing, parasailing, etc. Even though the beauty and peace of these islands make Lakshadweep a heaven for tourist, yet, the restriction imposed on entry of visitors and the remoteness of islands from the mainland coupled with inadequate means of communication, have led to only modest level of tourism related activity for the economy of the territory. The total tourist arrival in Lakshadweep has remained between 4000 and 8000 during the period 2009-10 to 2013-14. As indicated in the figure, majority of the tourists are domestic tourists except for the year 2009-10. The revenue earned from tourism has dropped from INR 15 Crore in 2008-09 to INR 4.87 Crore in 2009-10. However, it has started increasing from 2011-12 and stood at INR 11 crore in 2013-14.

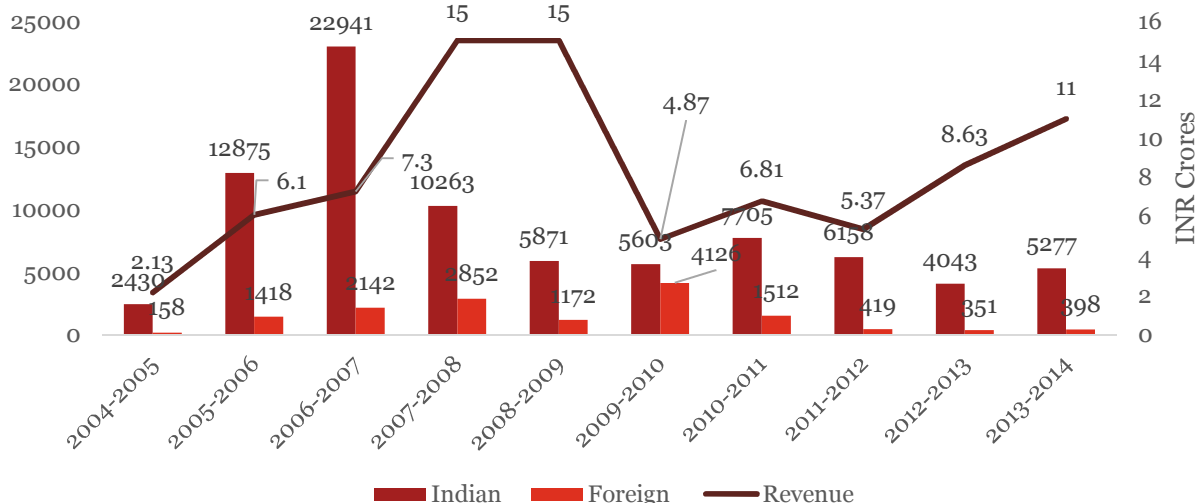
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<sup>6</sup> All economic activities- agricultural and non-agricultural, except those involved in crop production and plantation, public administration, Defence and compulsory social security, related to production and/or distribution of goods and/or services were covered.

<sup>7</sup> The establishment is a unit situated in a single location in which predominantly one kind of economic activity is carried out such that at least a part of the goods and/or service produced by the unit goes for sale ( i.e. Entire produce is not for sole consumption).

<sup>8</sup> (State Development Report, 2007)

**Figure 1 : Tourist arrival and revenue earned in Lakshadweep**

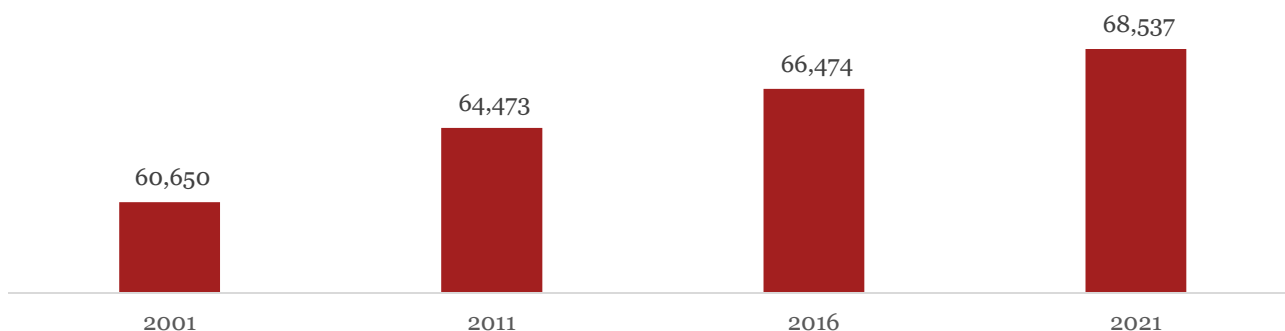


### 1.1.1. Demographic Profile

| Indicator  | Value  |
|--|--------|
| Total population   | 64,473 |
| Decadal rate of growth of population (2001-11)                                 | 6.13%  |
| Rural population   | 14,141 |
| Female   | 31,350 |
| SC population  | 0      |
| ST population  | 61,120 |
| Workforce participation  | 29%    |
| Main Workers (As % of total population)  | 17%    |
| Marginal (As % of total population)  | 12%    |
| Non-workers (As % of total population)   | 71%    |
| Number of people with vocational training in the age group of 15+ <sup>9</sup> | 11.4%  |

### Population trends<sup>10</sup>

**Figure 2: Population trend in Lakshadweep (2001-2011)**



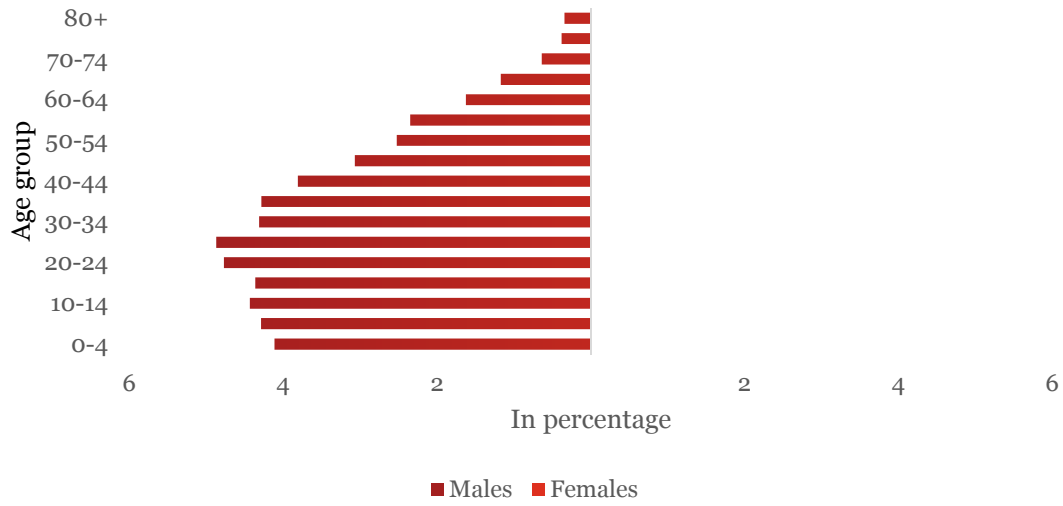
Lakshadweep had experienced a decadal growth of just 6.13% in its population during the period of 2001-2011. With this decadal growth rate, the population of Lakshadweep is projected to be 68,000 in 2021 as shown in Figure 2. As indicated in population pyramid based on Census 2011 data (Figure 3), a significant 18% of the total population

<sup>9</sup> Report on Education Skill Development and Labor Force, 2015-16, Ministry of labor & employment

<sup>10</sup> (Census of India, 2001 and 2011), PwC Analysis

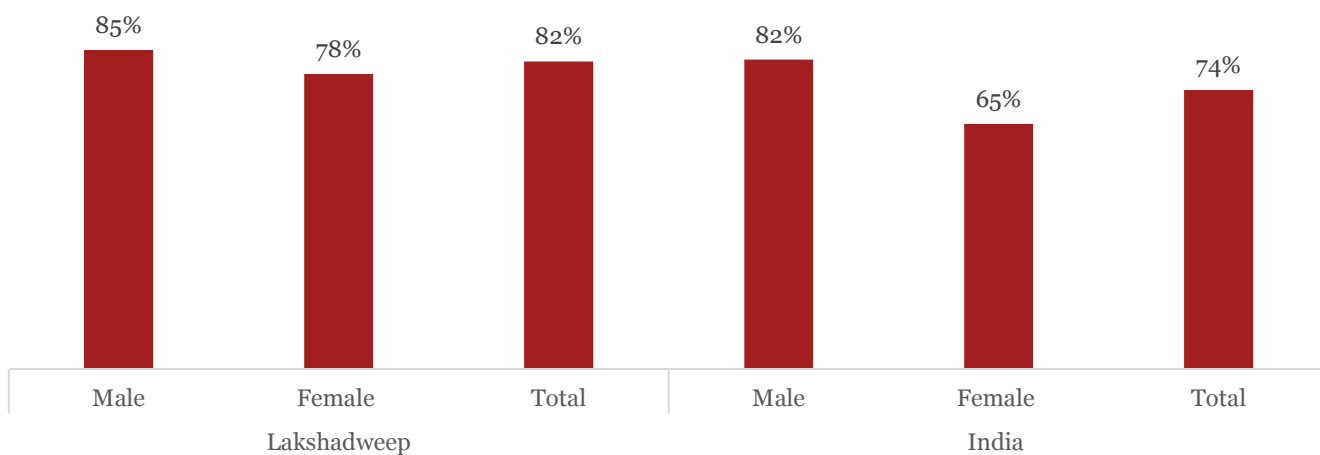
was in the age group 10-19 years. Majority of this age group is expected to enter workforce by 2016 and will be in need of market relevant skills in order to get gainful employment.

**Figure 3: Population pyramid for Lakshadweep (2011)**



## Literacy rates

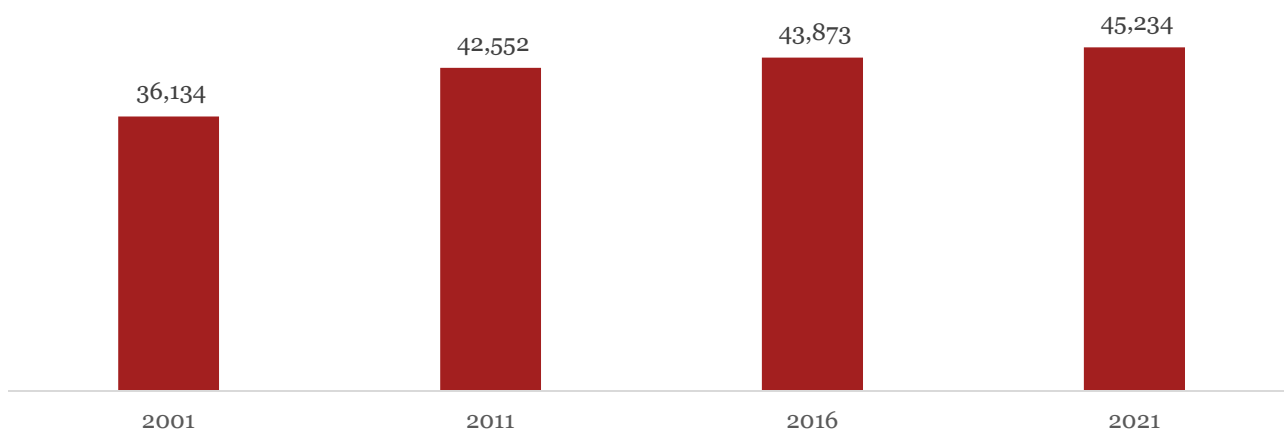
Figure 4: Lakshadweep vs India Literacy Rate (2011)



As per Census 2011, total literacy rate of Lakshadweep stands at 82% as compared to the national average of 74%, shown in Figure 4. This trend is consistent across gender with male and female literacy rates in Lakshadweep are significantly higher than the national level.

## Age specific population trends and education level for 2011<sup>11</sup>

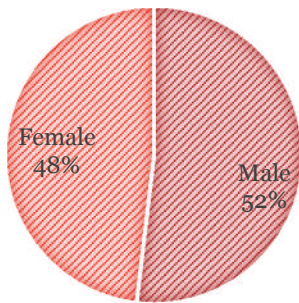
Figure 5: Growth trend of population in age group 15-59 years in Lakshadweep (2001-2021)



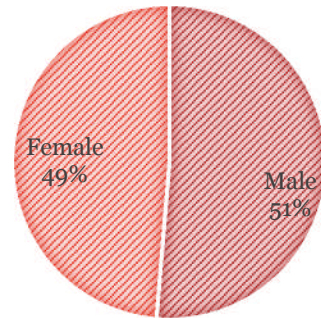
According to the Census 2011, about 66% of the population of Lakshadweep was in the age group 15-59 years. Assuming that the share of this age group remains constant, the population in this age group is estimated to grow to 43, 873 and 45, 234 in 2016 and 2022 respectively, which means a growth of 3.1% during this period.

<sup>11</sup> Based on Census 2001 and 2011

**Figure 7: Age specific population in Lakshadweep (15-59 years)**

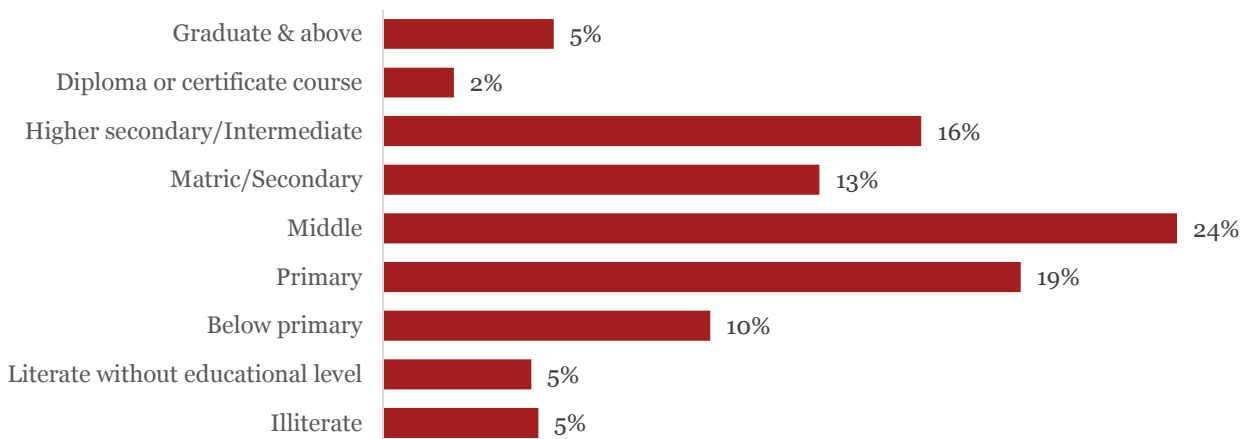


**Figure 6: Age specific population in Lakshadweep (15-24 years)**



While in the age group of 15-59 years the share of population of males and females in total population of Lakshadweep is around 52% and 48% respectively, the share of population of males and females in the age group of 15-24 years is 51% and 49% respectively (shown in Figure 7 and Figure 6).

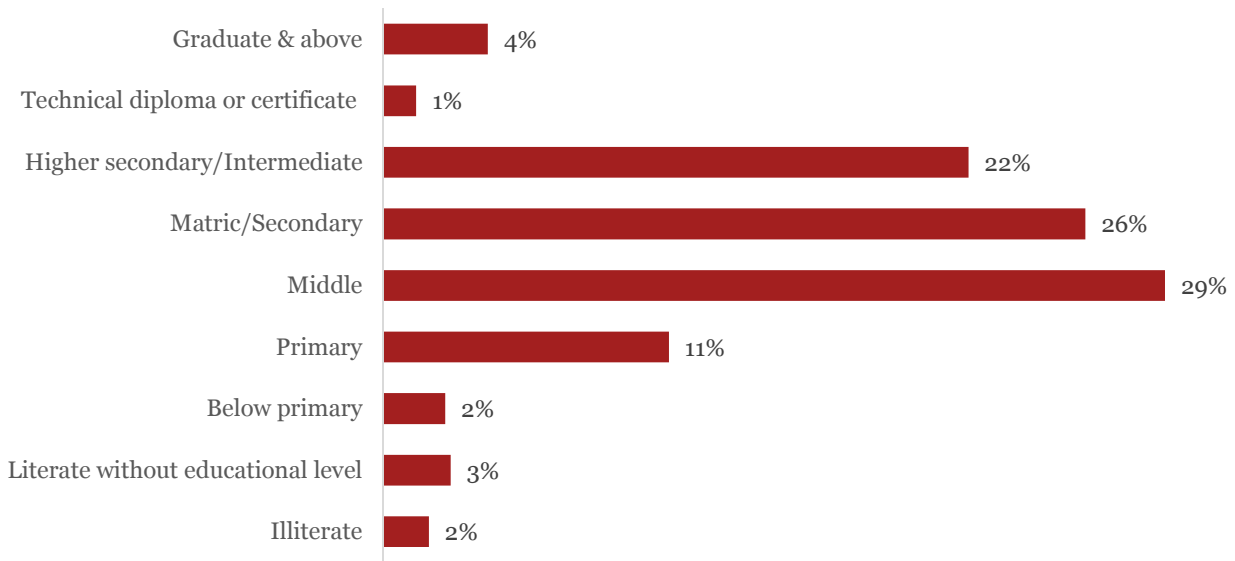
**Figure 8 : Age specific educational level in Lakshadweep (15-59 years)**



Of the total population of 42, 552 in the age category 15-59 years, about one-fourth (24%) of the population have attended middle school level of education and about one-fifth (19%) have attended primary school level of education (refer Figure 8). Further, roughly 30% of the population have attended matric or higher secondary level of education while only 5% of the population have completed graduate or above level of education. Only 2% of the population in the same age category have undergone any kind of diploma or certificate course.



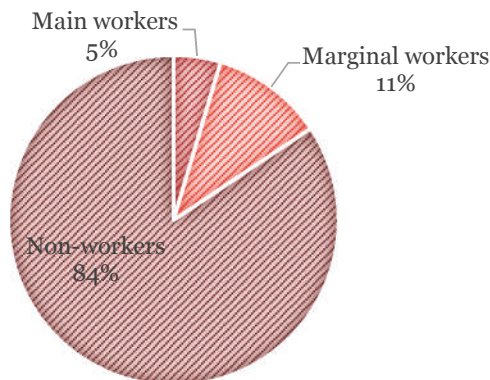
**Figure 9 : Age specific educational level in Lakshadweep (15-24 years)**



For the age category of 15-24 years, majority of the population (29%) have completed middle school level of education. Further, about 22% has attended higher secondary level of education and about one-fifth of the population in the same category have attended secondary level of education. Only 4% of the population in the same age category is graduate and above and 1% have attended any sort of diploma or certificate course

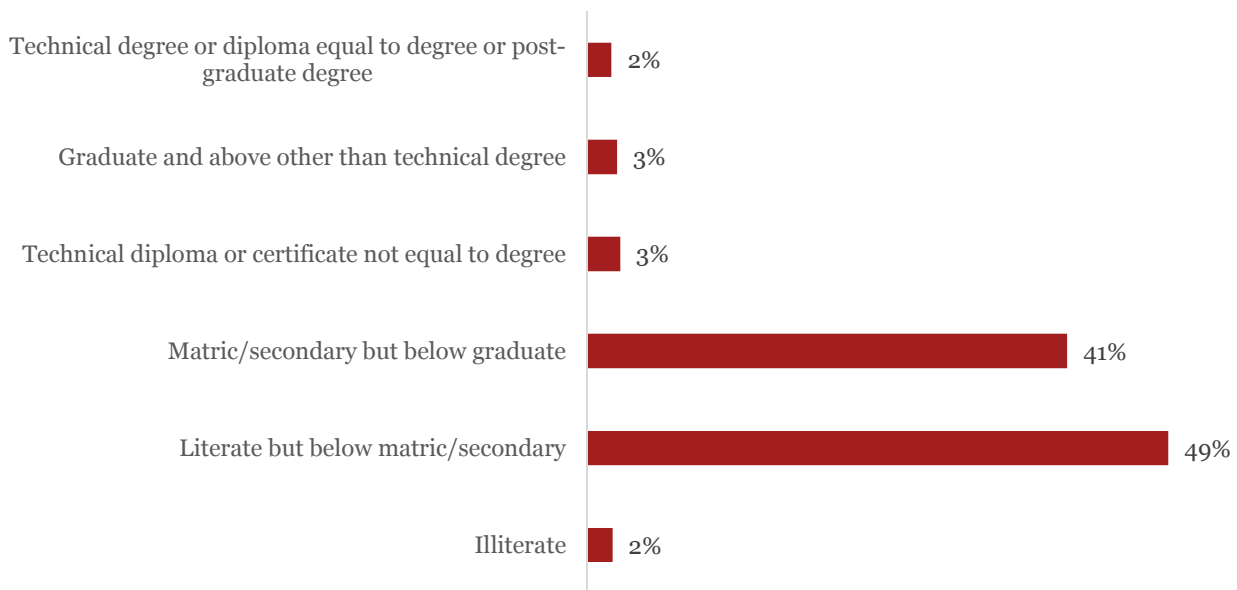
*Age specific distribution of workers and educational level*

**Figure 10 : Age specific workers in Lakshadweep (15-24 years)**



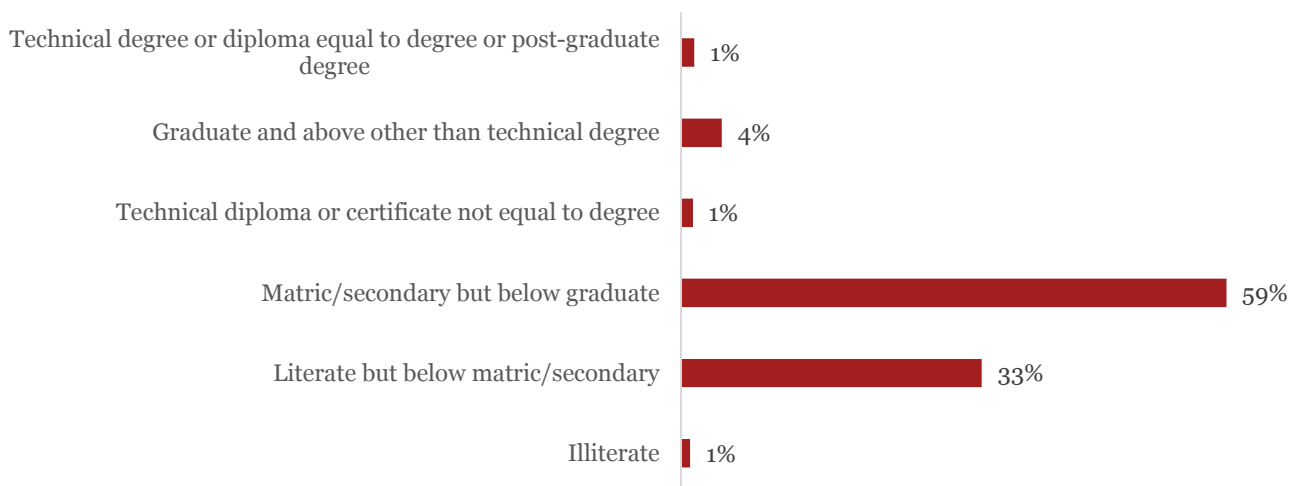
A large majority (84%) of the population aged 15-24 years is not in workforce; only 5% of the population in this age category are main workers and 11% are engaged in marginal work i.e. work for less than 6 months during the year.

**Figure 11 : Education level of marginal workers in Lakshadweep (15-24 years)**



According to the Census 2011, of the total 1,057 marginal workers available for work in the age category 15-24, about half of them are literate but have below secondary level of education and 41% have completed secondary level of education. Only 5% of workers in this age group have attended graduate or post graduate level of education and 2% have undergone any sort of diploma or certificate course (refer Figure 11)

**Figure 12 : Education level of non-workers in Lakshadweep (15-24 years)**

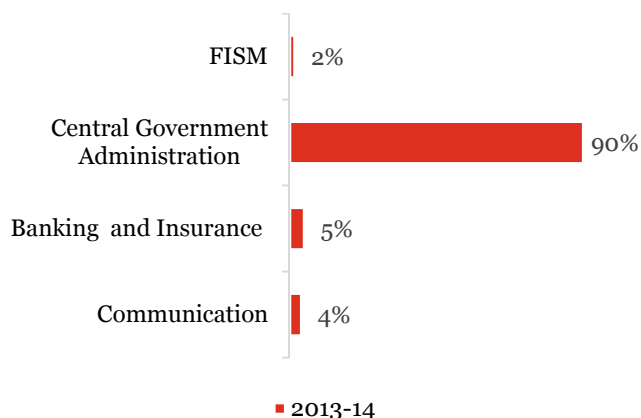


Amongst 5,338 non-workers who are available for work in the age category 15-24 years, nearly 60% have attended secondary or higher secondary level of education and about one-third have below matric level education. It is interesting to note that a significant number of people with secondary or higher secondary level education are unemployed and looking for job. This highlights the need for job relevant skills training for this segment of population in order to make them enable to get into the job market.

### 1.1.2. Key Economic Drivers

Owing to unavailability of information on key indicators that are required to calculate Gross State Domestic Product (GSDP), the Department of Planning and Statistics of Lakshadweep does not calculate GSDP. However, a crude estimate of GSDP of Lakshadweep is gauged by its contribution to Supra-regional<sup>12</sup> sectors, which includes Railway, Communications, Banking & Insurance, Central Government & Administration and Financial Intermediation Services Indirectly Measured (FISM). The total size of GSDP estimated from supra-regional sectors was INR 21,986 Lakhs at the constant price in 2013-14, mostly driven by contribution from central government administrative services with 90% contribution to the GSDP<sup>13</sup>.

**Figure 13 : GSDP estimated from Supra-regional sectors at constant price in 2013-14 (INR Lakhs)**



The key economic drivers of the district are illustrated below:

#### Port, maritime and logistics

- The average annual growth rate in Passenger traffic has been recorded as 6% between 2003-16 and it is expected to rise to 2,93,130 by 2022.
- Port department plans for acquisition of Passenger ships of varying capacities, oil barges, LPG cylinder carriers to meet the growing cargo traffic and passenger traffic

#### Fisheries

- About 14 thousand people engaged in fishing activities
- A total of 15,611 tonnes fish catch in 2013-14 valued at INR 14.83 crore
- Tuna fish consist of 86% of total fish catch
- 207.89 metric tonnes fish products exported from Lakshadweep in 2013-14

#### Tourism and hospitality

- Over 5600 tourist visited Lakshadweep in 2013-14 which generated a revenue of INR 11 crore
- The Department of Tourism and Hospitality plans to build eco-friendly resorts in inhabited islands and tourist homes and home stay facilities in habited islands
- The department also plans to develop tourism facilities in inhabited islands through Public-Private-Partnership

#### Manufacturing

- There are 43 government industrial units and 220 private industrial units
- All the units in the private sector are micro and small scale, dealing with coir, fish, agro-based, furniture, and various support activities.
- In the government sector, there are 7 fiber factory, 6 coir yarn production center, 9 printing press, 2 Tuna canning factory and 2 boat building yards, etc. The level of industrial development in Lakshadweep remains modest.
- 10,453 people are engaged in 3,404 establishments in agriculture and non-agriculture sectors

<sup>12</sup> In the preparation of state income estimates, certain economic activities like Railways, Banking & Insurance, Communication, and Central Govt. Administration, cut across state boundaries as their economic contribution cannot be assigned to any one state directly. Such activities are included in Supra-regional sectors of the economy. The estimates for these activities are compiled for the economy as a whole and allotted to the states on the basis of relevant indicators.

<sup>13</sup> Basic Statistics of Lakshadweep 2013-14, Department of Planning and Statistics, Lakshadweep

### 1.1.3. Priority Sectors

In Lakshadweep, the priority sectors that have been identified are **Port and Maritime sector, fisheries, tourism, construction (led by Public Works Department) and manufacturing which essentially include coconut and coir based products.**

| Ports & Maritime              |   |                                   |  |        |                                    |       |         |        |         |        |
|-------------------------------|---|-----------------------------------|--|--------|------------------------------------|-------|---------|--------|---------|--------|
| Key features                  | <p>The islands are surrounded by lagoons which are fenced by coral reefs. While these reefs are integral to the natural beauty of the islands, they pose a critical restriction of navigation across the islands due to shallow depth of water over the reefs. The islands are navigated by small and low draft vessels through some limited navigable entry points of these reefs where navigable depth of water over the reef is available. This means that:</p> <ul style="list-style-type: none"> <li>Vessels with drafts more than 2 meters cannot enter the lagoons, except Kavaratti, Minicoy and Andrott where vessels with 2.7 meters are able to enter inside the lagoon</li> <li>Embarkation and disembarkation of passengers and loading/unloading of cargo in most of the islands are carried out in open deep sea which are then brought to the islands and vice versa by small launches/dumb barge and boats</li> </ul> <p><b><i>The present Port facilities in various islands include jetties with lengths varying from 60m to 260m. Berthing facilities are only developed in eastern side of four islands (Minicoy, Agatti, Kavaratti and Amini) to enable berthing of bigger ships creating depth alongside of 10 to 12 M</i></b></p> |                                   |  |        |                                    |       |         |        |         |        |
| Mainland to island operations | <ul style="list-style-type: none"> <li><i>Passenger Shipping scenario:</i> At present 7 ships/vessels operate with passenger capacity varying from 150 to 700</li> <li><i>Cargo shipping scenario:</i> At present 7 cargo ships/vessels with a total capacity of over 4000 tonnes</li> </ul>  | Inter-island operations           | <ul style="list-style-type: none"> <li><i>Passenger Shipping scenario:</i> Around 7 High Speed Crafts operate between the 10 inhabited islands with passenger capacity varying from 150 to 500</li> <li><i>Cargo Shipping scenario:</i> At present 5 vessels operate with a total vessel capacity of 2400 MT and 2000 Cylinders</li> </ul> |        |                                    |       |         |        |         |        |
| Key Cargo                     | General Cargo, LPG, Petroleum, Aviation Turbine Fuel  | Draft                             | 2-2.7 metres   |        |                                    |       |         |        |         |        |
| Key Trend                     | The Passenger Traffic by ships on Mainland-Island sector (i.e. from Mainland to different island & vice versa) has grown by around 20% between 2010-11 and 2015-16. The cargo traffic from mainland to islands in UTL cargo vessels has also grown by 31% between 2010-11 and 2015-16   |                                   |  |        |                                    |       |         |        |         |        |
| Island-wise jetty facilities  |   |                                   |  |        |                                    |       |         |        |         |        |
|                               | Kavaratti   | Minicoy                           | Andrott  | Agatti | Amini                              | Bitra | Chetlat | Kadmat | Kalpeni | Kiltan |
| Jetty                         | New Katcherry Jetty, Fisheries Jetty  | Katcher ry Jetty, Fisheries Jetty | Jetty  | Jetty  | Passen ger Jetty, Fisheri es Jetty | Jetty | Jetty   | Jetty  | Jetty   | Jetty  |
| No. of berths                 | 6, 6  | 4, 3                              | 4  | 4      | 4,2                                | 1     | 3       | 3      | 4       | 3      |

|                                 |                                 |                                 |                                 |                                |                                 |      |                  |                  |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|------|------------------|------------------|---------------------------------|---------------------------------|
| <i>Depth alongside</i>          | 2.5M, 2M                        | 1.8M, 1.8M                      | 1.8M                            | 1.8M                           | 1.8M                            | 1.5M | 1.8M             | 1.5M             | 1.8M                            | 1.1M                            |
| <i>Cargo Handling Equipment</i> | Jetty cranes (3), Fork lift (2) | Jetty cranes (2), Fork lift (2) | Jetty cranes (2), Fork lift (1) | Jetty crane (2), Fork lift (1) | Jetty cranes (2), Fork lift (1) | -    | Jetty cranes (1) | Jetty cranes (2) | Jetty cranes (2), Fork lift (1) | Jetty cranes (2), Fork lift (2) |

### 1.1.4. Investments

The table below summarizes the investments are that are ongoing and proposed

**Table 1: Details of Investments (proposed and ongoing projects) in Port and Maritime sector in Lakshadweep**

| Project   | Proposed Investment (INR Lakhs) | Project Status  |
|---|---------------------------------|---|
| Construction of unloading platform to MSVs at Agatti  | 1161.12                         | Andaman and Lakshadweep Harbour Works (ALHW) Department has constituted the subcommittee for the project in 2016. Environment Impact Assessment report is awaited before launching the project. |
| Construction of existing wharf to another 40m lee side of breakwater from Ch.244m to 284m at Andrott                                    | 448.38                          | ALHW has constituted the subcommittee for the project in 2016. Environment Impact Assessment report is awaited before launching the project.  |
| Extension of berthing head of Katchery jetty at   | 567.85                          | ALHW is awaiting the revised Environment Impact Assessment report   |
| Design, Fabrication, supply, erection & commissioning of one grab dredger unit at Lakshadweep islands                                   | 184                             | MOU signed by ALHW with Bharat Earth Movers Limited (BEM) for excavator for mounting on the steel pontoon & delivered at Kochi. Agreement executed for fabrication of steel pontoon at Kochi.   |
| Fabrication and installation of 5000DWT mooring buoy at eastern side jetty for safe berthing of ship at Amini & Kavaratti               | 204.10                          | ALHS has requested for diversion of fund for placing yokohama fenders instead of mooring buoys and is waiting for response from the concerned department  |
| Providing of Channel marker bouys and twin point mooring bouys at Minicoy and Bitra   | 52.12                           | The work for channel buoys has been awarded and retender called for twin point mooring bouys.   |
| Expansion of berthing head of Northern jetty at Kalpeni   | 365.43                          | In pipeline   |
| Extension of berthing jetty at Kadmat   | 448                             | In pipeline   |
| Improvement to IIF wharf for 33.50 meter length and additional extension of wharf for 25 meter change, from 284 to 309 meter at Andrott | 428                             | In pipeline   |

With growing number of tourists visiting Lakshadweep, the tourism department has proposed to undertake a wide range of initiatives for tourism promotion. These include setting up of resorts in inhabited islands, promotion of tourist homes, promoting scuba diving etc.

**Table 2: Details of tourism projects (Proposed) in Lakshadweep**

| <b>Project</b>  | <b>Proposed Investment (INR cr)</b> | <b>Key details</b>  | <b>Key Players</b> |
|---|-------------------------------------|---|--------------------|
| Setting up of resorts in inhabited islands  | 10                                  | The resort will have a 100 guest capacity                                   | Tourism Department |
| Promotion of tourist homes in major islands- Kavratti, Kadmath, Minicoy, Agatti, Kalpeni and Andrott (around 10-15 tourist homes in each) | ~45                                 |   | Tourism Department |
| Setting up of resorts in un-inhabitant islands  | 80                                  | Around 4 resorts are expected to be set up with a guest capacity of 100-150 | Tourism Department |
| Development of scuba diving vessels   | 6                                   | The speed vessel is expected to accommodate 10-12 persons                   |                    |
| Infrastructure and project support for Lakshadweep Institute of Water sports  | 5                                   |   |                    |

### 1.1.5. Training Infrastructure

The existing training infrastructure in the UTL is tabulated below:

| Type of training infrastructure                            | Total number of institutions | No of trades/courses  | Courses offered  |
|--|------------------------------|---|--|
| Government ITI   | 1                            | 8   | Carpentry, plumber, mason, marine fitter, sewing machine operator, computer operator   |
| University Centres (Degree colleges in Kadmat and Androth) | 2                            | 7   | BA English , BA Arabic, B.Sc Mathematics , MA English, MA Arabic MA Economics , M.Sc Mathematics   |
| Lakshadweep Diving Academy                                 | 1                            | 12  | <ul style="list-style-type: none"> <li>• 3 Professional Certification (Dive-master, Open Water Scuba Instructor, Assistant Instructor)</li> <li>• 5 Diving Certification (Advanced open water, Junior advanced open water, Junior Open water, Open water , Rescue Diver_</li> <li>• 4 Emergency Care and Safety (Care for Children with AED instructor, EFR Primary care&amp; Secondary Care with AED instructor, EFR Instructor, EFR Primary care&amp; Secondary Care (1<sup>st</sup> Aid)</li> </ul> |
| Fishermen Training Centre                                  | 1                            | 5-7 (courses have been conducted so far; infrastructural support required ) | Polar line fishing training, Fish processing and preservation, On-boat training, Cage culture  |



## 2. Labour Market Scenario

### 2.1. Introduction about the limitation of estimating sector specific Skill Gap in Lakshadweep

Our approach to estimate gap in demand of skilled labor-force and supply for skilled labor-force depends primarily on the employment elasticity approach. Employment elasticity is a measure of the percentage change in employment associated with a 1 percentage change in economic growth. In order to estimate sector specific skill gap, we estimate sector specific employment elasticity by measuring the change in workforce in the sector and its contribution to economy for a given time period. Thus, in order to determine sector specific skill gap, we require data on sector specific Gross Domestic Product (GDP) and workforce for Lakshadweep. However, our primary consultation with the Department of Planning and Statistics revealed that Gross Domestic Product is not calculated for the union territory of Lakshadweep. Instead, total income of Lakshadweep is crudely estimated from its contribution to Supra-regional sectors which include Railway, Communications, Banking & Insurance, Central Government & Administration and Financial Intermediation Services Indirectly Measured (FISM). The total size of GSDP estimated from supra-regional sectors was INR 21,986 Lakhs at the constant price in 2013-14, mostly driven by contribution from central government administrative services with 90% contribution to the GSDP. In the absence of sector specific GDP estimated using the standard method, it is not possible to estimate sector specific employment elasticity. Thus, estimating skill gap based on employment elasticity approach is not possible. We present a comprehensive analysis on key labor indicators of Lakshadweep in this chapter.

### 2.2. Performance of Lakshadweep across key labour statistics

In order to understand the labour market scenario in Lakshadweep, it is important to map the performance of the UT across key labour statistics viz. Labour force participation rate (LFPR), Worker Population Ratio (WPR) and Unemployment Rate (UR) according to the usual principal and subsidiary status (ps+ss) approach. It can be observed from **Error! Reference source not found.** that the overall LFPR of Lakshadweep was estimated to be only 36.3%<sup>14</sup> which was also the lowest

among all Indian states and UTs. There is wide disparity between male and female LFPR suggesting that percentage of female population working or seeking work is much lower (16.3%) than their male counterparts (58.3%). Regarding WPR, it can be observed that, proportion of workers/employed persons in the total population of the age group 15 years and above is only 34.6%. The gender gap in WPR is an important estimate. For males the WPR is approximately four times that of the females. The total workforce of Lakshadweep (aged 15 years and above) has been estimated to be 20,436 in 2015. The unemployment rate reflects the portion of the labour force which was available for work during the given reference period but did not get work. On comparing the key labour statistics of Lakshadweep for 2011<sup>15</sup> and 2015, we find that the unemployment rate has drastically reduced by 16% while WPR has remained almost constant and LFPR has also reduced by 10% points.

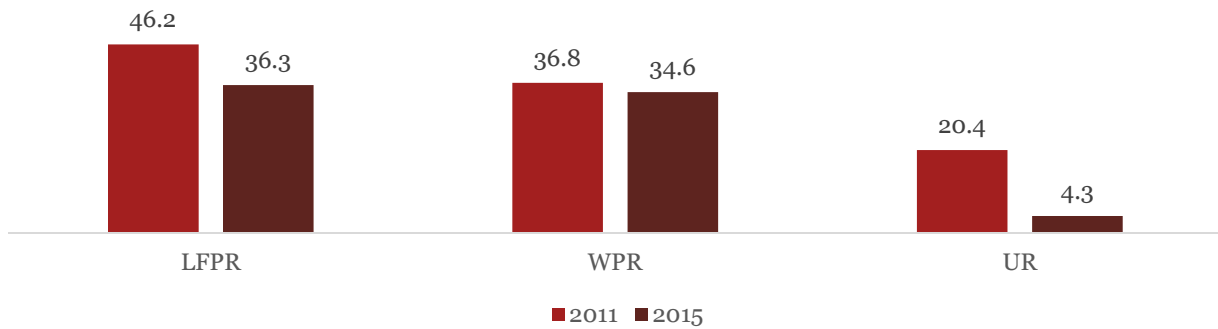
**Table 3: Comparison of LFPR, WPR and UR of Lakshadweep by ps+ss approach between 2011 and 2015**

| Labour statistic | Male | Female | Person |
|------------------|------|--------|--------|
| LFPR             | 58.3 | 16.9   | 36.3   |
| WPR              | 56.6 | 15.5   | 34.6   |
| UR               | 2.9  | 8.5    | 4.3    |

<sup>14</sup> (Report on Employment and Unemployment Survey, 2015-16)

<sup>15</sup> (Report on Employment and Unemployment Survey, 2011-12)

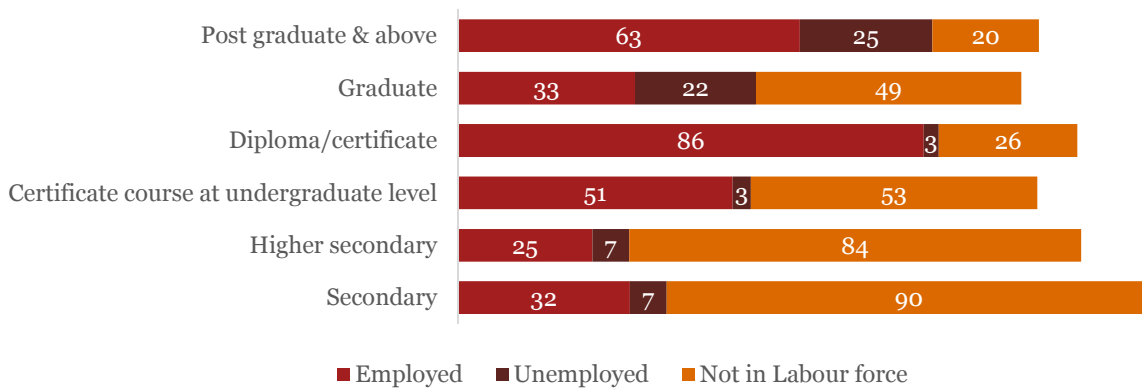
**Table 4: Comparison of LFPR, WPR and UR of Lakshadweep by ps+ss approach between 2011 and 2015**



### 2.3. Education level, vocational training and employment

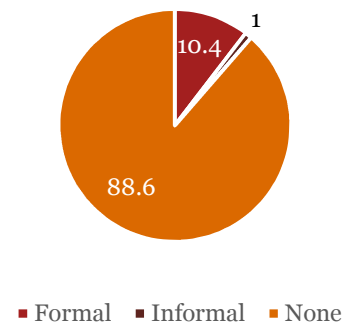
One-fourth of the graduates and nearly one-fifth of the post graduates in the age category 15-59 years are unemployed, and a significant proportion of them are not even in the labor force. This highlights high level of unemployment among the educated population. This segment of the population could be targeted for short term skilling course as they already have a decent level of education. It is important to note that 86% of the diploma and certificate holders are employed.

**Figure 14: Percentage distribution of person aged 15 years and above by main activity and educational qualification**



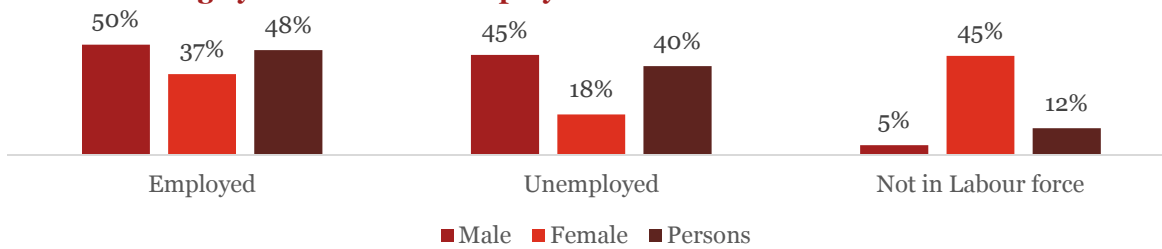
According to the Report on Employment and Unemployment Survey released by the Labour Bureau in 2015, of the total population in Lakshadweep aged 15 years and above, only 10% received formal form of vocational training. Majority of the population (89%) in the given age group received did not receive vocation training in any form. Given that there is only 1 government ITI and no private training partners in the UT, scope for receiving vocational training is clearly limited due to the lack of available formal training set up.

**Figure 15: Percentage distribution of population aged 15 years and above and status of vocational training**



Further, it is important to understand that out of the persons who received vocational training subsequently what proportion joined the labour-force. Out of the population (aged 15 years and above) that received vocational training 48% per cent received employment, 40% remained unemployed, and 12% did not join the labour-force. Disaggregation from gender perspective provides interesting insights that out of the total female population who undertook vocational training, a significant proportion of 45% did not join the labour-force while the corresponding figure for their male counterparts was 4.5%.

**Figure 16: Percentage distribution of persons aged 15 years and above who received vocation training by their status of employment**



## 2.4. Sector wise employment

The table below highlights the estimated workforce in Lakshadweep for year 2015. The total workforce in age category 15 years and above estimated to be 20, 477. Of which administrative support services, transportation and storage, construction, manufacturing, agriculture and allied sectors are main contributors. It is important to note that over 3,500 persons are engaged in manufacturing and construction sectors and over 3,000 are working in transportation and storage sectors.

| Sector   | Estimated Workforce in 2015 | Percentage distribution of estimated workforce |
|--|-----------------------------|--|
| Agriculture, forestry and fishing                                    | 1757                        | 8.6%   |
| Manufacturing  | 1328                        | 6.5%   |
| Electricity, gas, steam and air conditioning supply                  | 20                          | 0.1%   |
| Water supply; sewerage, waste management and remediation activities  | 20                          | 0.1%   |
| Construction   | 2452                        | 12.0%  |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 1553                        | 7.6%   |
| Transportation and storage   | 3290                        | 16.1%  |
| Accommodation and Food service activities                            | 163                         | 0.8%   |
| Information and communication  | 184                         | 0.9%   |
| Financial and insurance activities                                   | 20                          | 0.1%   |
| Real estate activities   | 0                           | 0.0%   |

|   |      |       |
|---|------|-------|
| Professional, scientific and technical activities             | 490  | 2.4%  |
| Administrative and support service activities                 | 4864 | 23.8% |
| Public administration and defence; compulsory social security | 388  | 1.9%  |
| Education   | 2330 | 11.4% |
| Human health and social work activities                       | 981  | 4.8%  |
| Arts, entertainment and recreation                            | 41   | 0.2%  |

## 2.5. Job roles in high demand

The job roles that are high in demand in the sectors and that have been identified as priority sectors are listed in this sub-section.

### *Port and Maritime Sector*

The port and maritime sector has reported high demand for boat drivers, MSEs, repair and maintenance staff at the Port Workshops at the islands.

The matrix below captures the jobs roles that are high in demand:

| <b>Job Roles: Port operations</b>  | <b>Findings</b>  |
|--|--|
| <ul style="list-style-type: none"> <li>Boat drivers,</li> <li>Tindale, Serang Operator, Multi-Skilled Employee (MSE)</li> <li>Vessel repairing staff/Mechanic</li> <li>Marine Painter</li> <li>Fitter maintenance- Marine, Fitter Pipe- Marine, Welder- Marine equipment</li> <li>Vessel Navigator</li> <li>General purpose rating</li> <li>Under water welding and cutting</li> <li>Electric Arc Welding</li> </ul> | <ul style="list-style-type: none"> <li>The port department recruits its officials as multi-skilled employees (MSE) and they progress based on trade tests and years of service for subsequent promotions.</li> <li>Regarding technical staff at the Port department, around one-fourth seats are vacant</li> <li>Training requirement is high for jobs such as boat engineers and repair staff</li> <li>Currently there are no shipyards, a</li> <li>Given that embarkation and disembarkation of passengers and loading/unloading of cargo in most of the islands is carried out in open deep sea, there is need for providing safety training, emergency rescue operations etc.</li> <li>In the absence of specialized training centre at the any of the islands, it is important that either training programmes are</li> </ul> |

### *Tourism*

The Tourism Department of the UTL plans to invite private sector participation for promotion of tourism by setting up resorts and hotels in the islands. Cruise tourism is also expected to rise in the coming years.

The matrix below captures the jobs roles that are high in demand:

| <b>Job Roles: Tourism</b>   | <b>Findings</b>  |
|---|--|
| <ul style="list-style-type: none"> <li>F&amp;B production</li> <li>F&amp;B Service</li> <li>Caterer</li> <li>Restaurant Cook</li> <li>Front Office Staff</li> <li>Housekeeping Staff,</li> <li>Divers</li> <li>Tour guides</li> </ul> | <ul style="list-style-type: none"> <li>Job opportunities in the tourism and hospitality sector are expected to rise with the upcoming investments by the Tourism department to set up resorts, home-stays, hotels in various islands.</li> <li>Currently Tourism Department sends students to the mainland to the study courses in tourism and hospitality</li> <li>Provision of skill courses in the islands will be beneficial for creating skilled pool of resources for the tourism sector of Lakshadweep</li> </ul> |

### *Construction*

All the construction activities of the Lakshadweep Administration and other central government organizations are under taken by Lakshadweep Public Works Department (PWD). Given the unique geographic location, the sectors in which construction activities are being undertaken include: Roads and Bridges, Anti Sea Erosion, Housing and Urban Development, Water Supply and Sanitation. There will be demand for workforce that could work in construction activities.

The matrix below captures the jobs roles that are high in demand:

| <b>Job Roles: Construction</b>   | <b>Findings</b>  |
|--|--|
| <ul style="list-style-type: none"> <li>• Bar benders</li> <li>• Piling Works</li> <li>• Masons</li> <li>• Steel Fixer</li> <li>• Electricians</li> <li>• Plumbers</li> <li>• Fitters</li> <li>• Supervisor - Electrical Works</li> <li>• Supervisor - Roads &amp; Runways</li> </ul> | <ul style="list-style-type: none"> <li>• Construction sector is witnessing inflow of migrants into the islands.</li> <li>• Investments by PWD was around INR 1000 lakhs in building roads and bridges in 2016-17.</li> <li>• It is proposed to construct staff quarters in all Islands &amp; transit accommodation at, Agatti, Andrott, Kalpeni, Kozhikode and Mangalore with around INR 1500 lakhs allocated for the housing sector.</li> </ul> |

## *Manufacturing*

The UTL faces infrastructural constraints which blocks the industrialization process and restricts growth of only specific industries which include: Coir based industries (coir mat, rope, yarn, fibre etc.) and Coconut based products (coconut oil, desiccated coconut powder, shell powder, cream, water bottles etc.)

The matrix below captures the jobs roles that are high in demand:

| <b>Job Roles:</b>   | <b>Findings</b>  |
|---|--|
| <ul style="list-style-type: none"> <li>• Job roles at the manufacturing unit- Cutting, peeling, extracting</li> </ul> | <ul style="list-style-type: none"> <li>• Coconut based manufacturing units are widely present across all islands. The major products manufactured are: Desiccated coconut powder, virgin oil, coconut oil, coconut cake and halwa</li> <li>• Existing manufacturing units are not operating at their optimal capacities due to infrastructural limitations</li> <li>• Since most activities of the process are undertaken manually training is required for hygiene practices, safety material handling and operational efficiency.</li> </ul> |

## *Fisheries*

Given the abundance of fish in the islands, fishing is one of the most important economic activities of the UTL.

The matrix below captures the jobs roles that are high in demand:

| <b>Job Roles: Fisheries</b>  | <b>Findings</b>  |
|--|--|
| <ul style="list-style-type: none"> <li>• Production Assistants</li> <li>• Quality Control assistants</li> <li>• Lab assistants</li> <li>• Supervisors in value added fishery products manufacturing units</li> <li>• Cold Storage Technician</li> <li>• Marine processing technicians</li> </ul> | <ul style="list-style-type: none"> <li>• Currently there is one Tuna Canning Factory in Minicoy</li> <li>• Lakshadweep Development Corporation Limited has initiated a project to convert the unit from a semi-automatic manufacturing unit into a fully automatic one. The project started in 2012 and is still underway. It is expected that complete automation will lead to production of value added fish products and create demand for marine process technicians.</li> </ul> |

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## **3. District Action Plan**

### **3.1. Background**

An actionable roadmap is one of the deliverables to be submitted to MoS for implementing skill training programmes in each of the districts. To develop these District specific plans, the team has mapped the emerging skilling opportunities across the 21 Coastal districts. Further, similar training opportunities or training requirements from the same sector have been clubbed in to one programme to ensure optimal use of resources and to build economies of scale for delivery partners. This has been proposed to improve the chances of developing and proposing feasible and viable training delivery models.

Further, the team has also estimated the broad capital and operational expenditure expected to be incurred in operationalizing the training initiatives in the districts. Apart from this, critical operational aspects such as training delivery mechanisms, availability of curriculum and employers have also been explored. The current status of these critical aspects will help ascertain the feasibility of initiating these trainings immediately and assess the gaps that need to be bridged before these training can be rolled out.

### **3.2. Objective of developing the plan**

The District action plans have been developed with an overall objective of providing a step by step skill implementation plan to the Ministry of Shipping in the 21 coastal districts. The specific objectives include the following:

- Mapping various skilling opportunities available in the district, keeping in mind the requirements of Port led development and emergence of CEZs.
- Mapping the current status of various pre-requisites such as availability of qualifications, curriculum, funding for training, potential training delivery partners, availability of assessors and certification processes and institutions for the training programmes.
- Identify the potential/target beneficiaries for the training courses.
- Map the infrastructure and the investment that may be required to deliver the training programmes in the district.
- Provide an estimate of the investment required to create/hire the skilling infrastructure.
- Provide a step by step action plan for MoS to implement the skilling initiatives.

### **3.3. Methodology**

Stakeholder consultations<sup>16</sup> that were held at national, state and district level and that included stakeholders from government, industries, associations, and private firms. A separate plan has been prepared for each of the 13 districts. The plan has been divided into several sections and include sections on training delivery, potential partners, and investments. The investments component has been divided into two broad heads: capital expenditure and operational expenditure. Capital expenditure has only been proposed in cases in which there were very limited possibilities of using existing institutional framework for partnership and for using existing infrastructure and equipment. Operational expenditure includes the cost of the running the training programmes including the salary of the instructors. The common cost norms inform the calculation of the operational expenditure. Capital expenditure has been worked out bearing in mind the infrastructure requirements of the programme and duration of training programmes. Wherever, feasible partnership with existing programmes such as DDU-GKY and PMKVY has been suggested in the plan.

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<sup>16</sup> Roughly 300 primary consultations inform the development of this plan

### 3.4. Summary for Lakshadweep

| SN | Project Name   | Job Roles   | Type of training     | No. of people to be trained |
|----|--|---|----------------------|-----------------------------|
| 1  | Skill Development training for port and shipping                 | <b>Drivers:</b> Boat drivers, boat master/boat syrang<br><b>Maintenance and repair works:</b> Marine Painter, Fitter maintenance- Marine, Fitter Pipe- Marine, Welder- Marine equipment, Vessel Navigator, general purpose rating course, Safety training       | Fresh and Upskilling | 450-600 in next 5 years     |
| 2  | Training for Skilled job roles in Tourism and Hospitality Sector | F&B production, F&B Service, Caterer, Restaurant Cook<br>Front Office Staff, Housekeeping Staff,<br>Dive masters, Open water scuba instructor, Scuba Divers,EFR divers, Open water divers,<br>Entrepreneurial course for setting up diving/water sports centres | Fresh and Upskilling | 550 to 600 in next 5 years  |
| 3  | Training for fishermen community                                 | Rearing and breeding of ornamental fish<br><br>Value Added fish products-<br><br>Deep Sea fishing and navigation  | Upskilling           | 400-550 in the next 5 years |
| 4  | Training for job roles in Construction Sector                    | Bar benders and Steel Fixers<br><br>Piling workers  | Fresh and Upskilling | 200-400 in the next 5 years |

### 3.5. Action Plan for Lakshadweep

| <b>Project 1: Skill Development training for port and shipping</b> |  |
|--|--|
| <b>Key economic drivers</b>  | <ul style="list-style-type: none"> <li>The geographic isolation of the Lakshadweep islands makes shipping industry the life-line</li> <li>Proposed plans for acquisition of passenger ships, cargo barges, oil barges etc. to meet the growing demand of passenger and cargo movement.</li> </ul>  |
| <b>Rationale for a Training programmes</b>                         | Since embarkation and disembarkation of passengers and loading/unloading of cargo in most of the islands is carried out in open deep sea which are then brought to the islands and vice versa by small launches/dumb barge and boats, there is <b>need to train more workers as boat drivers and operators</b> . Since the process makes the whole exercise of shipping operation very dangerous, there is a need to provide |

|                                   |   |  |   |   |  |
|-----------------------------------|---|--|---|---|--|
|                                   |   | <p><b>safety training to these boat drivers.</b> According to the Perspective Plan submitted by Department of Port Shipping and Aviation, UTLA, the passenger traffic and cargo traffic between mainland and island sector are expected to rise at annual rate of 6% and 4% respectively between 2017-2030. As a result there are proposition for acquisition of 6 passenger ships, 6 cargo barges, 1 oil barge and 3 LPG cylinder carriers in the next few years. It is important to note that out of the total port department, approximately one fifth positions are vacant and the gap is maximum at the <b>Multi Skilled Employee</b> (entry level skilled worker engaged in maintenance and repair works). Currently there is only one port work shop (where repairs of boats and vessels take place) at Kavratti and repair works of all other islands are also carried out at Kavratti alone. Moreover the workshop at Kavratti is severely under-staffed. The department has proposed to set up more port workshops to meet the need of repair works. The situation reflects the need for introducing <b>training courses in operations and maintenance works</b>-marine welder, marine fitter, marine painter, vessel navigator etc. Apart from this, the department also plans to conduct dredging of channel from lagoon entrance up to jetty in all islands to facilitate safe entry of all High Speed Crafts having a draft of 1.35 mtrs. This indicates the need for dredging operators</p> |   |   |  |
| <b>Trainings</b>                  | <b>Training courses</b>   | <b>Target Beneficiaries</b>  | <b>Type of Trainings</b>  | <b>Total Number of beneficiaries</b>  |  |
|                                   | Boat drivers, boat master/boat serang   | <ul style="list-style-type: none"> <li>• Unemployed youth from the islands</li> <li>• Existing port staff</li> </ul>   | Fresh Training  | 50-100 in next 2 years  |  |
|                                   |   |  | Up-skilling   | 100-150 in next 5 years   |  |
|                                   | Marine Painter, Fitter maintenance- Marine, Fitter Pipe- Marine, Welder- Marine equipment, Mechanic , Vessel Navigator, general purpose rating course | <ul style="list-style-type: none"> <li>• Unemployed youth from the islands</li> <li>• Existing port-workshop staff</li> </ul>  | Fresh Training  | 100-150 in next 5 years   |  |
|                                   |   |  | Up-skilling   | 100-150 in next5 years  |  |
|                                   | Safety training   | <ul style="list-style-type: none"> <li>• Existing port staff</li> </ul>  | Upskilling  | 100-150 in next 5 years   |  |
| Dredging operator                 | <ul style="list-style-type: none"> <li>• Unemployed youth from the islands</li> </ul>   | Fresh  | 50-100 in next 5 years  |   |  |
| <b>Availability of curriculum</b> | <b>Job Roles</b>  | <b>Target Groups</b>   | <b>Available QP/NOS</b>   | <b>MES</b>  | <b>CTS</b>                                     |
|                                   | Boat drivers, boat master/boat serang   | <ul style="list-style-type: none"> <li>• Unemployed youth from the islands</li> <li>• Existing port staff</li> </ul>   | QP not available  | Course not available  | Course not available                           |
|                                   | Marine Painter, Fitter maintenance- Marine, Fitter Pipe- Marine, Welder- Marine equipment, Vessel   | <ul style="list-style-type: none"> <li>• Unemployed youth from the islands</li> <li>• Existing port-workshop staff</li> </ul>  | QP available for Protective and Marine Painter (250-350 hours), Pipe Fitter - Ship Building | Course available for Welder (repair and maintenance (500 hours), pipe), Metal | Course available for Welder (Pipe) (12 months) |



|                                      |  |  |   |                             |                      |
|--------------------------------------|--|--|---|-----------------------------|----------------------|
|                                      | Navigator, general purpose rating course |  | (210hours), Repair Welder (500 hours)   | surface painter (150 hours) |                      |
|                                      | Safety training                          | • Existing port staff  | QP Not available  | Course not available        | Course not available |
|                                      | Dredging operator/mechanic               | • Unemployed youth from the islands  | QP Not available  | Course not available        | Course not available |
| <b>Investment (INR In lakhs)</b>     |  |  |   |                             |                      |
| <b>Capital Expenditure</b>           |  |  | <b>10</b>   |                             |                      |
| <b>Boat Driver/Operator</b>          |  |  |   |                             |                      |
| Operational Expenditure              |  |  | 14.84   |                             |                      |
| <b>Marine Painter/fitter</b>         |  |  |   |                             |                      |
| Operational Expenditure              |  |  | 35.60   |                             |                      |
| <b>Safety Training</b>               |  |  |   |                             |                      |
| Operational Expenditure              |  |  | 15.59   |                             |                      |
| <b>Dredging Operator</b>             |  |  |   |                             |                      |
| Operational Expenditure              |  |  | <b>17.06</b>  |                             |                      |
| <b>Total Operational Expenditure</b> |  |  | <b>83.09</b>  |                             |                      |
| <b>Total Expenditure</b>             |  |  | <b>93.09</b>  |                             |                      |
| <b>Potential Partners</b>            |  | <b>Partner</b>   | <b>Areas of Support</b>   |                             |                      |
|                                      |  | Department of Port Shipping and Aviation   | <ul style="list-style-type: none"> <li>• Access to port facilities for practical training</li> <li>• Guest faculty</li> <li>• Input for designing curriculum</li> <li>• Provision of used equipment for training</li> <li>• Provide guest faculty and facilitate on the job training</li> <li>• On-the-job training</li> <li>• Facilitate implementation of upskilling for existing work-force</li> </ul> |                             |                      |
|                                      |  | Training Partner (Government ITI)  | <ul style="list-style-type: none"> <li>• Mobilization support</li> <li>• Training delivery</li> <li>• Co-management of the training facility</li> </ul>   |                             |                      |
|                                      |  | Logistic Sector Skill Council  | <ul style="list-style-type: none"> <li>• Development of QPs for the identified job roles</li> <li>• Develop model training programmes for the identified Job Roles</li> <li>• Identification and certification of Trainers</li> <li>• Identification and certification of assessors</li> <li>• Assessment of trainees</li> <li>• Certification of Trainees</li> </ul>                                     |                             |                      |
| <b>Training Delivery</b>             |  | <b>Option 1</b>  |   |                             |                      |
|                                      |  | <ul style="list-style-type: none"> <li>• Department of Port, shipping and aviation to take the lead on introduction of training programmes</li> <li>• Government ITI to be involved for training delivery through mobilization of fresh youth, provision of training infrastructure, identification of skilled trainers</li> <li>• Private training provider to rent/develop the training facility and deliver the training programme</li> </ul> |   |                             |                      |

**Work Plan**

| <b>Port and Logistics</b>  | <b>in Months</b> |          |          |          |          |          |          |          |          |
|--|------------------|----------|----------|----------|----------|----------|----------|----------|----------|
|  | <b>1</b>         | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> |
| Partnership with SSC and Department of Ports   |                  |          |          |          |          |          |          |          |          |
| Development of QPs   |                  |          |          |          |          |          |          |          |          |
| Preparation of Training facilities   |                  |          |          |          |          |          |          |          |          |
| Furnishing of the training centre  |                  |          |          |          |          |          |          |          |          |
| Purchase and installation of lab equipment   |                  |          |          |          |          |          |          |          |          |
| Appointment of staff members (instructors, counsellors, mobilization in-charge, placement officers, administrative staff etc.) |                  |          |          |          |          |          |          |          |          |
| Mobilization of prospective trainees   |                  |          |          |          |          |          |          |          |          |
| Enrolment of students  |                  |          |          |          |          |          |          |          |          |
| Roll-out of training programme   |                  |          |          |          |          |          |          |          |          |

| <b>Project 2: Training for Skilled job roles in Tourism and Hospitality Sector</b> |   |   |                          |                                      |
|--|---|---|--------------------------|--------------------------------------|
| <b>Key economic drivers</b>  | <ul style="list-style-type: none"> <li>Between 2012 and 2016, tourist arrivals in Lakshadweep has increased by 56% points (2012: 4997, 2016: 7788)</li> <li>Tourism Department of Lakshadweep plans to set up resorts and tourist homes with an investment of Rs 146 Crores</li> <li>Tourism Policy 2014 of the UT, lays emphasis on the need to improve infrastructural facilities such as provision of adequate means of transport, increased availability of accommodation facilities, better connectivity etc. to promote tourism</li> </ul>  |   |                          |                                      |
| <b>Rationale</b>   | <p>According to the Department of Tourism, the total number of domestic and foreign tourists in 2016 was 7126 and 662 respectively. Promotion of tourism has been identified as one of major thrust areas to generate employment opportunities to youth of Lakshadweep. The tourism policy envisages a government led tourism development model for the sustainable and eco-friendly development of tourism in Lakshadweep. Some of the critical steps that the tourism department intends to undertake in this regards are:</p> <ul style="list-style-type: none"> <li>Procurement of dedicated ships for tourists besides promoting the visit of private cruise liners and luxury yachts</li> <li>Eco-friendly accommodation infrastructure in inhabited (~INR 10 Crores) islands and invite private players for setting up tourism infrastructure at uninhabited islands through PPP mode (~INR 80 crores)</li> <li>Promotion of tourist homes (~INR 45 crores)</li> </ul> <p>For this reason, creating a pool of skilled professionals in the field of hospitality and tourism such as: food and beverage (F&amp;B) production, F&amp;B service, caterer, multi-cuisine cook, front office staff, housekeeping staff, tour guides etc. will be an important step in this regard.</p> <p>An integral component of tourism promotion in Lakshadweep is promotion of dive tourism. Creating a pool of skilled manpower as scuba divers, emergency first response (EFR) divers, dive masters, open water divers is critical. Additionally training programmes targeted towards entrepreneurial development of the skilled divers will support them in setting up their own water sports diving centres.</p> |   |                          |                                      |
| <b>Trainings</b>   | <b>Training courses</b>   | <b>Target Beneficiaries</b>   | <b>Type of Trainings</b> | <b>Total Number of beneficiaries</b> |
|  | F&B production, Caterer, Restaurant Cook  | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | Fresh Training           | 200 in next 2 years                  |
|  | Front Office Staff, Housekeeping Staff, F&B Service   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | Fresh Training           | 100 in next 2 years                  |
|  | Dive masters, Open water scuba instructor<br>Scuba Divers, EFR divers, Open water divers,   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | Upskilling               | 50-100 in next 2 years               |
|  |   |   | Fresh                    | 100-150 in next 2 years              |

|                                      |   |   |   |  |   |
|--------------------------------------|---|---|---|--|---|
|                                      |   | Entrepreneurial course for setting up diving/water sports centres                   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul>   | Upskilling   | 100-120 in next 2 years   |
| <b>Availability of curriculum</b>    | <b>Job Roles</b>  | <b>Target groups</b>  | <b>Available QP/NOS</b>   | <b>MES</b>   | <b>CTS</b>  |
|                                      | F&B production, , Caterer, Restaurant Cook  | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | QP available for: <ul style="list-style-type: none"> <li>F&amp;B production</li> <li>F&amp;B Service (435 hours)</li> <li>Assistant Catering Manager (475 hours)</li> </ul>     | Course available for: <ul style="list-style-type: none"> <li>F&amp;B service (544 hours)</li> <li>Cook (520 hours)</li> </ul>  | Course available for <ul style="list-style-type: none"> <li>Food production (1 year)</li> <li>F&amp;B service Assistant (1 year)</li> </ul> |
|                                      | Front Office Staff, Housekeeping Staff, F&B Service                                   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | QPs available for: <ul style="list-style-type: none"> <li>Front office associate/executive (280-340 hours)</li> <li>Housekeeping executive/attendant (200-250 hours)</li> </ul> | Course available for <ul style="list-style-type: none"> <li>Housekeeper (520 hours)</li> <li>Hospitality Assistant (520 hours)</li> <li>Front office cum receptionist (520 hours)</li> </ul> | Course available for <ul style="list-style-type: none"> <li>Housekeeper, Front Office Associate (1 year)</li> </ul>                         |
|                                      | Dive masters, Open water scuba instructor Scuba Divers,EFR divers, Open water divers, | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | QP not available  | Course not available   | Course not available  |
|                                      | Entrepreneurial course for setting up diving/water sports centres                     | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> </ul> | QP not available  | Course not available   | Course not available  |
| <b>Investment (INR In lakhs)</b>     | <b>Capital Expenditure</b>  |   |   |  | <b>25</b>   |
|                                      | F&B Production, Caterer, Cook etc.  |   |   |  |   |
|                                      | Operational Expenditure   |   |   |  | 45.24   |
|                                      | <b>F&amp;B Service, Housekeeping, front office staff</b>                              |   |   |  |   |
|                                      | Operational Expenditure   |   |   |  | 14.84   |
|                                      | <b>Diving related courses</b>   |   |   |  |   |
|                                      | Operational Expenditure   |   |   |  | <b>28.34</b>  |
|                                      | <b>Entrepreneurial course</b>   |   |   |  |   |
| Operational Expenditure              |   |   |   | <b>17.06</b>   |   |
| <b>Total Operational Expenditure</b> |   |   |   | <b>73.17</b>   |   |
| <b>Total Expenditure</b>             |   |   |   | <b>98.17</b>   |   |
| <b>Potential Partners</b>            | <b>Partner</b>  |   |   | <b>Areas of Support</b>  |   |

|                          |  |   |
|--------------------------|--|---|
|                          | Tourism Department (SPORTS) and MoS  | <ul style="list-style-type: none"> <li>• Provide funds for training delivery, equipment support and infrastructure support</li> <li>• Facilitate On-Job-Training</li> </ul>   |
|                          | Training Partner (National Council of Hotel Management and Catering Technology/ Government ITI/ Lakshadweep Development Academy) | <ul style="list-style-type: none"> <li>• Provide infrastructure for training</li> <li>• Training delivery</li> <li>• Provide faculty members</li> <li>• Integrate the proposed trainings in its training plan</li> </ul>  |
|                          | Sports Sector Skill Council/ Tourism and Hospitality Sector Skill Council  | <ul style="list-style-type: none"> <li>• Develop model training programmes for the identified Job Roles (in case QPs do not exist)</li> <li>• Identification and certification of Trainers</li> <li>• Identification and certification of assessors</li> <li>• Assessment of trainees</li> <li>• Certification of Trainees</li> </ul>   |
| <b>Training Delivery</b> |  | <ul style="list-style-type: none"> <li>• National Council of Hotel Management and Catering Technology/ Government ITI/Lakshadweep Development Academy will provide deliver the training programmes</li> <li>• Sports Sector Skill Council and Tourism and Hospitality Sector Skill Council will certify the training programmes</li> <li>• Ministry of Tourism could fund the training</li> </ul> |

### Work Plan

| Training for Skilled job roles in Tourism and Hospitality Sector         | in Months |   |   |   |   |   |
|--|-----------|---|---|---|---|---|
|  | 1         | 2 | 3 | 4 | 5 | 6 |
| Upgradation of training centre (if required in case of LDA or Govt. ITI) |           |   |   |   |   |   |
| Purchase of consumables  |           |   |   |   |   |   |
| Appointment of additional staff members (if required)                    |           |   |   |   |   |   |
| Mobilization of prospective trainees                                     |           |   |   |   |   |   |
| Enrolment of students  |           |   |   |   |   |   |
| Roll-out of training programme   |           |   |   |   |   |   |

| Project 3: Trainings for fishermen community |   |
|--|---|
| <b>Key economic drivers</b>                  | <ul style="list-style-type: none"> <li>• Contribution of Fisheries to district GDP was Rs. 34793 Lakhs (2013-14)</li> <li>• Contribution of Fisheries to district GDP has grown at CAGR of 5.17%</li> <li>• Presence of CMFRI, MPEDA, CIFT in Kochi</li> </ul>  |
| <b>Rationale</b>                             | Fishing is the most important economic activity of the UT. According to the 6 <sup>th</sup> Economic Census of Lakshadweep, fishing and aquaculture constituted 83% of the total agricultural establishments. Fishing is a traditional economic activity and the number of active fishermen e has increased by over 39% between 2010-11 (4210) and 2013-14 (5841). The quantity of fish landings between 2004 and 2015 has increased by 88% and the value of fish landings was INR 1483 lakhs in 2013 and has remained stagnant for last few years. |

|                                   |  |   |   |   |                                      |
|-----------------------------------|--|---|---|---|--------------------------------------|
|                                   |  | The islands are home to some of the most unique fish and exotic species. For this reason, training for rearing and breeding of <b>ornamental fish</b> could be introduced. Given that tuna fish is found in abundance, there is immense scope to explore the processed fish market with regard to tuna based fish products. Currently, <b>New opportunities are also emerging in the market for value added fish products</b> especially tuna based products. Currently there is only one tuna canning factory in Minicoy island. Apart from this, the vast deep sea varieties of fishes available in the sea around Lakshadweep is still unexploited. In order to diversify fish catch, to exploit the deep sea varieties of fish such as yellow fin tuna, big eye tuna, blue fin tuna, sharks, there is need to provide training in <b>deep sea fishing and navigation</b> with practical training to use the requisite equipment |   |   |                                      |
| <b>Trainings</b>                  |  | <b>Training courses</b>   | <b>Target Beneficiaries</b>   | <b>Type of Trainings</b>  | <b>Total Number of beneficiaries</b> |
|                                   |  | Rearing and breeding of ornamental fish   | <ul style="list-style-type: none"> <li>Existing workforce engaged in fisheries</li> </ul>                               | Upskilling  | 200 in next 2 years                  |
|                                   |  | Value Added fish products-  | <ul style="list-style-type: none"> <li>Existing workforce engaged in fisheries</li> </ul>                               | Upskilling  | 50 in next 2 years                   |
|                                   |  | Deep sea fishing and navigation   | <ul style="list-style-type: none"> <li>Existing workforce engaged in fishery</li> </ul>                                 | Upskilling  | 300 in next 2 years                  |
| <b>Availability of curriculum</b> | <b>Job Roles</b>                               | <b>Target groups</b>  | <b>Available QP/NOS</b>   | <b>MES</b>  | <b>CTS</b>                           |
|                                   | <b>Ornamental fish technician</b>              | Fishermen community   | QP available for: <ul style="list-style-type: none"> <li>Ornamental fish technician (200 hours)</li> </ul>              | No course available   | No course available                  |
|                                   | <b>Fish and Sea food processing technician</b> | Fishermen community   | QP available for: <ul style="list-style-type: none"> <li>Fish and Sea Food Processing Technician (240 hours)</li> </ul> | Course available for Processing of Fish and their By-products (314 hours)   | No course available                  |
|                                   | <b>Deep sea fishing and navigation</b>         | Fishermen community   | No QP available   | No course available   | No course available                  |
| <b>Investment (INR In lakhs)</b>  |  | <b>Capital Expenditure</b>  |   |   | <b>22</b>                            |
|                                   |  | <b>Ornamental Fish Technician</b>   |   |   |                                      |
|                                   |  | Operational Expenditure   |   |   | 20.78                                |
|                                   |  | <b>Fish and Sea food processing technician</b>  |   |   |                                      |
|                                   |  | Operational Expenditure   |   |   | 5.19                                 |
|                                   |  | <b>Deep Sea Fishing and Navigation</b>  |   |   |                                      |
|                                   |  | Operational Expenditure   |   |   | <b>31.18</b>                         |
|                                   |  | <b>Total Operational Expenditure</b>  |   |   | <b>57.16</b>                         |
| <b>Total Expenditure</b>          |  |   | <b>79.16</b>  |   |                                      |
| <b>Potential Partners</b>         |  | <b>Partner</b>  |   | <b>Areas of Support</b>   |                                      |
|                                   |  | Department of Fisheries   |   | <ul style="list-style-type: none"> <li>Upgrade the existing Fishermen training centre to make provisions for the training programmes</li> </ul> |                                      |
|                                   |  | Training partners   |   | <ul style="list-style-type: none"> <li>Training delivery</li> </ul>   |                                      |

|                          |   |   |
|--------------------------|---|---|
|                          | (Marine Products Export Development Authority (MPEDA)/Central Institute of Fishing Technology (CIFT), Cochin) | <ul style="list-style-type: none"> <li>• Provide faculty members</li> <li>• Integrate the proposed trainings in its training plan</li> </ul>  |
|                          | Knowledge partner (Central Marine Research Institute, Cochin)   | <ul style="list-style-type: none"> <li>• Input for designing the curriculum</li> <li>• Guest faculty</li> </ul>   |
|                          | Agriculture Sector Skill Council  | <ul style="list-style-type: none"> <li>• Develop model training programmes for the identified Job Roles</li> <li>• Identification and certification of Trainers</li> <li>• Identification and certification of assessors</li> <li>• Assessment of trainees</li> <li>• Certification of Trainees</li> </ul>  |
| <b>Training Delivery</b> |   | <ul style="list-style-type: none"> <li>• Fisheries department to upgrade the existing fishermen training centre or set up new infrastructure to hold trainings for fishermen</li> <li>• Fisheries department to collaborate with CIFT/MPEDA in Cochin for delivery of trainings.</li> <li>• Agriculture Sector Skill Council will certify the training programmes</li> <li>• Department of Fisheries and MoS could fund the training</li> </ul> |

### Work Plan

| Fisheries  | in Months |   |   |   |   |   |
|--|-----------|---|---|---|---|---|
|  | 1         | 2 | 3 | 4 | 5 | 6 |
| Upgradation of training centre                         |           |   |   |   |   |   |
| Purchase of consumables                                |           |   |   |   |   |   |
| Collaboration with training institutes in the mainland |           |   |   |   |   |   |
| Appointment of staff members                           |           |   |   |   |   |   |
| Mobilization of prospective trainees                   |           |   |   |   |   |   |
| Enrolment of students                                  |           |   |   |   |   |   |
| Roll-out of training programme                         |           |   |   |   |   |   |

| <b>Project 4: Trainings for job roles in construction sector</b> |                              |  |   |  |                                      |
|--|------------------------------|--|---|--|--------------------------------------|
| <b>Key economic drivers</b>                                      |                              | <ul style="list-style-type: none"> <li>Emerging investments by Andaman and Lakshadweep Harbour Works (ALHW) and Public Works Department</li> <li></li> </ul>   |   |  |                                      |
| <b>Rationale</b>   |                              | <p>In the light of the proposed investments in construction works by Public Works Department as Andaman and Lakshadweep Harbour Works (ALHW) for the upcoming years-housing, anti-sea erosion works, flood control, urban development, water supply, extension of boat jetties etc. Skilled workforce will be required to meet the requirements of these emerging investments.</p> |   |  |                                      |
| <b>Trainings</b>   |                              | <b>Training courses</b>  | <b>Target Beneficiaries</b>   | <b>Type of Trainings</b>   | <b>Total Number of beneficiaries</b> |
|  |                              | Bar Benders and Steel fixers   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> <li>Migrants</li> </ul>   | Fresh Training<br>Upskilling   | 100-200 in next 2 years              |
|  |                              | Piling Workers   | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> <li>Migrants</li> </ul>   | Fresh Training<br>Fresh Training   | 100-200 in next 2 years              |
| <b>Availability of curriculum</b>                                | <b>Job Roles</b>             | <b>Target groups</b>   | <b>Available QP/NOS</b>   | <b>MES</b>   | <b>CTS</b>                           |
|  | Bar-Benders and Steel Fixers | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> <li>Migrants</li> </ul>  | <ul style="list-style-type: none"> <li>QP available for Bar Bender and Steel Fixer</li> <li></li> </ul> | <ul style="list-style-type: none"> <li>Course available for Bar Bender and Steel Fixer</li> </ul>  | No course available                  |
|  | Piling Workers               | <ul style="list-style-type: none"> <li>Unemployed youth from the islands</li> <li>Migrants</li> </ul>  | <ul style="list-style-type: none"> <li>QPs do not exist for Piling Workers</li> </ul>                   | No course available  | No course available                  |
| <b>Investment (INR In lakhs)</b>                                 |                              | Bar-Benders and Steel Fixers   |   |  |                                      |
|  |                              | Operational Expenditure  |   | 38.57  |                                      |
|  |                              | <b>Piling Workers</b>  |   |  |                                      |
|  |                              | Operational Expenditure  |   | 45.68  |                                      |
|  |                              | <b>Total Operational Expenditure</b>   |   | <b>84.26</b>   |                                      |
| <b>Potential Partners</b>  |                              | <b>Partner</b>   |   | <b>Areas of Support</b>  |                                      |
|  |                              | Training Partner (Government ITI)  |   | <ul style="list-style-type: none"> <li>Provide infrastructure for training</li> <li>Training delivery</li> </ul>   |                                      |
|  |                              | Knowledge Partners (ALHW/PWD)  |   | <ul style="list-style-type: none"> <li>Provide inputs in developing industry relevant training material</li> <li>Facilitate industry experience</li> <li>Provide on-the-job training</li> <li>Provide guest faculty/trainers</li> </ul>  |                                      |
|  |                              | Construction Skill Development Council of India  |   | <ul style="list-style-type: none"> <li>Develop model training programmes for the identified job roles</li> <li>Identification and certification of Trainers</li> <li>Identification and certification of assessors</li> <li>Assessment of trainees</li> <li>Certification of trainees</li> </ul> |                                      |
| <b>Training Delivery</b>   |                              | Training delivery to be channeled through Government ITI   |   |  |                                      |



**Work Plan**

| <b>Construction</b>                     | <b>in Months</b> |          |          |          |          |          |
|---|------------------|----------|----------|----------|----------|----------|
|   | <b>1</b>         | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| Upgradation of training centre          |                  |          |          |          |          |          |
| Purchase of consumables                 |                  |          |          |          |          |          |
| Appointment of additional staff members |                  |          |          |          |          |          |
| Mobilization of prospective trainees    |                  |          |          |          |          |          |
| Roll-out of training programme          |                  |          |          |          |          |          |