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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

Andaman and Nicobar Islands  
South Andaman

Final Report



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# 1. District Profile

## South Andaman

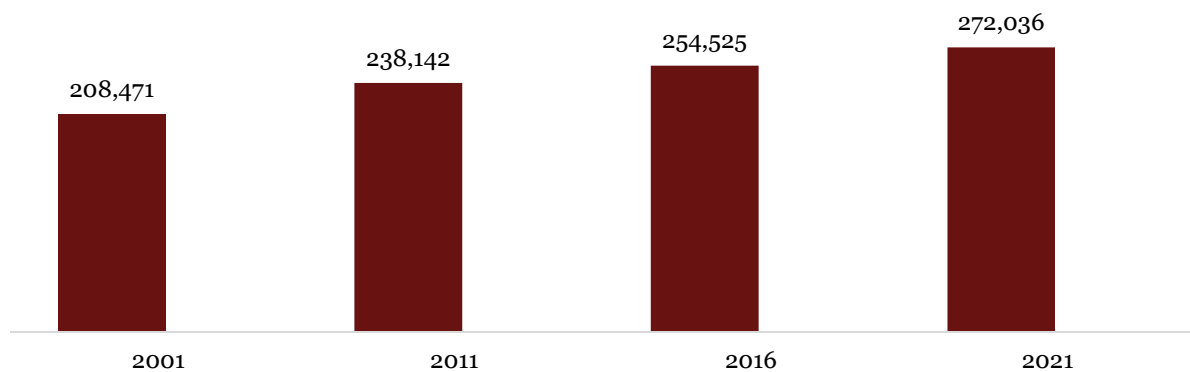
One of the three districts of the Union Territory of Andaman and Nicobar Islands, the district was bifurcated from the erstwhile unified Andaman District. Home to historical locations including the Cellular Jail and Chatham, the district is home to more than 60% of the population<sup>1</sup> of the union territory (97% of the urban population) and 80% of the industrial base<sup>2</sup>. The islands of Havelock and Neil Island are popular tourist destinations. The Sentinelese people who have had no contacts with the outside world for millennia also form a part of the district in North Sentinel Island.

### 1.1. Demographic Profile<sup>3</sup>

Indicator	Value
Total population	2,38,142
Decadal rate of growth of population (2001-11)	14.23 %
Rural population	40.9%
Female	47%
SC population	-
ST population	1.72%
Workforce participation (As % of total population)	40.66%
Main Workers (As % of total population)	35.79%
Marginal (As % of total population)	4.88%
Non-workers (As % of total population)	59.34%
Number of people with vocational training in the age group of 15+ <sup>4</sup>	172 per 1,000

### Population trends<sup>5</sup>

Figure 1: Population Trends in South Andaman 2001-2021



The demographic dividend bulge in South Andaman is nearing its end. However, the nature of the union territory is to also attract a considerable amount of people in the working age population, who migrate back to the mainland upon retirement. Estimating the population for the period 2011-21 (10 years), the population is

<sup>1</sup> District Census Handbook, Census 2011

<sup>2</sup> Dept. of Industries, Govt. of Andaman & Nicobar

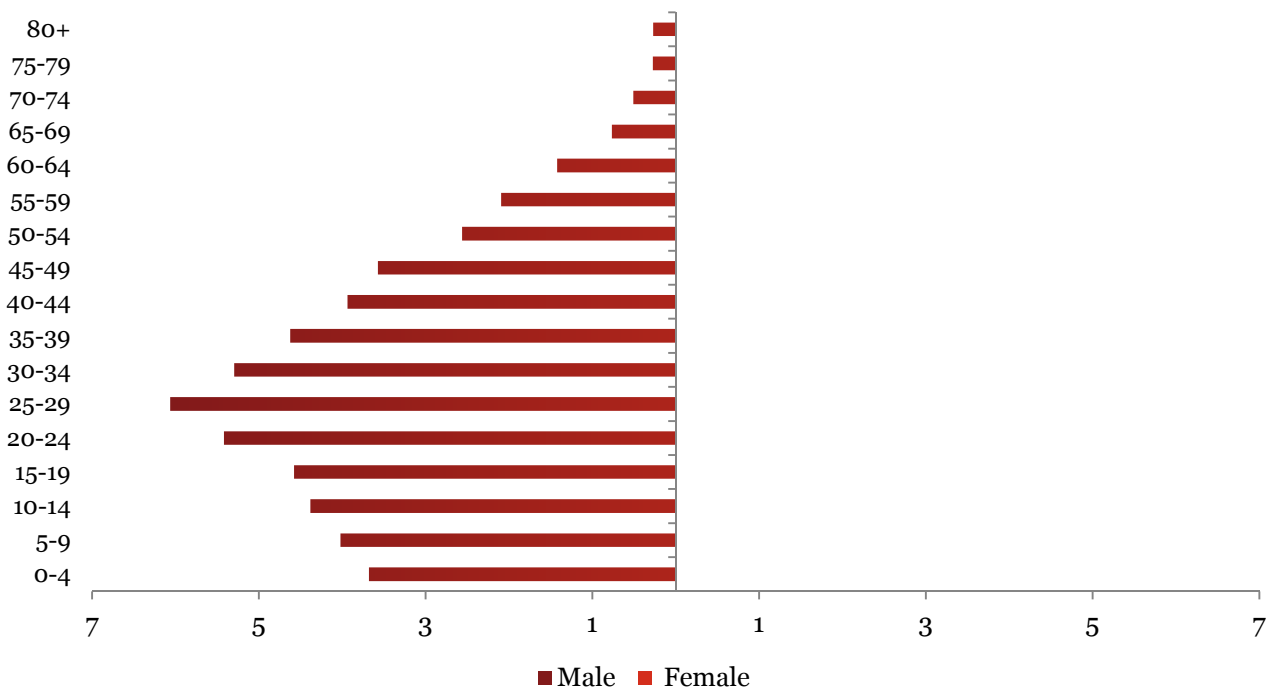
<sup>3</sup> Census 2011

<sup>4</sup> Employment and Unemployment Survey, Vol III, Labour Bureau 2015-16,

<sup>5</sup> Based on Census 2001 and 2011

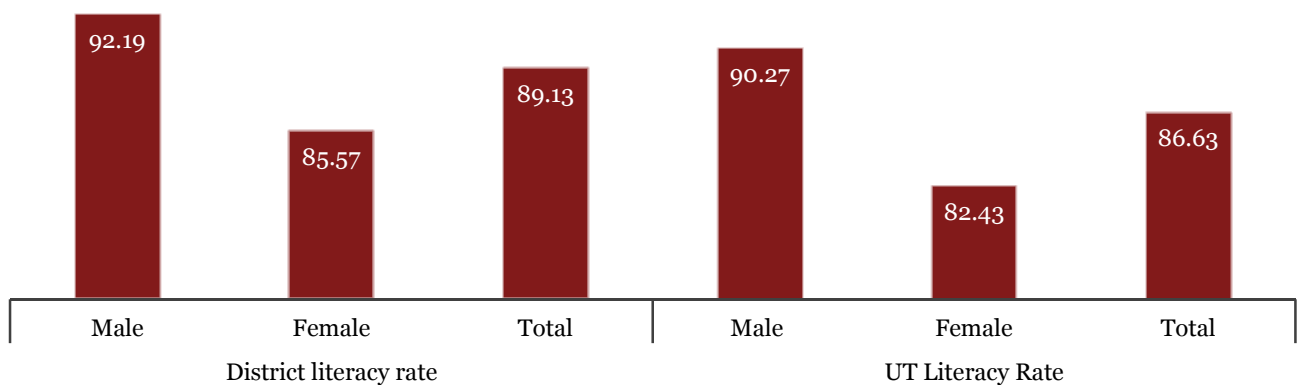
estimated to be 2,54,600 and 2,72,196 in 2016 and 2021 respectively. The projected absolute growth in the population from 2016 to 2021 is 14.3%.

**Figure 2: Population Pyramid South Andaman 2011**



### Literacy rates<sup>6</sup>

**Figure 3: South Andaman District vs Andaman UT literacy rates (2011)**



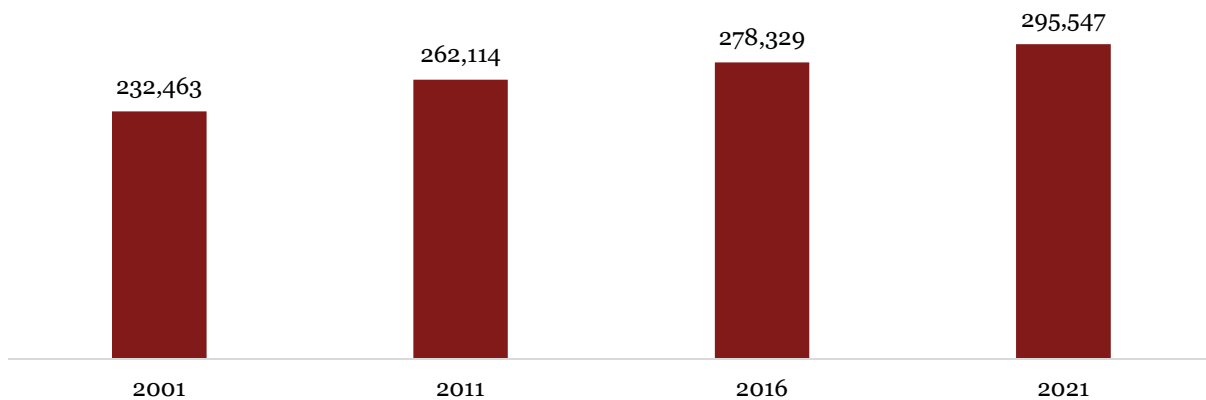
Total literacy rate of South Andaman, as per the Census 2011, is around 89.93%, which is higher than the UT's literacy rate of around 86.63%. The female literacy rate of South Andaman is 85.57% which is lower than the male literacy rate of 92.19% but better than the UT level literacy amongst women.

<sup>6</sup> Census 2011

## Age specific population trends and education levels for 2011<sup>7</sup>

Projecting from the Census 2011, the population in the age-group of 15 to 24 years was 45,064 (18.9% of the overall population). Projecting the population for Andaman and Nicobar Islands in the age group of 15-59 years, it is estimated to be about 278,329 and 295,547 in 2016 and 2021 respectively. The projected absolute growth in the population from 2016 to 2021 is 12.6%.

**Figure 4: Growth trend of population in the age group 15-59 years in Andaman & Nicobar Islands (2001-2021)<sup>8</sup>**



**Figure 5: Age Specific Population (15-24 years) Figure 6: Age Specific Population (15-59 years)**

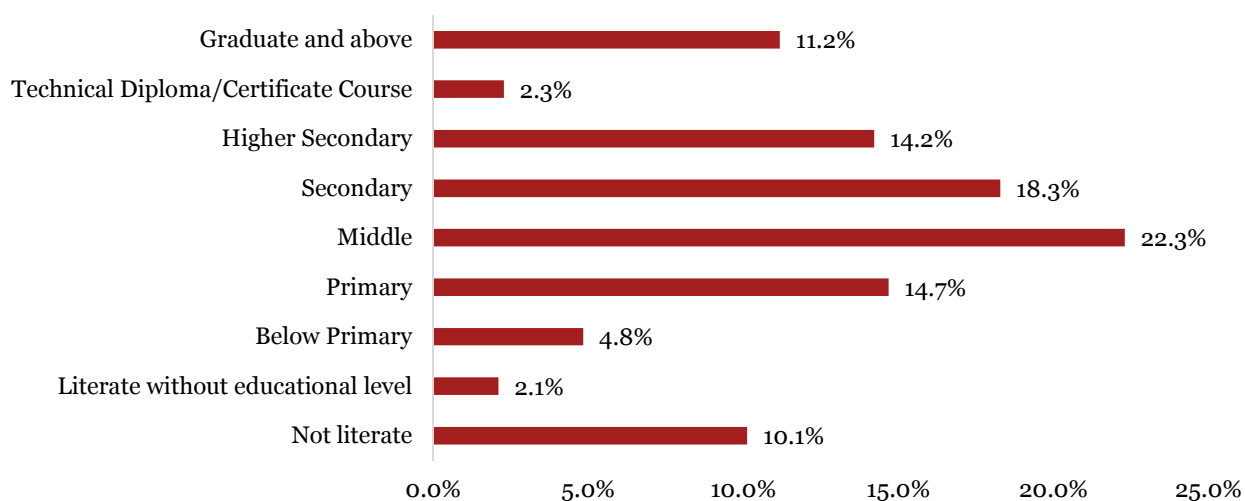


The share of population of females in total population in working age of South Andaman is around 45.6 %. The share of female in the 15-24 age category is marginally higher at 47.25%. This could indicate an increasing sex ratio.

<sup>7</sup> Census 2011

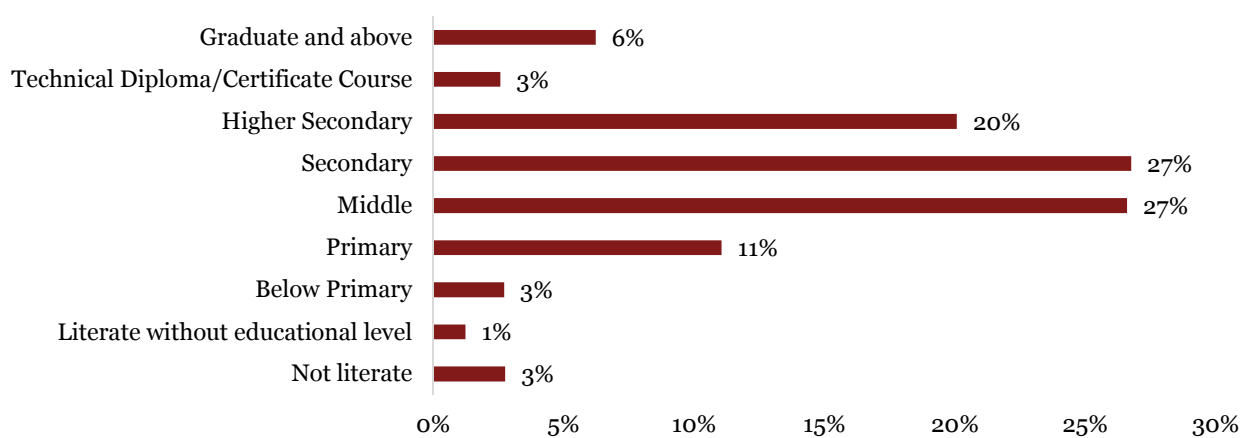
<sup>8</sup> Calculated for All Andaman and Nicobar due to lack of sufficient data for 2001 Census.

**Figure 7: Age specific education level in South Andaman (15-59 yrs.)**



From the Census 2011, we understand that for the age category of 15-59 years, literacy in the working age group is 89.9%. Graduates and Technical Diploma holders make about 13% of the population. Taken together with Secondary (18.3%) and Higher Secondary (14.2%) education, more than 40% of the population is educated with secondary or higher education. In addition, there is only 17% of the population with education levels below primary.

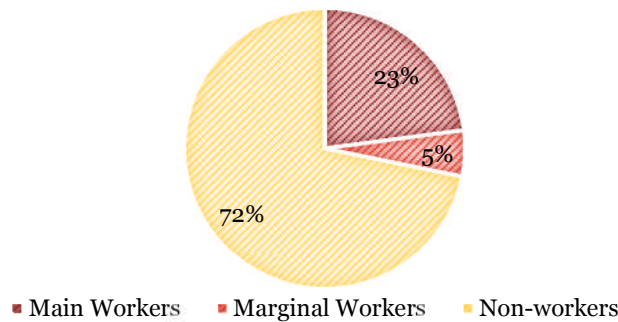
**Figure 8: Age specific education level in South Andaman (15-24 yrs.)**



For the age category of 15-24 years, 2.4% of the population of South Andaman is not literate, 1% are literate without any educational qualification, 3% have attended school till below primary level and 11% have completed schooling only up to primary level. Roughly 26% of the population in 15-24 years category has done schooling up to the middle level, whereas, around 27% of the population in 15-24 years category have been educated till secondary. Only 3% of the population of this District in this age category has done a certificate/diploma course and 6% have at least completed graduation.

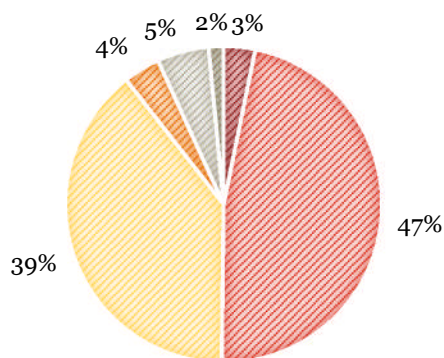
## Age specific distribution of workers and educational level<sup>9</sup>

**Figure 9: Age specific distribution of workers in South Andaman (15-24 yrs.)**



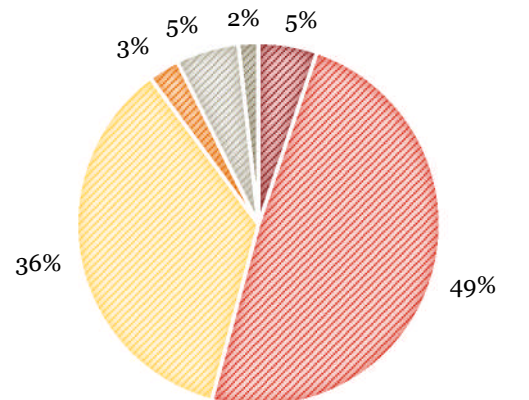
The total workforce participation rate for the district, according to census 2011, is 28.74% and 72% of the population in the age group of 15-24 years is reported as non-workers. 23% of the population is main-worker, whereas 5% is engaged in marginal work i.e. working for 3-6 months during the year.

**Figure 11: Educational level for marginal workers in South Andaman (15-24 yrs.)**



- Illiterate
- Literate but below matric/secondary
- Matric/secondary but below graduate
- Technical diploma or certificate not equal to degree
- Graduate and above other than technical degree
- Technical degree or diploma equal to degree or post-graduate degree

**Figure 10: Educational level for main workers in South Andaman (15-24 yrs.)**



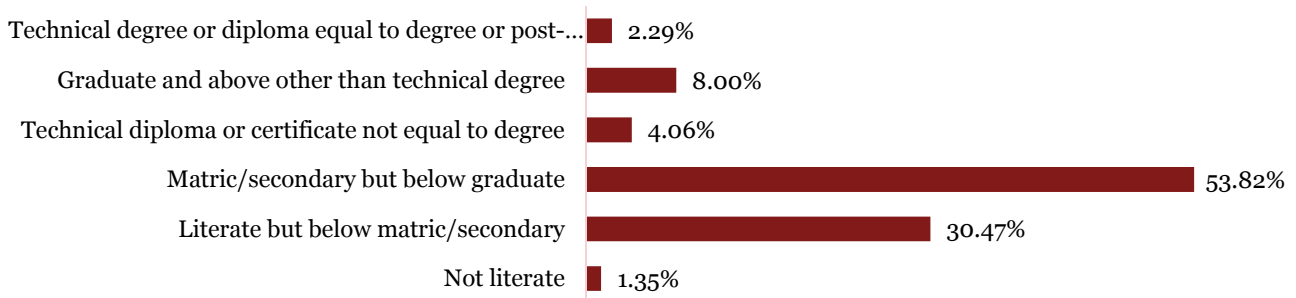
- Illiterate
- Literate but below matric/secondary
- Matric/secondary but below graduate
- Technical diploma or certificate not equal to degree
- Graduate and above other than technical degree
- Technical degree or diploma equal to degree or post-graduate degree

The proportion across the education levels across the main and marginal workers in the relevant age group are similar and lie within a margin of 1-3 %.

<sup>9</sup> Census 2011



**Figure 12: Education level of non-workers available for work in South Andaman (15-24 yrs.)**

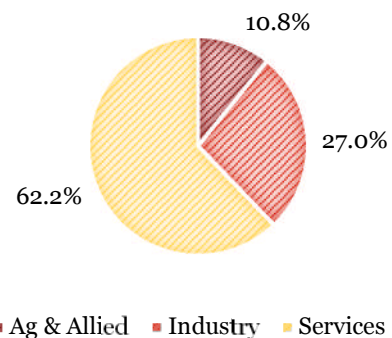


Amongst the 12,476 non-workers available for work in the age group of 15-24 years, 2.29% hold a technical degree or a diploma equal to degree or post graduate degree and 8% have a graduate and above other than a technical degree. 5668 (47.52%) are educated up to the matric/secondary level but below graduate and 30.47% are literate but below matric/secondary level. 1.35% marginal workers who are available for work in this age group are not literate.

## 1.2. Key Economic Drivers

According to Directorate of Economics and Statistics data, the Gross Domestic Product of the UT (at constant prices- 2004-05) was INR 525,329 lakh in 2015-16 and grown at 6.8% over the period 2011-12 to 2015-16. The sectoral break up suggests that services sector contribution to GSDP is more than half (62%) followed by industries sector (27%). Further disaggregation suggests that public administration has a share of 17% and construction has a share of 13% in the District GDP. Other sectors driving the District economy are agriculture (10-14%) and tourism and trade (10%). Construction (experiencing a boost after the 2004 Tsunami) and manufacturing have experienced severe slowdown in recent years.

**Figure 13: Sectoral breakup of South Andaman GDP at constant prices (2004-05)**



The key economic drivers of the District are illustrated below:

<b>Tourism</b>	<ul style="list-style-type: none"> <li>• Swadeshi Darshan Program</li> <li>• Development of Floating Jetties. Water Sports Activities</li> </ul>
<b>Ports &amp; Infrastructure</b>	<ul style="list-style-type: none"> <li>• Development of Cruise Terminals under Sagarmala</li> <li>• Connecting of South Andaman and Middle Andaman</li> </ul>
<b>Urbanization</b>	<ul style="list-style-type: none"> <li>• Smart City Program</li> <li>• Connectivity to High Speed Internet with undersea cable</li> </ul>

### 1.3. Priority Sectors

In South Andaman, the priority sectors that have been identified are **Port and Maritime sector** and allied sectors: **logistics, fisheries, tourism and construction.**

### 1.4. About Port

Ports & Maritime			
Major Ports: 0		Minor Ports: 3	
		Shipyards: 1	
Details			
Port Blair Port			
Operations:	Port Management Board	Capacity	17 Mn Tonnes P.A
Key Cargo	Containers, Bulk, Ferry Movement	No of berths:	7
		Draft	11 m
Description and key Trend	A system of jetties across the Port Blair bay at Chatham, Haddo, Phoenix Bay, harbour make up the Port. In addition jetties in Bamboo Flat, Havelock, Neil Island etc. allow inter island transportation through ferry services		

### 1.5. Investments

The table below summarizes the investments that are in pipeline in next few years:

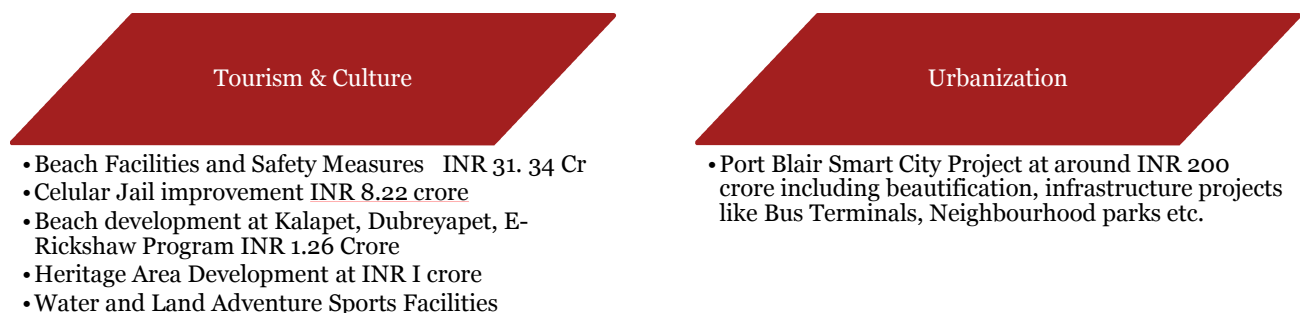
**Table 1: Proposed Key Investments for the year 2016-22 in South Andaman**

Sector	Proposed Investment (INR cr)	Number of Projects	Expected Employment	Key Players
Port & Maritime	-	3	-	Port Management Board, Directorate of Shipping Services, Sagarmala Cell
Tourism	592.15	>10	--	Town and Country Planning Department, Smart Cities Mission, NHAI

Under the Smart Cities program, several Projects are to be executed in the district in Urban Planning, Retro-fitting, Sanitation, Transport, etc.

Tourism & Trade is one of the major drivers of the South Andaman economy as South Andaman is the gateway to the Islands. There are promotions planned in Havelock, Neil islands to develop resorts of the highest standards. Considerable attention is being paid to adventure sports and safety. The Govt. of Andaman is also planning to tap the heritage aspect of tourism to boost production of Handicrafts through an Artist’s villages.

**Figure 14: Details of proposed investments across different sectors**



## 1.6. Youth Aspiration<sup>10</sup>

The key findings of the youth aspirations include youths' exposure to vocational training and educational aspiration, job aspirations, training aspirations and self-employment.

### Respondent Profile

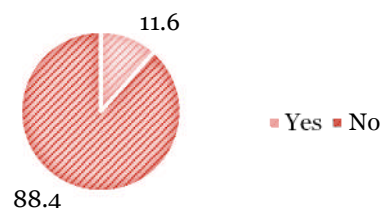
The table below provides an overview of the respondent profile:

Profile	Details
<b>Total Sample Size</b>	397
<b>Gender Profile</b>	Male – 57.4% Female -42.6%
<b>Age Group</b>	15-24 years
<b>Education Level (top 3)</b>	Senior Secondary Schooling (Class 9 to 10)- 25.6% Higher secondary schooling with commerce (Class 11 to 12)- 16.4% Secondary schooling(Class 9 to 10)- 11.6%
<b>APL/BPL/AAY/Don't know</b>	APL -63.7 % BPL – 31.4 % Don't know/Can't Say – 4.9 %
<b>Occupational Profile (top 3)</b>	Student (26.4%), Salaried (22.7%), Unemployed (22.2%)

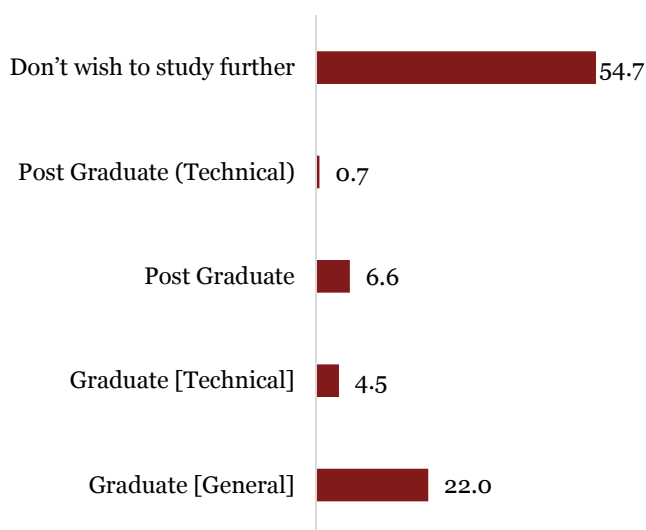
### Exposure to Vocational Training and Educational Aspiration

Regarding the exposure to the vocational training, most students reported that they had not completed any vocational training course. Overall, ~88% of the respondents had not enrolled in vocational training course. The 11.6% registered in vocational courses is one of the highest in the districts covered. (Figure 16).

**Figure 16: Percentage of respondents who completed vocational training course - South Andaman**



**Figure 15: Desired level of education - South Andaman**

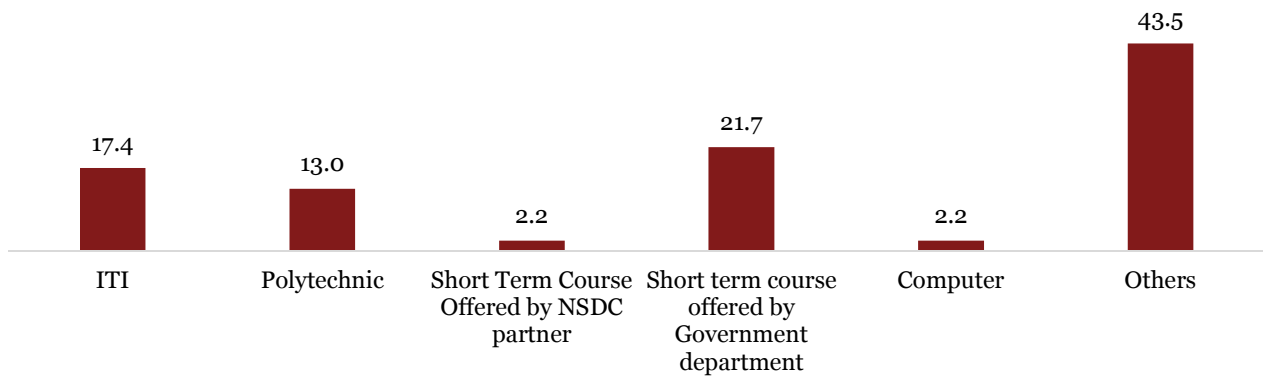


The respondents were asked about the level of education they wished to attain. More than half of the respondents (55%) didn't aspire for further education. The desire to attain technical education is relatively low with only 5.4% aspiring for graduation or post-graduation in technical fields with general degrees preferred (22%) (Figure 15: Desired level of education - South Andaman). Of the total respondents who underwent vocational training (which is 11%), most were from other informal institutions (43.5%) and other Govt. run short term courses (21%). The low numbers through ITIs, Polytechnics also points out to the low capacity in the districts. Figure 17: Percentage of respondents completed courses in vocational training - South Andaman exhibits the percentage of

<sup>10</sup> PwC Analysis based on aspiration survey

respondents who completed different types of courses as part of their vocational training.

**Figure 17: Percentage of respondents completed courses in vocational training - South**

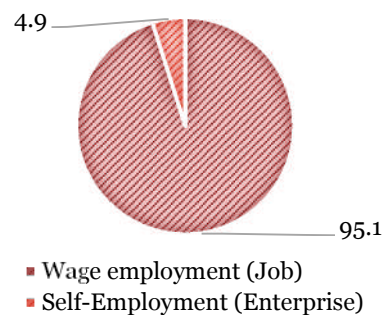


### *Job Aspiration*

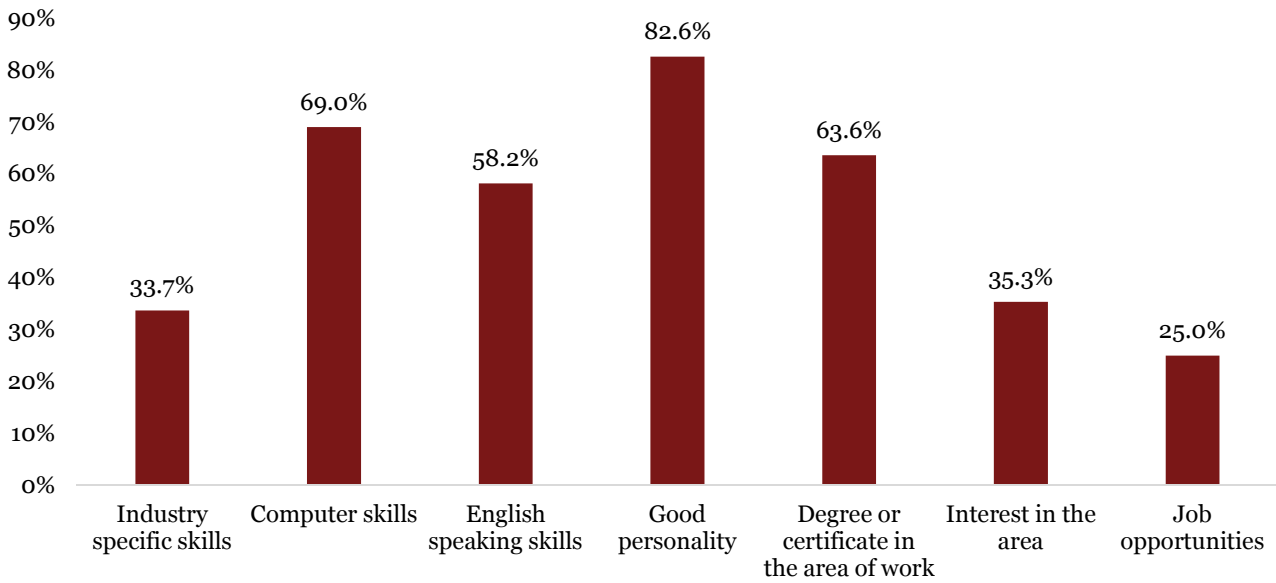
One of the important findings of the survey has been the high preference for wage employment over self-employment among the youth of the District. Over 95% of the respondents reported their preference for wage employment over self-employment (Figure 18: Percentage of respondents aspiring for wage and self-employment).

The respondents were further asked to identify the factors important for securing employment in the area of interest. 82.6% of the respondents identified good personality skills as the most important factor for securing employment followed by computer skills and (69%) and degree (63.6%) (Figure 19).

**Figure 18: Percentage of respondents aspiring for wage and self-employment - South Andaman**

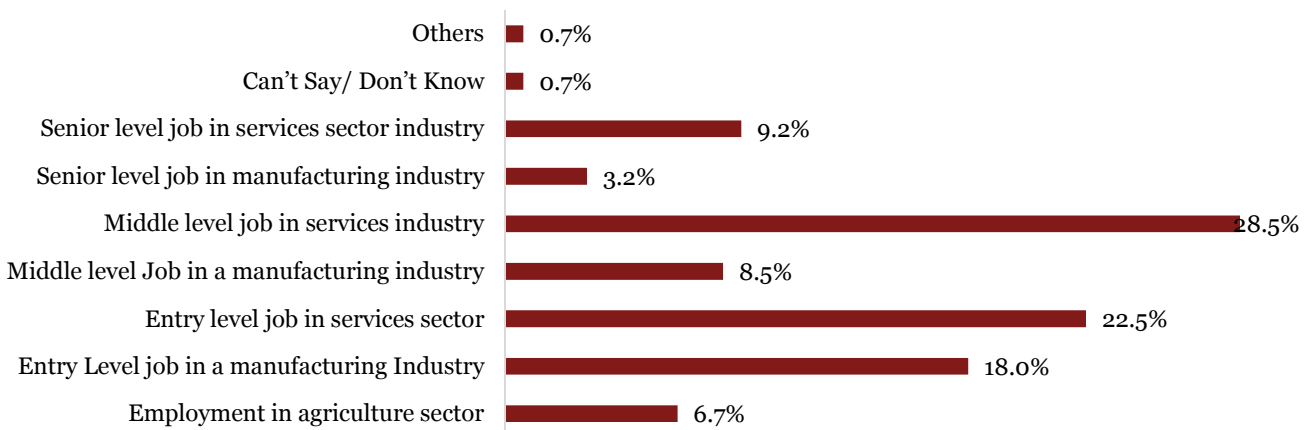


**Figure 19: Factors important for securing employment in area of interest (%) - South Andaman**



Regarding job aspiration of the respondents after completion of education or training, it can be observed that there is a demand for services sector with 28.5% aspiring for middle level jobs and 22.5% aspiring for entry level jobs. This is followed by manufacturing sector entry level jobs (18%) (Figure 20: Desired job profile after completion of education/training - South Andaman).

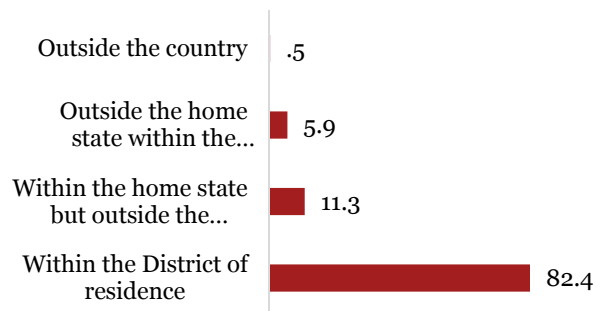
**Figure 20: Desired job profile after completion of education/training - South Andaman**



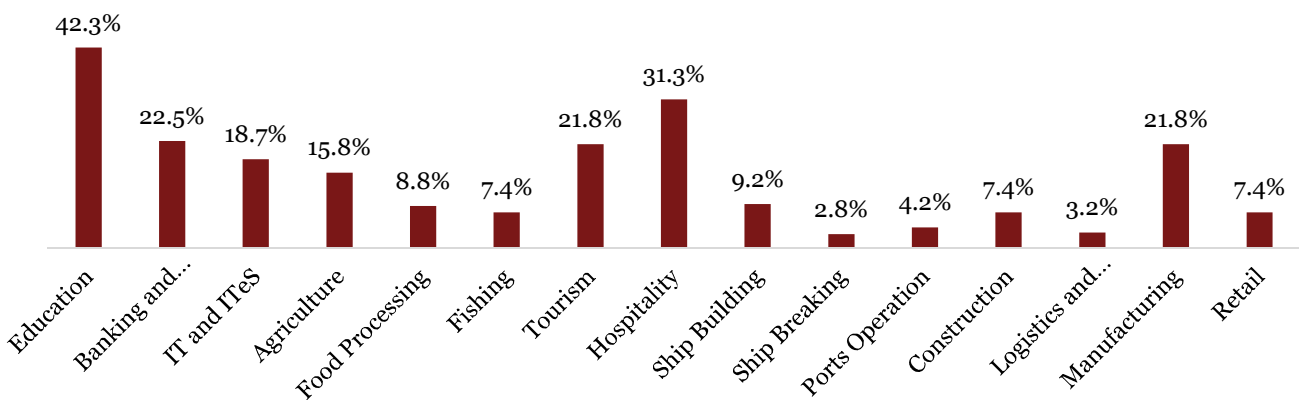
Further, Education (42.3%), Hospitality (31.3%), BFSI (22.5%), Tourism (21.8%) and Manufacturing (21.8%) have been identified as sectors in which the respondents feel that they are mostly likely to get a job which is in alignment with their considerable interest for a job in all three sectors. The details of other sectors are mentioned in (Figure 21: Sectors in which respondents' foresee getting a desired job (%) - South Andaman).

Out of the total respondents, 82% preferred to work in the same district. 11.3% expressed willingness to migrate to other Districts in the same state suggesting low

**Figure 22: Preferred work location of candidates - South Andaman**



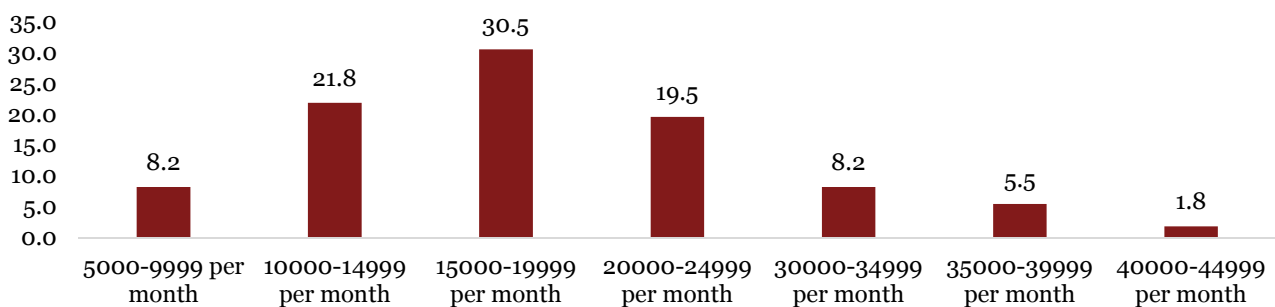
**Figure 21: Sectors in which respondents' foresee getting a desired job (%) - South Andaman**



flexibility among the youth of the District (Figure 22: Preferred work location of candidates - South Andaman)

A high proportion of the respondents' (30.5%) reported that their monthly salary expectation was in the range of INR 15000-19999. For 21.8% of respondents the expected salary is reported to be range in 10000-14999 per month. For 19.5% the salary expectation was around 20000-24999 per month. The mean salary expectation is thus around the 15000-1999 category which is higher than other districts. (Figure 23: Monthly salary expectation of respondents - South Andaman).

**Figure 23: Monthly salary expectation of respondents - South Andaman**

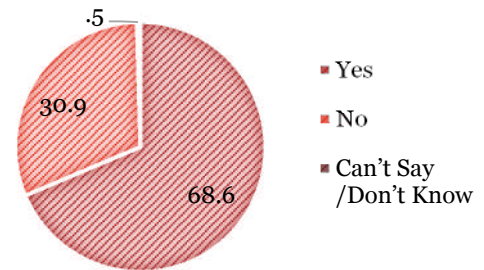


## Training Aspiration

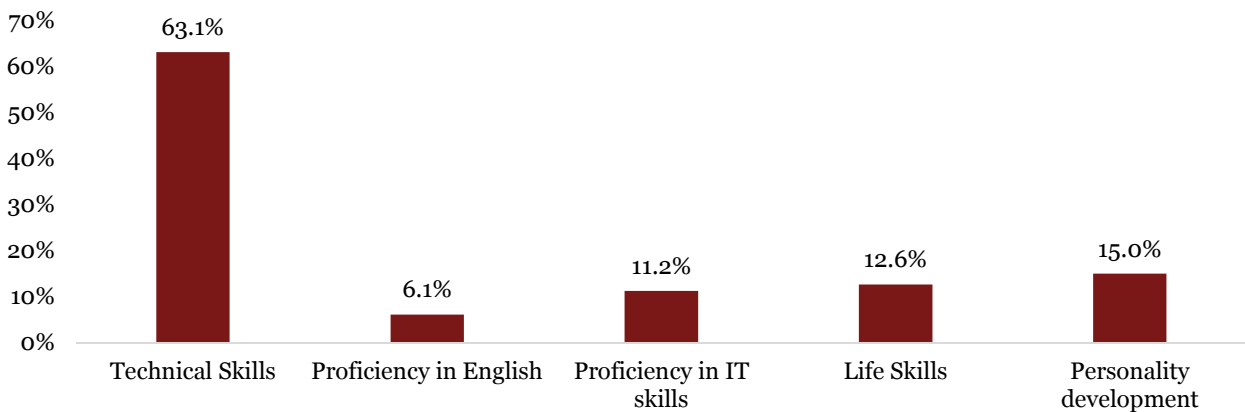
Regarding willingness of the respondents to participate in the training programme in next one year, more than two thirds expressed interest. (Figure 24: Willingness to participate in trainings (%) - South Andaman)

Further, when enquired about the key focus areas of skill training, 63.1% of respondents reported that emphasis must be laid on technical skills followed by personality development (15%) and life skills (12.6%) (Figure 25).

**Figure 24: Willingness to participate in trainings (%) - South Andaman**

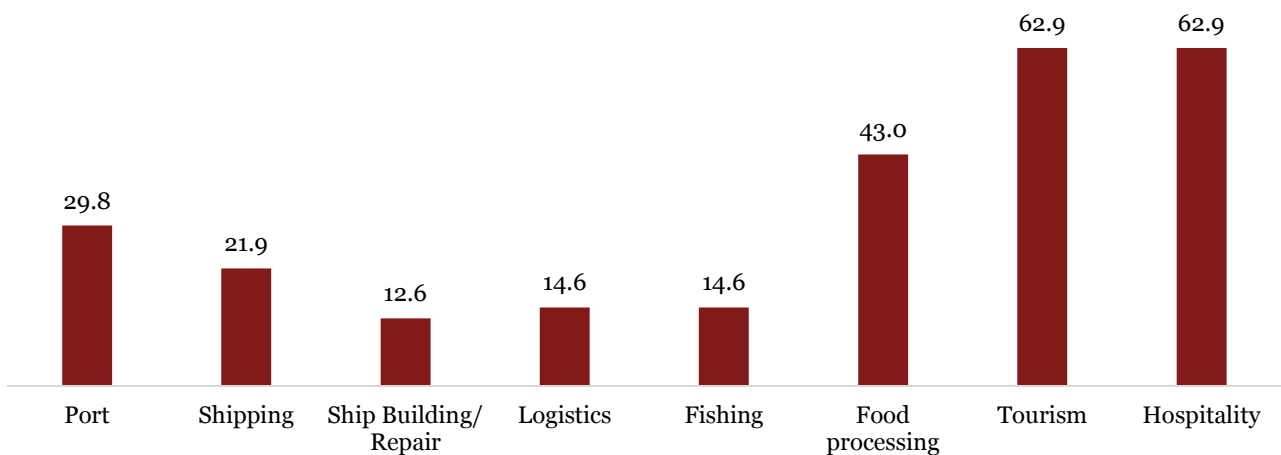


**Figure 25: Focus area on skills training - South Andaman**



Overall there is low acceptability for training in port (29.8%), shipping (21.9%), logistics and fishing (14.6%) and ship building (12.6%) show demand for the core sectors of this study. Hospitality, Tourism and Food Processing have been identified as more preferred sectors) (Figure 26).

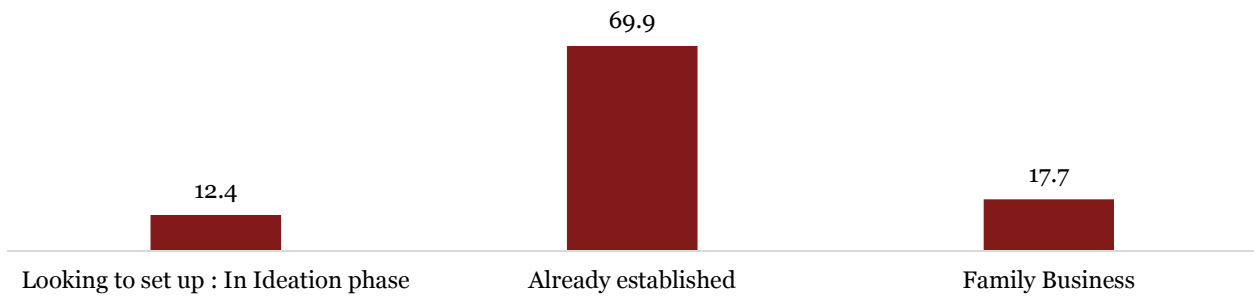
**Figure 26: Willingness of respondents to participate in trainings of different sectors -**



## Self-Employment

Regarding current status of the Entrepreneurial Venture of the respondents who are in self-employment, 12.4% were looking to set up a venture, 69.9% had already established businesses and only about 17.7% were in family business (Figure 27).

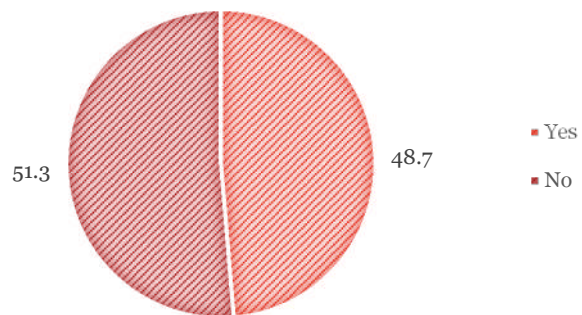
**Figure 27: Current Status of Entrepreneurial Venture (%) - South Andaman**



Further, 51.3% of the respondents expressed a desire to undergo a training programme for enhancing their entrepreneurial skills (Figure 28).

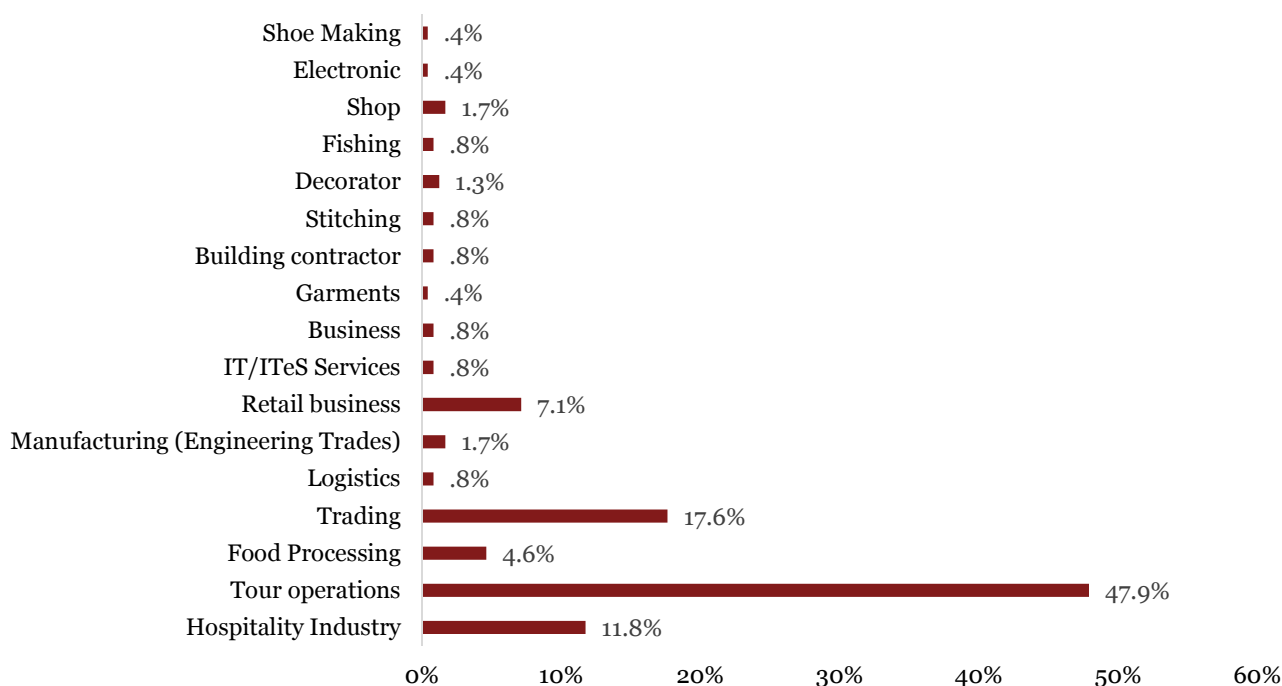
Tour Operations (47.9%), Trading (17.6%), retail (12%) and Hospital Industry (11.8%) emerge as the key sectors which the respondents want to set up ventures in. (Figure 29).

**Figure 28: Interested in skill development for enhancing entrepreneurial skills (%) - South Andaman**





**Figure 29: Sectors for establishing enterprise (%) - South Andaman**



## 1.7. Training Infrastructure

Type of training infrastructure	Total number of institutions	No of trades	Top 5 trades based on enrolment and seat capacity
ITI	1	11	Surveyor, Fitter, Draughtsman, Motor Mechanic, Construction and Woodwork
Polytechnic	1	11	Engineering: Electrical, Electronics & Communication, Civil, Information Technology Computer, Others: Food Production, Front Office Operation, Nautical Science, GP Rating
Training centers under PMKVY <sup>11</sup>	Not Allotted	Not Allotted	Not Allotted
PMKK	Not Allotted	Not Allotted	Not Allotted
DDU GKY	Not Allotted	Not Allotted	Not Allotted

The Training infrastructure in the District is dominated by the ITI and Polytechnic.

- **ITIs:** There is one ITI providing training in 15 different trades. However according to the Dept. of Training & Employment information of the sanctioned seats, there is an average of 65% placements across all trades.
- **Polytechnics:** Core engineering sectors like Civil, Electrical & Electronics, Electronics & Communication and Mechanical remain the most dominant trades. Though there exists infrastructure for port and maritime courses, the lack of due recognition from Directorate General of Shipping is preventing further increased demand. Currently these courses are taken from mainland.
- **PMKVY & PMKK, DDU-GKY:** There has been no allotment.

## 2. Skill Gap Assessment, Job Roles and Emerging Job Roles

### 2.1. Incremental Demand<sup>12</sup> for Skilled & Semi Skilled Manpower

The Andaman is experiencing a slump in industrial sectors like Manufacturing, Construction, etc. Most of the scope lies in the improved logistics and communication sectors which are set to receive a boost through the undersea optical fiber cable which will provide high speed internet, sea bridges connecting the North, Middle and South Andaman and the Sagarmala Initiatives opening up more Islands for tourism. Considering the unique nature of the Islands and their economy, the sectors have been clubbed together for estimation purposes.

**Table 2: Incremental Demand for Skilled & Semi Skilled Workers in South Andaman**

Sector	2017	2018	2019	2020	2021	2022	Total
<b>Core Sectors</b>							
Ports & Allied	35	37	40	43	47	50	252
Logistics & Communication	597	624	653	680	712	743	4,009
Tourism & Trade	226	233	241	248	256	264	1468
Construction	-98	-96	-96	-95	-95	-93	-573
<b>Other Dominant Sectors in the District</b>							
Public Administration and Other Services	626	639	653	666	680	695	3,959
Agriculture	-840	-613	-446	-323	-236	-173	-2,631
<b>TOTAL</b>							<b>6,484</b>

#### Key trends in Core Sectors

- **Ports and Allied Sectors:** The ports in the district are primarily used for inter-island travel and import of material from the Mainland. However plans are on the anvil to attract more cruise shipping activities in the port.
- **Logistics:** The undersea optical fiber cable which will provide high speed internet, sea bridges connecting the North, Middle and South Andaman will open up avenues for Telecommunication and Logistic Jobs.
- **Tourism & Trade:** A major tourist attraction, Andaman & Nicobar attracted more than 4 lakh tourists in FY2015-16, greater than its resident population of 3.8 Lakhs<sup>13</sup>. With increasing possibility of formalization, opening up of more islands for tourism, there can be an expected increase in the jobs in these sectors.
- **Construction:** Though infrastructure projects are in the anvil, there is a considerable downturn. Feedback from consultations attributed this to the slowdown of the frenetic activity in construction post Tsunami in 2004, which has now returned to normal levels.

<sup>12</sup> Incremental Demand Estimates the additional stock of workforce that are to be created given the expected Economic Conditions in the period of study. This may help in estimating requirement for fresh trainings.

<sup>13</sup> Dept. of Tourism

- **Fisheries:** The promotion of sustainable fishing and deep sea fishing has considerable scope in the islands. However, the lack of incentives for mainland agencies to invest in fishing is holding the sector back.

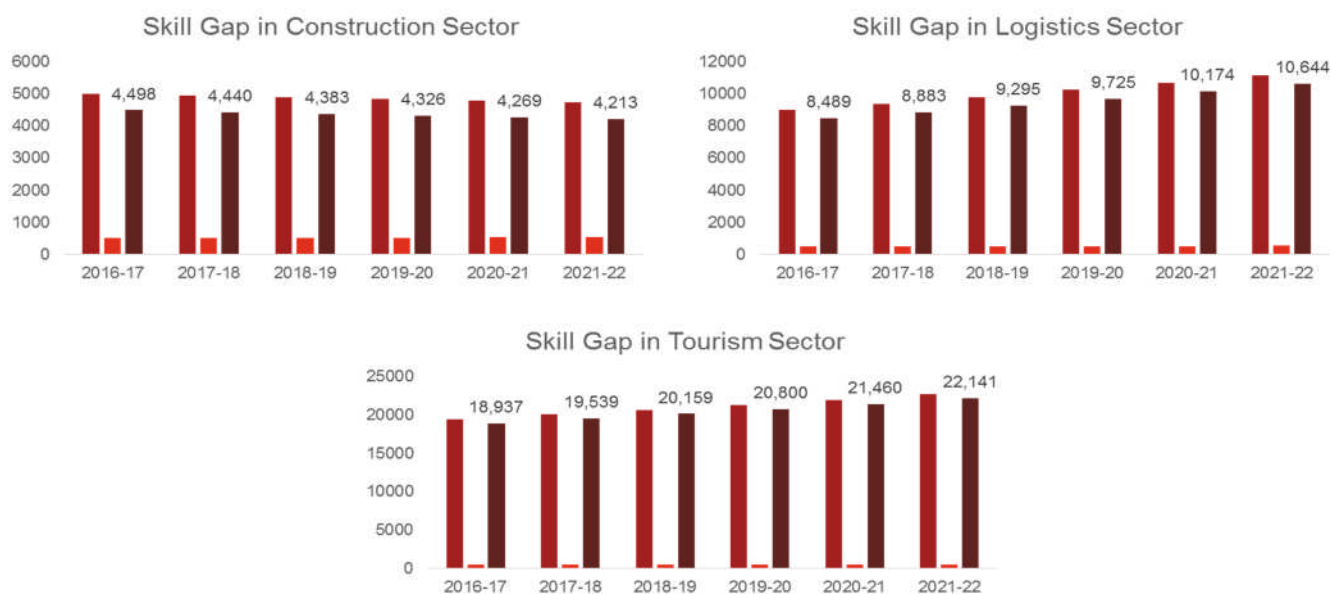
### Key trends in other Dominant Sectors in the District

- **Manufacturing & Industry:** South Andaman<sup>14</sup> is home to more than 80% of all industries in the islands. The industry is dominated by small scale establishments in carpentry, wood processing, engineering, etc. However restrictions on timber cutting and environmental issues have slowed down the industry.
- **Agriculture:** There is considerable stagnation in the sector and improving productivity and automation is resulting in job losses in the sector.
- **Public Administration and Other Services:** The Public Services is the largest sector in the GDP along with the Other Services category. The requirement for new services are likely to emerge with new age technology enabled through the undersea high speed optic fiber cable.

## 2.2. Gap between Total Demand<sup>15</sup> and Supply for Skilled workforce in Select Sectors

The gap in the existing total skilled workforce connotes the gap between the total requirement of skilled manpower and workforce in the District with recognized trainings in the said sectors

**Figure 30: Gap between Skilled Manpower Requirement and Workforce in District with Trainings in Select Sectors in South Andaman**



- **Construction Sector:** Though the sector is experiencing a slowdown, there is a shortage of skilled workforce.

<sup>14</sup> Directorate of Industries Data

<sup>15</sup> Total Demand refers to the total stock of workforce including the existing workforce in a sector in a district given the expected Economic Conditions in the period of study. This may help in identifying Scope for RPL and Upskilling

- **Logistics Sector:** Less than 1000 skilled workers are available to meet the **total requirement of skilled manpower** of 8000-10000 people. These are exacerbated by the limited options available for recognized trainings and certificates in the sector. In addition, the incremental requirement for workforce in the district is expected to increase the gap further by nearly a quarter.
- **Tourism and Hospitality:** Given the present trends of increased formalization and requirement of skilled workers in the sector, the gap between the **total requirement of skilled manpower** and **availability of workforce with recognized trainings** is set to increase by more than 3000 by 2022. The requirement for initiating new trainings and recognizing prior learning in the sector is thus a priority.

## 2.3. Job Roles High in Demand

This section captures the jobs that have been reported to be high in demand in South Andaman. The job roles that are listed below have been identified by the stakeholders. Across the sectors few job roles are susceptible to be impacted by technological disruptions and automation. The sub-sections below describe the job roles that are high in demand across the sectors.

### Ports and Maritime Sector

The sector has been seeing little activity because of the reason that the economy of Andaman is import oriented. All the food items and other items of daily use are imported but nothing is exported out of the island district. This makes shipping a costly affair for the operators since it increases the operational expense and makes cargo shipping unviable. Cargo ships operate only to meet the requirements of the local population. The main traffic at the ports are the jetties and inter island ships used to carry passenger traffic. Passenger ships operate intra-island and inter island. 79 vessels are being operated by DSS and 5 vessels are operated by private players. The port handled 17.57 lakh ton of cargo in 2016. 9760 vessels, 18.92 lakh passengers, 10 cruise and 45 yachts were handled by the port in 2016.

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

Job Roles: Port & Terminal operations	Findings
<ul style="list-style-type: none"> <li>• <b>Jetty in charge</b></li> <li>• <b>Surveyor</b></li> <li>• <b>Welder</b></li> <li>• <b>Mechanic</b></li> <li>• <b>Painter</b></li> <li>• <b>Electrician</b></li> <li>• <b>Gang man</b></li> </ul>	<ul style="list-style-type: none"> <li>• There is a requirement of jetty operators for operating the intra-island and inter-island jetties.</li> <li>• There is also requirement of ship building and ship repair activities. Currently, the ships are sent to Chennai or Cochin for repair activities.</li> <li>• In the ship repair activities, there is a requirement of job roles such as welder, electrician, painter, etc. Currently the quality of students coming out of ITI is not up to the mark.</li> </ul>

### Other Priority Sectors

The job roles that are high in demand in the sectors and have been identified within the priority sectors are listed in this sub-section. Like port and maritime sector, sectors such as logistics, construction, tourism & hospitality and fisheries have been identified as priority sectors for South Andaman district.

### Logistics

Within the logistics sector, the main demand is for truckers and lorry operators. Once the cargo arrives at the port, distribution of the material to wholesalers and retailers is done.

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

<b>Job Roles: Logistics</b>	<b>Findings</b>
<ul style="list-style-type: none"> <li>• <b>Surveyors</b></li> <li>• <b>Supervisors</b></li> <li>• <b>Truck Driver</b></li> <li>• <b>Helper</b></li> </ul>	<ul style="list-style-type: none"> <li>• Proposed investments in port and increased cargo traffic will require more skilled manpower in the logistics sector</li> <li>• Skills shortage for handling hazardous substances</li> <li>• Life skills training required for truckers</li> <li>• Increased use of ICT and automation in work processes will impact the manual jobs.</li> </ul>

### *Construction*

Construction sector is booming with a lot of construction being done in resorts, hotels and residential complexes. After the tsunami of 2004, the construction sector boomed since everything was demolished. This resulted in a huge manpower requirement for the next 5-6 years. With increasing urbanization and construction in port Blair and nearby islands, there is a deficiency in availability of resources in these sectors which is being fulfilled by construction workers from mainland.

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>• <b>Mason</b></li> <li>• <b>Carpenter</b></li> <li>• <b>Bar bender</b></li> <li>• <b>Painter</b></li> <li>• <b>Plumber</b></li> </ul>	<ul style="list-style-type: none"> <li>• Demand increased after the 2004 tsunami</li> <li>• With increased urbanization, housing requirement and ban on timber cutting, the demand for construction has slowly and steadily been decreasing.</li> </ul>

### *Tourism & Hospitality*

Tourism sector is set to further develop on new areas of skill trainings via beach tourism, adventure sports, etc. With an increased influx of domestic and foreign tourists, the requirement of hotels, restaurants and tourism activity related people has been increasing.

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

<b>Job Roles: Tourism</b>	<b>Findings</b>
<p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>• Tourist guide</li> <li>• Auto driver</li> <li>• Beach tourism</li> <li>• Adventure sports coordinator</li> <li>• Tourism police</li> </ul> <p><b>Hospitality</b></p> <ul style="list-style-type: none"> <li>• Chef/Cruise ship chef</li> <li>• Housekeeping</li> <li>• Attendant</li> <li>• Housekeeping</li> </ul>	<ul style="list-style-type: none"> <li>• A promising sector with a lot of investment potential and skilled manpower requirement</li> <li>• Requirement of hospitality staff due to lot of influx of domestic and foreign tourists</li> <li>• Potential of trained manpower in the tourism sector with the coming up of beach tourism and adventure tourism related activities</li> </ul>

### *Fisheries*

Fishing is the primary source of economic activity for almost 10,322 fishermen from the South Andaman district. Currently fishing is being done in traditional ways. Deep sea fishing is proposed to be promoted in a planned manner which will require trained manpower to operate the DSFVs. The current fishermen also require training in safe fishing practices and efficient fishing techniques.

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>• <b>Deep Sea Fisherman</b></li> <li>• <b>Fish handler</b></li> <li>• <b>Sorter</b></li> <li>• <b>Spotter</b></li> <li>• <b>Mechanic</b></li> <li>• <b>Captain/boat operator</b></li> </ul>	<ul style="list-style-type: none"> <li>• Potential for employment of fishermen on DSFVs</li> <li>• Export potential for produce if cold storage plants and other required infrastructure is provided on the islands.</li> <li>• Training of existing fishermen on safety and hygiene issues can result in greater catch</li> <li>• Significant potential to catch fish outside of the 12 nautical mile area</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 13 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> were held at National, State and District level and 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 includes 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 limited possibilities of using existing institutional framework for partnership and for using existing infrastructure and equipment. Operational expenditure includes the cost of 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 of projects for South Andaman

Sl. No.	Project Name	Job Roles	Type of training	No. of people to be trained
1	Skill Development Training in Ship Building/Ship Repair	Painter, Blaster Mechanical/Steel Fitter, Electrician, Welder, Safety Officer, Safety supervisor Surveyor	Fresh Training/ Upskilling	1500 persons in 5 years
2	Training in Fisheries Sector	Fish handler, Sorter, Spotter Mechanic, Captain/boat operator	Fresh Training Upskilling	1000 persons in 5 years 1250 persons in 5 years
3	Skill Development Training in Tourism & Hospitality Sector (Beach Tourism)	Chef/Cruise ship chef Attendant, Housekeeping Cleaning gang/staff Boat/Jetty Operator Lifeguard Tourist Guides	Fresh Training / Upskilling	500 persons in 5 years 500 persons in 5 years



### 3.5. Action Plan for South Andaman

<b>Project 1: Skill Development Training in Shipping</b>					
<b>Key economic drivers</b>		<ul style="list-style-type: none"> <li>• Presence of 4 mainland island vessels, 6 inter island vessels, 4 cargo vessels, 17 foreshore ferries, 27 vehicle ferries (operated within harbour limit), 6 motor launch vessels, 2 water barge vessels and 13 other vessels</li> <li>• Current ship repair facilities present on the island are inadequate and only cater to small ships.</li> <li>• No certification possible for locals in the Island for offshore jobs.</li> <li>• 76 Cr investment being done for a dry dock facility</li> <li>• Huge investment in sending ships to mainland or nearby countries for repair activities</li> </ul>			
<b>Rationale for the project</b>		<p>Currently the ship repair facilities present on the islands are inadequate. The ones which are present can only cater to small ships/boats. This is one of the main reasons why fishing is not being taken up in the area and the vessels do not operate from the island.</p> <p>It has been proposed that there is a requirement of a ship repair facility in South Andaman which will cater to the jetties/boats/ships operating from Port Blair. The quality of manpower currently being present is substandard and skilled manpower is brought from mainland for any kind of ship repair activity that needs to be done on the island.</p> <p>There is increased demand for courses in the maritime sector as identified by the Dept. of Training. Diploma program at D-BRAIT Polytechnic is yet to be recognized by DG-Shipping. Deckhands, pilots would be required in considerable numbers once new Islands are opened up for tourism. Opportunities exist in the mainland and other countries too.</p> <p>With strengthening of the port infrastructure and creation of a ship building/repair activity, there would be a requirement of trained and skilled manpower in the sector</p>			
<b>Job roles in demand</b>		<b>Training courses</b>	<b>Target Beneficiaries</b>	<b>Type of Trainings</b>	<b>Total Number of beneficiaries</b>
		<ul style="list-style-type: none"> <li>• Welder</li> <li>• Mechanic</li> <li>• Painter</li> <li>• Electrician</li> </ul>	• Local youth	Fresh Training	1,200 persons in 5 years
		• Deckhands	• Higher Secondary	Fresh Training	200 persons in 5 years
		• Pilots	• Graduates	Fresh Training	100 persons in 5 Years
<b>Availability of curriculum</b>	<b>Job roles</b>	<b>Target Group</b>	<b>Available QP/NOS</b>	<b>MES</b>	<b>CTS</b>
	Welder, mechanic, painter, electrician	Local youth	<ul style="list-style-type: none"> <li>• Repair welder</li> <li>• Repair painter</li> <li>• Mechanical fitter</li> </ul>	<ul style="list-style-type: none"> <li>• Welder (repair and maintenance)</li> <li>• Metal surface painter</li> <li>• Basic marine mechanic</li> </ul>	<ul style="list-style-type: none"> <li>• Welder (Fabrication &amp; Fitting)</li> </ul>
	Pilot / Captain	• Local Youth	• QP does not exist	No course available	No course available
	Deck Hands	• Local Youth	• QP does not exist	No course available	No course available

<b>Investment (INR In lakhs)</b>	<b>Ship repair</b>	
	Operational Expenditure	183
	<b>Deck hands</b>	
	Operational Expenditure	30
	<b>Pilot</b>	
	Operational Expenditure	15
<b>Total Expenditure</b>		228
<b>Potential Partners</b>	<b>Partner</b>	<b>Areas of Support</b>
	Ministry of Shipping	• Training centre infrastructure cost and setup
	Local industry player	• On the job training support
	ITI	• Training delivery
	Strategic Manufacturing Sector Skill Council	• Course curriculum development • Trainer certification
	Port Management Board / DG Shipping	• Recognition of Trainings
<b>Training Delivery</b>	<ul style="list-style-type: none"> <li>• Port Management Board will be the nodal agency for the implementation of the project</li> <li>• Strategic manufacturing SSC will be required to prepare and provide the course curriculum.</li> <li>• DG Shipping to provide recognition.</li> <li>• The training centre will be setup in ITI or Polytechnic and the infrastructure setup cost will be borne by MoS</li> <li>• On the job training will be provided to the trainees on ships that come for repair work on the port</li> </ul>	

### Work Plan

<b>Handicraft</b>	<b>in Months</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Training centre setup						
Course curriculum preparation						
Onboarding of training partner for training delivery						
Mobilization of prospective trainees						
Enrolment of trainees						
Roll-out training programme						

<b>Project 2: Training in Fisheries Sector</b>	
<b>Key economic drivers</b>	<ul style="list-style-type: none"> <li>• Fishing is a primary source of economic activity for around 10322 fishermen in South Andaman district<sup>17</sup></li> <li>• Availability of huge fish catch in and around the island district.</li> <li>• Proposed plan by the Fisheries department to promote Deep Sea Fishing</li> <li>• Proposed establishment of two DSF harbours preferably one each at Port Blair and Campbell Bay</li> <li>• Proposed facilities for direct export from A&amp;N Islands including the establishment of Export Inspection Agency (EIA) and Customs.</li> </ul>
<b>Rationale</b>	South Andaman has a total population of 10322 fishermen. There are 428 traditional boats, 570 motorized boats and 78 mechanized boats in the district. Photo ID cards have been issued to 2873 fishermen. Currently the fishing activities being carried out in South Andaman as well as the entire

<sup>17</sup> Marine Fisheries Census 2010

		<p>A&amp;N Islands is traditional in nature. It has been estimated<sup>18</sup> that the annual potential yield of fishes in this region is 1.48 lakh tons whereas the current harvest is about 37,000 tons per annum from the territorial waters. The current low levels of catch are primarily due to lack of fishing capacity, negligible skilled manpower, low levels of entrepreneurship, lack of modern technology, inadequate deep sea fishing vessels, no boat/ship building yards, lack of readily available market, lack of large processing units and lack of supporting infrastructure.</p> <p>It has also been noticed that the local fishermen fish within the prescribed 12 nautical miles territory whereas bigger vessels with LoP catch and export the fishes and do not report the same. In order to increase the knowledge amongst the local fishermen community, their upskilling/training in proper fishing practices is required which can be achieved through RPL program.</p> <p>The Fisheries department has also proposed to promote DSF in the area wherein deep sea fishing liners will be used so that the coral belt is not exploited and the fishermen are able to go deep into the sea to catch fish. Increase of DSFVs will also result in requirement of trained manpower which can cater to the fishing requirement and work on these vessels.</p>			
<b>Trainings</b>		<b>Training courses</b>	<b>Target Beneficiaries</b>	<b>Type of Trainings</b>	<b>Total Number of beneficiaries</b>
		Deep sea fishing and navigation	<ul style="list-style-type: none"> <li>Fishermen community</li> <li>Local youth</li> </ul>	Fresh Training	1000 persons in 5 years
		RPL Training for fishermen and crew members	<ul style="list-style-type: none"> <li>Fishermen community</li> </ul>	Upskilling	1250 persons in 5 years
<b>Availability of curriculum</b>	<b>Job Roles</b>	<b>Target Groups</b>	<b>QP/NOS</b>	<b>MES</b>	<b>CTS</b>
	<ul style="list-style-type: none"> <li>Sorters, spotters, Mechanics, fish handlers, captain/boat operators</li> </ul>	<ul style="list-style-type: none"> <li>Fishermen community</li> <li>Local youth</li> </ul>	Fishing Boat Mechanic, Marine Capture Fisherman	Not Available	Not Available
	<ul style="list-style-type: none"> <li>Fish handling and marketing, safety and hygiene</li> </ul>	Fisherman Community	Not Available	Not Available	Not Available
<b>Investment (INR In lakhs)</b>		<b>Training for Fishermen</b>			
		Capital Expenditure			10
		Operational Expenditure			228
		<b>Total Expenditure</b>			<b>238</b>
<b>Potential Partners</b>		<b>Partner</b>	<b>Areas of Support</b>		
		Department of Fisheries, Private industry players willing to invest in DSFVs	<ul style="list-style-type: none"> <li>Source of funding</li> <li>Provide infrastructure for training</li> </ul>		
		CIFNET, MPEDA and Fisherman Co-operatives	<ul style="list-style-type: none"> <li>Training delivery</li> <li>Provide faculty members</li> </ul>		

<sup>18</sup> Fishery survey of India

		<ul style="list-style-type: none"> <li>Integrate the proposed trainings in its training plan</li> </ul>
	CMFRI	<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>Department of Fisheries to be the nodal agency for implementation of the project</li> <li>Training centre setup to be done by Dept. of Fisheries from funds of Ministry of Agriculture or Ministry of Shipping</li> <li>DSFV equipment and on the job training can be provided by industry players in South Andaman who are willing to operate these vessels.</li> <li>Training delivery to be provided by Master Trainers certified from Agriculture SSC</li> <li>Agriculture Sector Skill Council could certify the training programmes</li> </ul>

### Work Plan

Fisheries	in Months					
	1	2	3	4	5	6
Training centre setup and establishment						
Collaboration and MoU with local industry players						
Preparation of course curriculum						
Trainer certification and availability						
Mobilization of prospective trainees (fishermen and local youth)						
Enrolment of trainees						
Purchase of consumables						
Roll-out of centre and training programme						

<b>Project 3: Skill Development Training in Tourism and Hospitality Sector (Beach Tourism)</b>	
<b>Key economic drivers</b>	<ul style="list-style-type: none"> <li>A&amp;N Islands saw a tourist footfall of around 284,552 domestic tourists and 15,466 international tourists in 2016<sup>19</sup>.</li> <li>Although the tourist season is round the year but the majority of tourists visit the islands from October – March</li> <li>Proposed creation, maintenance of tourism accommodation, infrastructure and destination worth Rs. 10 Cr</li> <li>Proposed tourism promotional activities worth Rs. 1.53 Cr</li> <li>Approval of Swadesh Darshan scheme worth 42.18 Cr. The scheme would include upgradation of facilities at cellular jail, beach safety measures, beach amenities, eco-friendly tourist transport, scuba diving centre, signage and illumination of Andaman club.</li> </ul>
<b>Rationale</b>	A&N Islands are a very popular tourist destination. Both domestic and international tourists visit the islands and the season is all through the year

<sup>19</sup> Data from Immigration authorities of Port Blair

		<p>with most of the tourists visiting between October - march. Trade and tourism accounts for 11% of the GSDP.</p> <p>Tourism is one of the major growth drivers of A&amp;N Islands and provides employment to a large section of the workforce, both directly and indirectly. With over 100 private hotels in Port Blair, 5 govt. guest houses outside port Blair and 17 private accommodations outside port Blair there is a huge requirement for trained manpower in the hospitality sector<sup>20</sup>. Currently, because of shortage of manpower in the hospitality sector, people from other parts of the country come to Andaman for work. Apart from this there are around 100 private accommodations in Neil and Havelock islands. With the growing influx of both domestic and international tourists, the expectation in terms of the service being provided has been increasing. Thus, there is a dire need to have skilled manpower in the hospitality sector.</p> <p>The tourism department also has plans for setting up a scuba diving centre and creation of beach facilities on the nearby islands which are popular amongst the tourists. A lot of inter-island ferries and jetties operate carrying tourist passengers. Around 79 govt. jetties and 5 private ships operate in Andaman. Jetty operators, cleaning staff, chefs, and cruise ship chefs are a few main job roles in which there is a demand for trained workforce. Currently, this demand is met from both the local Andamanese people and workers who come from mainland. The workers sourced from mainland are expensive since their travel, food and accommodation also needs to be arranged by the employer and so industry players are more receptive towards recruiting local trained people.</p>			
<b>Trainings in high demand</b>		<b>Training courses</b>	<b>Target Beneficiaries</b>	<b>Type of Trainings</b>	<b>Total Number of beneficiaries</b>
		<ul style="list-style-type: none"> <li>Chef/Cruise ship chef</li> <li>Attendant</li> <li>Housekeeping</li> </ul>	<ul style="list-style-type: none"> <li>Current workforce</li> <li>Local youth</li> </ul>	<ul style="list-style-type: none"> <li>Fresh Training</li> <li>Upskilling</li> </ul>	<ul style="list-style-type: none"> <li>300 persons in 5 years</li> <li>200 persons in 5 years</li> </ul>
		<ul style="list-style-type: none"> <li>Cleaning gang/staff</li> <li>Boat/Jetty Operator</li> <li>Lifeguard</li> <li>Adventure sports</li> </ul>	<ul style="list-style-type: none"> <li>Current workforce</li> <li>Local youth</li> </ul>	<ul style="list-style-type: none"> <li>Fresh Training</li> <li>Upskilling</li> </ul>	<ul style="list-style-type: none"> <li>300 persons in 5 years</li> <li>200 persons in 5 years</li> </ul>
<b>Availability of curriculum</b>	<b>Job Roles</b>	<b>Target Group</b>	<b>QP/NOS</b>	<b>MES</b>	<b>CTS</b>
	Chef/Cruise ship chef, attendant, housekeeping	<ul style="list-style-type: none"> <li>Current workforce</li> <li>Local youth</li> </ul>	<ul style="list-style-type: none"> <li>Trainee Chef</li> <li>Commis Chef</li> <li>Tandoor Chef</li> <li>Sous chef</li> <li>Housekeeping attendant</li> <li>Room attendant</li> </ul>	No course available	No course available
	Cleaning gang/staff, boat/jetty	<ul style="list-style-type: none"> <li>Current workforce</li> <li>Local youth</li> </ul>	<ul style="list-style-type: none"> <li>Boat jetty in charge</li> </ul>	No course available	No course available

<sup>20</sup> Dept. of Tourism, Govt. of Andaman & Nicobar Islands

	operator, Lifeguards, adventure sports		<ul style="list-style-type: none"> <li>Life guard – pool and beach</li> </ul>		
<b>Investment (INR In lakhs)</b>	<b>Training in Tourism and Hospitality</b>				
	Capital Expenditure				0
	Operational Expenditure				58
	<b>Total Expenditure</b>				<b>58</b>
<b>Potential Partners</b>	<b>Partner</b>		<b>Areas of Support</b>		
	TSP		<ul style="list-style-type: none"> <li>Space and infrastructure for establishing training centre</li> <li>Training delivery/training facility</li> </ul>		
	Hotel Management Institutes (HMIs)		<ul style="list-style-type: none"> <li>Input for designing curriculum</li> <li>Guest faculty</li> </ul>		
	Industry Association (Hotel)		<ul style="list-style-type: none"> <li>Facilitate On-Job-Training</li> <li>Facilitate placements</li> </ul>		
	Travel and Hospitality Sector Skill Council (THSSC)		<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>	<ul style="list-style-type: none"> <li>Dept. of Tourism will be the nodal agency for implementation of the project</li> <li>Training centre can be established by the private training partner</li> <li>On the job training can be provided on jetties in collaboration with Directorate of Shipping Services.</li> <li>Local industry participation for on the job training delivery and placements</li> </ul>				

<b>Tourism and Hospitality (Beach tourism)</b>	<b>in Months</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
TSP empanelment						
Course curriculum preparation						
Mobilization of prospective trainees						
Enrolment of trainees						
Roll-out of centre and training programme						

# Appendix A. - Consultations

## A.1. Union Territory level consultations- South Andaman

Sl. No.	Stakeholder	Person	E-mail	Cell/Phone
1	District Collector	Shri. Udit Prakash Rai (IAS)	dcand@and.nic.in	03192-233089,245444(F)
2	Dept. of Labour Employment and Training	Madhu Sudhan Baidya, Labour Commissioner, & Director Employment and Training	lcdet@and.nic.in	9434270182
3	ITI- Dollygunj	Venketesh.Ch, Principal	Venketesh_ch@rediffmail.com	09434262620
4	D-BRAIT – Polytechnic/ Engineering College	Arun Shrivastav, HoD Electrical (Principal In charge)	arun_shrivastava_2001@yahoo.com	09434288234
5	Dept.of Industries	Ajit Anand, Director of Industries	dirind@and.nic.in	03192-200548
6	Dept. of Industries	Industrial Promotion Officer - Training	Indpb.trgcell@gmail.com	
7	Dept. of Industries	Abdul Haneef, Industrial Promotion Officer		099320989915
8	Directorate of Economics and Statistics	Gaurang Mishra, Director,	dirs.and@nic.in	03192-232476
9	Directorate of Tourism	Amit Anand, Director,	thedirectortourism@gmail.com	03192-232747
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13	Port Management Board	HS Pabla, Assistant Engineer (P&S)		9434260280
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15	Andaman Chamber of Commerce and Industry	C.V Verghese, Executive Secretary	cvverghese@gmail.com	09474213349
16	Dept. of Fisheries	D. Jagadeesan, Fisheries Inspector		
17	VP Operations, TCI Seaways	Pradeep Kumar Kaushik	pk.kaushik@tciseaways.com	9434285644
18	TSG Aqua / Emerald View Hotel / Automobiles	G. Bhaskar	tsgbh@rediffmail.com	9933244404, 09434281560
19	Agriculture/Food Processing	Mr. Shyamal Chowdhary	Kunalsales3060@gmail.com	9434281046

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24	Fisheries Dept.	Mr. Chandrashekhar	Dirfish.and@nic.in	03192-240095
25	Hotel, The Royal Palace	Mr. Venkat		03192230999, 9434269999
26	Directorate of Shipping Services	Mr. Veeriah, Deputy Director of Shipping	Ddss.and@nic.in	03192-232725
27	Fairmacs Shipping &Transport	Janardhan Uprethi	janardhan@fairmacs.com	09932081841



