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

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

Gujarat

Kutch
Bhavnagar

Final Report

Contents

1. District Profile

1.1. Kutch

About Kutch

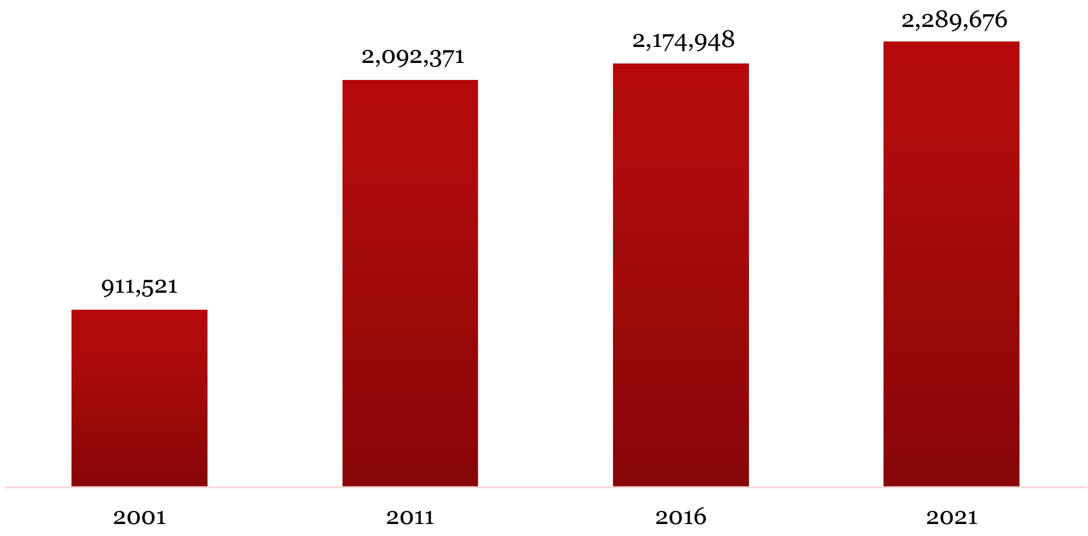
The key industries in Kutch include engineering, power, minerals, steel pipes, cement, handicrafts, timber, and salt[1]. Nearly 75 % of the total minerals of the Gujarat State are produced in Kutch district alone and it also has the largest lignite reserves in Gujarat. The district contributes to over 60% of Gujarat's Salt production which is largely exported to countries like Bangladesh and Korea. Kutch also has one of the major ports in India, Kandla Port and the largest private port, Mundra port which acts as the driver for the dominant industries in the district.

1.1.1. Demographic Profile[2]

Indicator	Value
Total population	2,092,371
Decadal rate of growth of population (2001-11)	19%
Rural population	65%
Female	48%
SC population	12%
ST population	1%
Workforce participation	37%
Main Workers (As % of total population)	33%
Marginal (As % of total population)	4%
*Number of people with vocational training in the age group of 15+ in the state	65 per 1000

Population Trends[3]

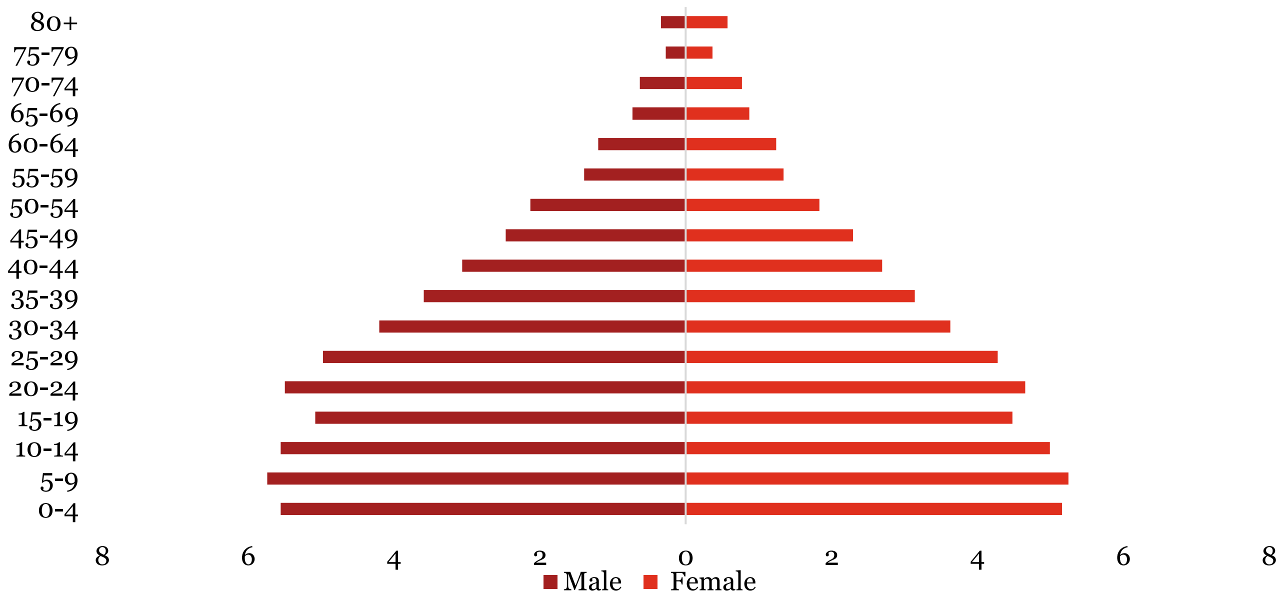
Figure 1: Population trend in Kutch (2001-2011)



[1] Brief Industrial Profile of Kutch District, MSME
[2] Census 2011
[3] (Census of India, 2001 and 2011), PwC Analysis

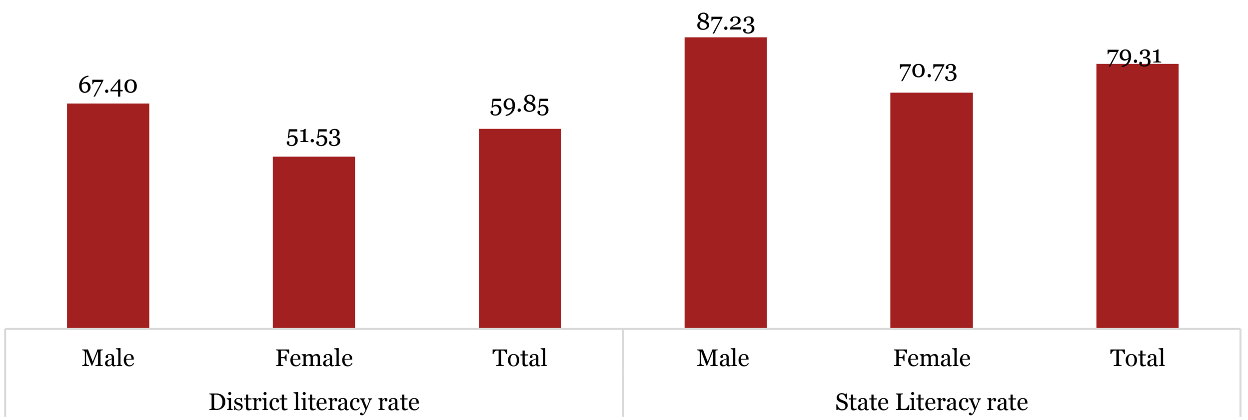
Estimating the population for the period 2011-21 (10 years), the population is estimated to be 2,174,948 and 2,289,676 in 2016 and 2021. The projected absolute growth in the population from 2016 to 2021 is 5 %.

Figure 2: Population pyramid Kutch - 2011



Literacy rates[4]

Figure 3: Kutch vs Gujarat literacy rates (2011)



Total literacy rate of Kutch, as per Census 2011, is approximately 60%, which is far below the State's literacy rate of around 79%. Also, the female literacy rate of Kutch (51.5%) is substantially lower than the male literacy rate, which is 67.4 % as per Census 2011.

[4] (Census of India, 2011)

Age specific population trends and education levels for 2011[5]

As per Census 2011, the population in the age-group of 15 to 24 years was 611,485 (29 of the overall population). Using proportional method, the population in the age group of 15-59 years is estimated to be 1,526,649 and 1,607,179 in 2016 and 2021 respectively. The projected absolute growth in the population from 2016 to 2021 is 5%.

Figure 4: Growth trend of population in the age group 15-59 year in Kutch (2001-2011)

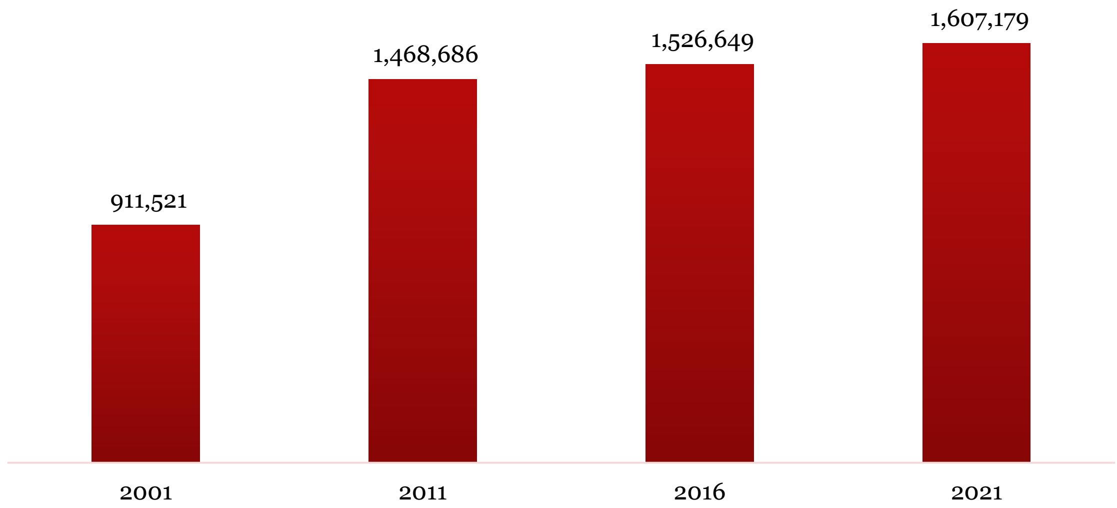


Figure 6: Age specific population in Kutch (15-59 years)

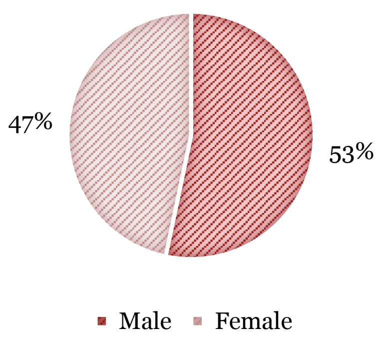
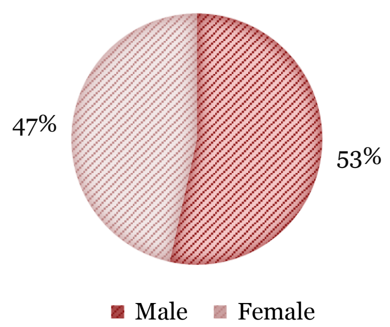


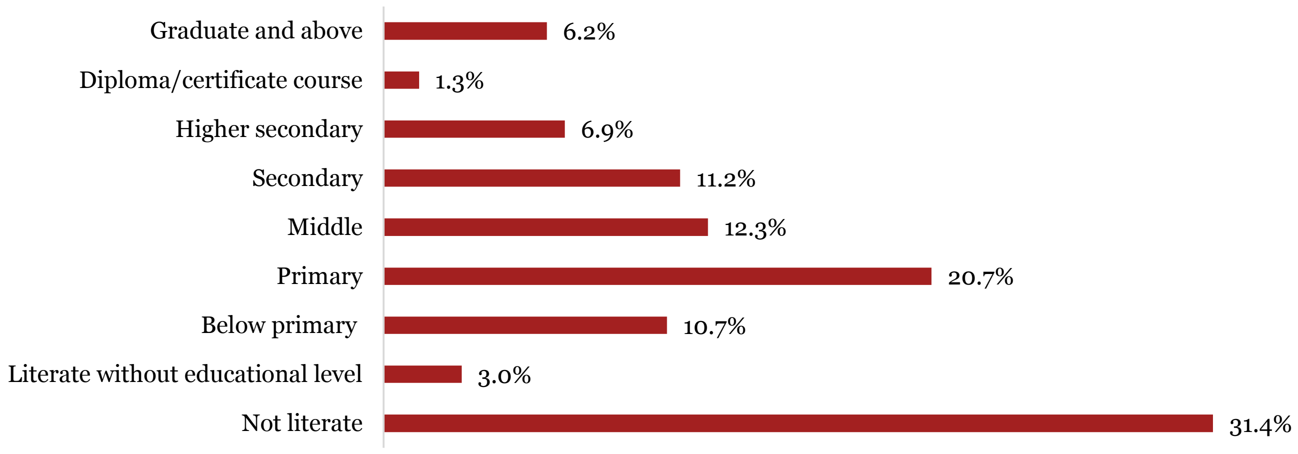
Figure 5: Age specific population in Kutch (15-24 years)



The share of female population in the total population is around 47% and 53% in the age categories 15-59 years and 15-24 years respectively.

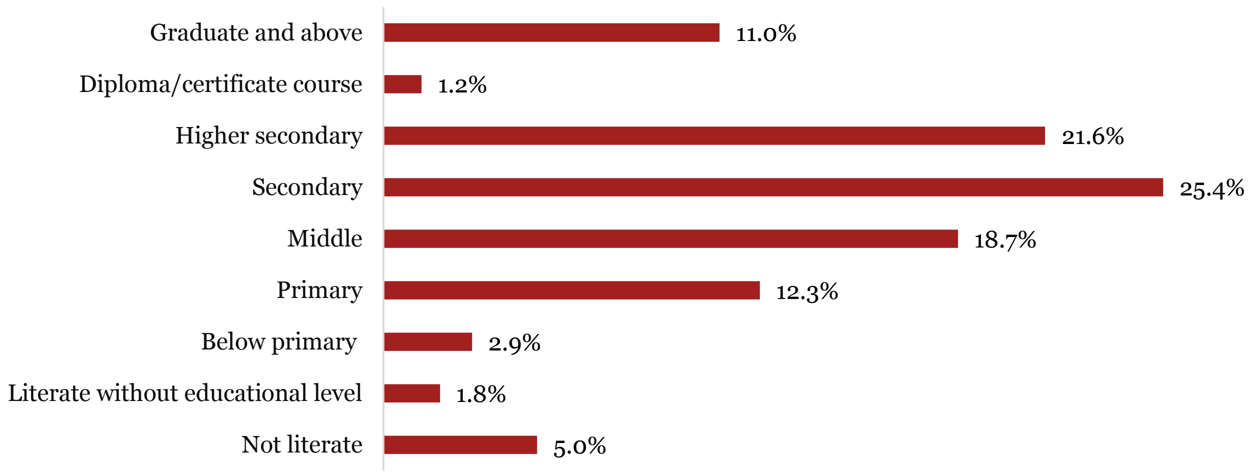
[5] (Census of India, 2001 and 2011)

Figure 7: Age specific education level in Kutch (15-59 years)



The chart above indicates that for the age category of 15-59 years, 31.4% of the population of Kutch is not literate. 3% of the population in the age category of 15-59 years is literate without any educational qualification, 10.7% has attended school till below primary level and 20.7% has completed schooling only up to primary level. Roughly, 12.3% of the literate population has completed schooling up to the middle level, whereas around 11.2% of the literate population has been educated till secondary. Only 1.3% of the population of this district has done a certificate/diploma course and 6.2% has at least graduated, indicating that a graduate/post-graduate degree is more sought after than a certificate/diploma.

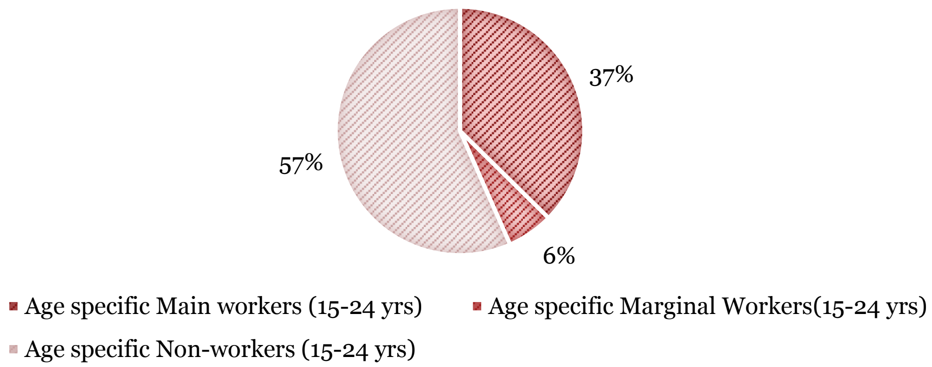
Figure 8: Age specific education level in Kutch (15-24 years)



For the age category of 15-24 years, 5% of the population of Kutch is not literate. 1.8% is literate without any educational qualification, 2.9% has attended school till below primary level and 12.3% has completed schooling only up to primary level. Roughly 18.7% of the literate population has done schooling up to the middle level, whereas, around 25.4% of the literate population has been educated till secondary. Only 1.2% of the population of this district has done a certificate/diploma course and 11% has at least completed graduation.

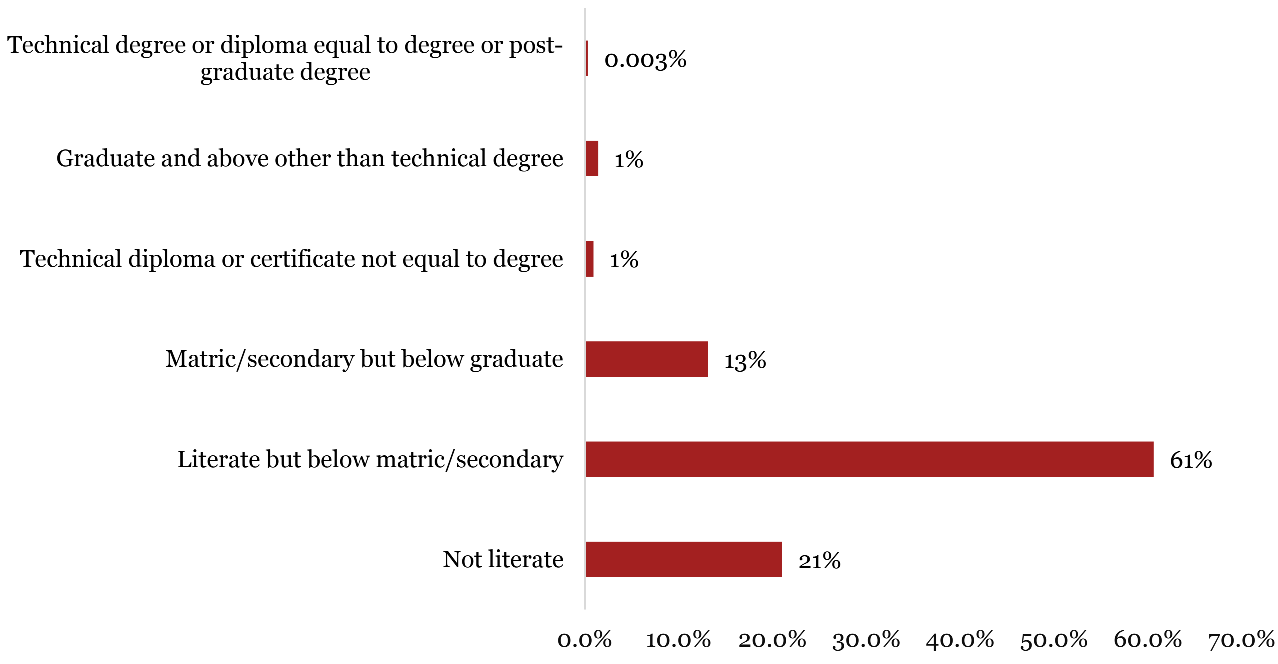
Age specific distribution of workers and educational level[6]

Figure 9: Age specific distribution of workers in Kutch 15-24 years



57% of the people in the age group of 15-24 years are non-workers. 6% of the people are main-workers, whereas 37% are engaged in marginal work i.e. work for 3-6 months during the year. The main and marginal labour force participation rate are 32.8% and 4.3% respectively.

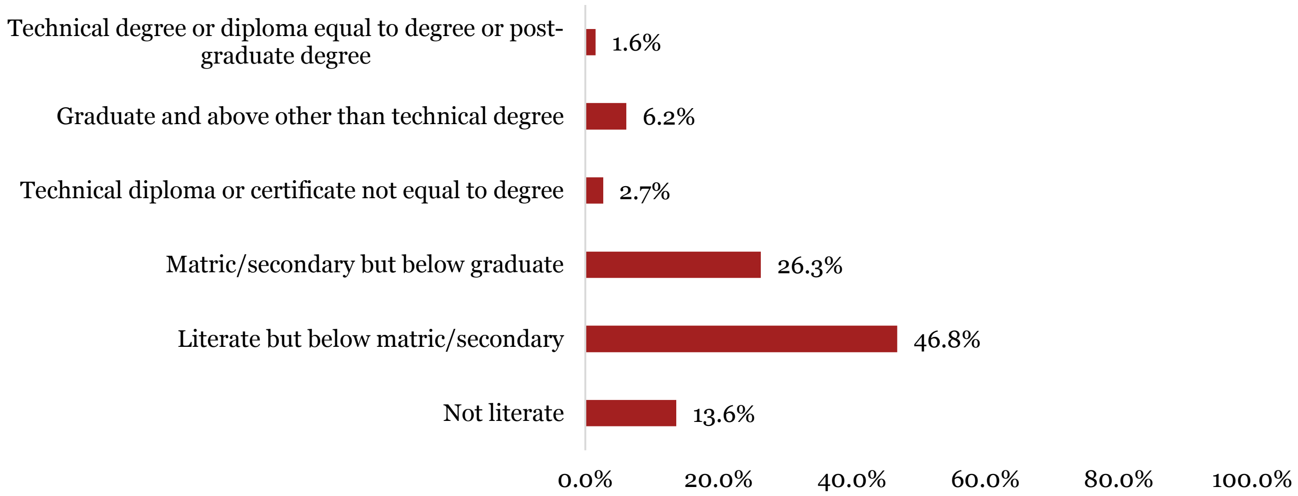
Figure 10: Education level of marginal workers available for work in Kutch (15-24 years)



Amongst the 9,044 marginal workers in the age group of 15-24 years, around 30 (0.003%) hold technical degree or a diploma equal to degree and 130 (1%) are graduate and above other than a technical degree. 84 (1%) have a diploma or a certificate (not equal to degree). 1,185 (13%) are educated up to the matric/secondary level and around 5,481 are (61%) literate with an educational qualification of below matric/secondary level. 1,902 (21%) marginal workers in this age group are not literate.

[6] (Census of India, 2011)

Figure 11: Education level of non-workers available for work in Kutch (15-24 years)



Amongst the 18,920 non-workers in the age group of 15-24 years, 298 (2%) hold a technical degree or a diploma equal to degree or post graduate degree, and 1,171 (6%) have a graduate and above other than a technical degree. 509 (3%) have a diploma or a certificate (not equal to degree). About 4,983 (26%) are educated up to the matric/secondary level and around 8,858 (47%) are with an educational qualification of below matric/secondary level. 2,581 (14%) marginal workers in this age group are not literate.

Figure 13: Education level for main workers available for work in Kutch (15-24 years)

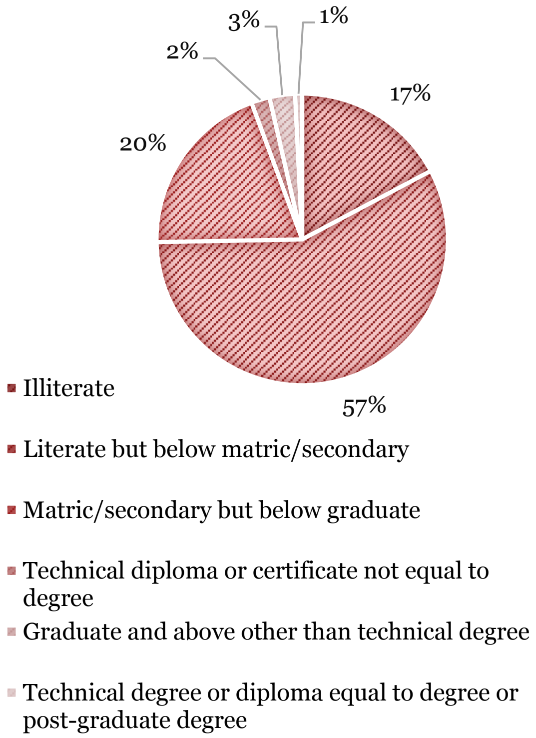
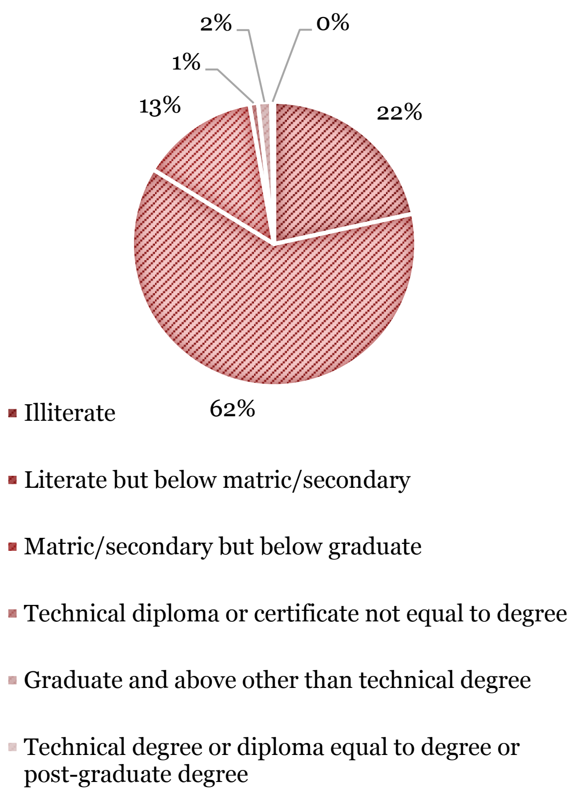


Figure 12: Educational level for marginal workers available for work in Kutch (15-24 years)

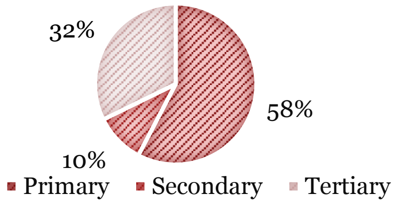


From the chart given above, we find that the proportion of main workers who are illiterate (in the age category 15-24 years) is slightly less (5 percentage point difference between the two) than the proportion of marginal workers available for work and who are illiterate. We also find that the proportion of main workers who are literate but below matric/secondary (in the age category 15-24 years) is slightly more (5 percentage point difference between the two) than the proportion of marginal workers who are available for work and are literate but below matric/secondary. The proportion of main workers who are matric/secondary but below graduate (in the age category 15-24 years) is more (7 percentage point difference between the two) than the proportion of marginal workers who are available for work and are matric/secondary but below graduate. For the remaining three educational levels, we find that the population shares are more or less the same across the two worker categories.

1.1.2. Key Economic Drivers

In the absence of district level GDP figures for Gujarat, we have considered the state level GDP figures which (at constant prices 2004-05) are INR 4,52,625 Crore in 2013-14. The workforce distribution[7] of the district suggests that across sectors more than half (58%) of the district population is engaged in the primary sector followed by tertiary sector which employs nearly one third of the total workforce (32%).

Figure 14: Workforce distribution in Kutch district across sectors



The key economic drivers of the district are illustrated below:

Port, maritime and logistics

- Presence of Mundra and Kandla: handle more than 30% of country's total cargo
- KPT has massive expansion as well as mechanisation plans worth USD 700 Mn
- Green ports envisaged by Adani port

Mining and Mineral based industries

- Nearly 75% of Gujarat's mineral reserves are in Kutch
- Setting up of 2.4 million TPA of Cement Plant in JV with M/s. Jaiprakash Associates Limited, New Delhi, in Kutch along with Mineral based SEZ, based on limestone to be supplied from GMDC

Tourism

- In 2015, Of the total investments, 31% constituted tourism in (DIC investments)
- Diverse tourist attractions in the form of Spiritual Sites, Architectural & Heritage Sites , Natural Ecosystems/ Wildlife Sanctuaries, Beaches/ Water Based Attractions etc.
- Govt is expected to sign MOUs worth Rs.1,500 crore for 18 districts. Incl Kutch

Manufacturing

- Salt production in Kutch was approx. 60 Lakh MT in 2013-14 which constituted about one third of the total salt production of the state.
- SAW Pipes: World's 2nd largest hub in terms of capacity for SAW pipe manufacturing
- Engineering units/mechanical parts: Rs 1659 Lakhs worth investments were sanctioned by DIC
- Edible Oil: Palm Oil, soya, ground nut

Timber

- Average growth rate of the timber import volumes has been over 20% on YOY bases
- 952 licensed wood working factories and over 2000 saw mills around Kandla served by two ports

[7] District wise skill gap study for the State of Gujarat (2012-17, 2017-22), NSDC Report

1.1.3. Priority Sectors

In Kutch, the priority sectors that have been identified are **Ports and Maritime sector** and other sectors closely linked to port led activities such as **fisheries, logistics and tourism.**

Other sectors/industries that are prominent from the point of view of their contribution to district economy are identified to be **mines and mineral based, timber, edible Oil, handicrafts/handlooms and salt.**

1.1.4. Investments

Over the last couple of years, Kutch has witnessed rampant investments in the industrial space. Between 2006 and 2014, approximately 1636 MSME units have been established for which around INR 1458 Crores worth investments have been made and the employment has been generated for approximately 27,000 persons.

Infrastructure has also been an important component of the past investments in the district. Under Critical Infrastructure Projects (CIP) scheme, 3 projects with an investment of INR 1,894 Crores have been sanctioned under Non-Gujarat Infrastructure Development Corporation (GIDC) projects between 2012 and 2015.

As far as projects registered with District Industries Centre, Kutch are concerned, overall investments worth INR 80 Crores have been made across 55 projects which are expected to generate employment for over 700 persons.

In Kutch, ports and maritime is a growing sector with investments to the tune of INR 28,000 crore which is expected to generate employment for over 2,000 individuals in the coming years. The nature of investments vary from upgradation and improvement of existing terminals, mechanization and establishment of green ports.

Details of some of the key investments proposed for the port and maritime sector in the district are given below:

Table 1: Proposed Key Investments in Port and Maritime Sector in Kutch

Project	Proposed Investment (in USD Million)	Expected Employment	Key Players[8]
Development of marble based furniture cluster in Kutch	353.8	N/A	KPT
Setting up of a container terminal (2.19 Million TEUs) at Tuna Tekra, Kandla Port	346.2	200-250 persons	KPT
Development of 14th multipurpose berth on BOT basis, Kandla Port	36.7	100-150 persons	KPT
Development of 16th multipurpose cargo berth on BOT basis, Kandla Port	36.7	100-150 persons	KPT
Setting up of 10 liquid Storage Tank farms	Information Not Available	100-150 persons	KPT
Development of Multi-Purpose Cargo Berth at Tuna Tekra on BOT basis, Stage-II Kandla Port	192.3	300-400 persons	KPT
Augmentation of Kandla LPG Import Terminal	46.15	N/A	
Setting up of 14 MW solar power plant at Kandla Port Trust	12.9	20-50 persons	KPT

[8] Investments related to Adani Port, Mundra were not shared on account of confidentiality

1.1.5. Youth Aspiration

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

Profile	Details
Total Sample Size	384
Gender Profile	Male- 61% Female- 39%
Age Group	15-24 years
Education Level (top 3)	Senior Secondary schooling(Class 9 to 10)- 35.7% Secondary schooling(Class 6 to 8)- 26.7% Higher secondary schooling with science (Class 11 to 12)- 14.1%
APL/BPL/AAY/Don't know (118)	APL-68 % BPL- 32% AAY- 0% Don't know- 0%
Occupational Profile (top 3) (112)	Salary from employment (34.1%), Agriculture (32.2%), Own business (28%), Labourer in village (7.8%)

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, ~98% of the respondents had not enrolled in vocational training course (Figure 15).

Of the total respondents who underwent vocational training (which is ~2%), majority were from ITI (39%) and polytechnic (39%). Figure 16 exhibits the percentage of respondents who completed different types of courses as part of their vocational training

Figure 15: Percentage of respondents who completed vocational training courses - Kutch

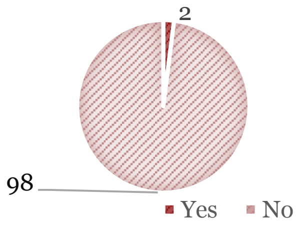
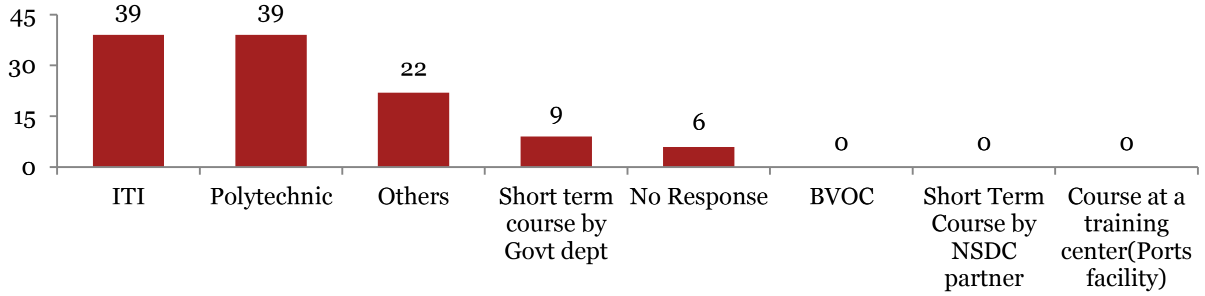
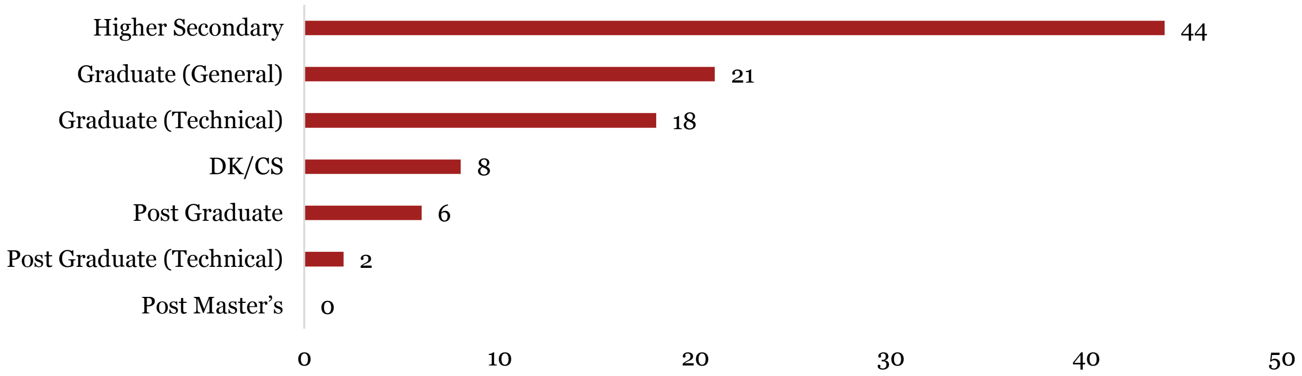


Figure 16: Percentage of respondents who completed courses in vocational training - Kutch



Further, the respondents were asked about the level of education they wished to attain. While 44% of the respondents aspired to attain higher secondary, 27% aspired to attain graduation and post-graduation level of education. The desire to attain technical education is relatively low with only 20% aspiring for graduation or post-graduation in technical fields (Figure 17).

Figure 17: Desired level of education - Kutch



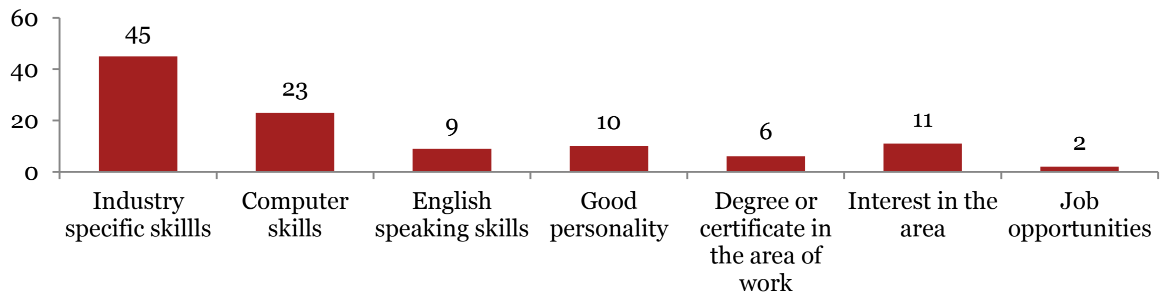
Job Aspiration

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. About 91% of the respondents reported to have preferred wage employment over self-employment (Figure 18).

The respondents were further asked to identify the factors important for securing employment in the area of interest. Nearly half (45%) of the respondents identified industry specific skills as the most important factor for securing employment followed by computer skills (23%), interest in area (11%) and good personality (10%) (Figure 19).

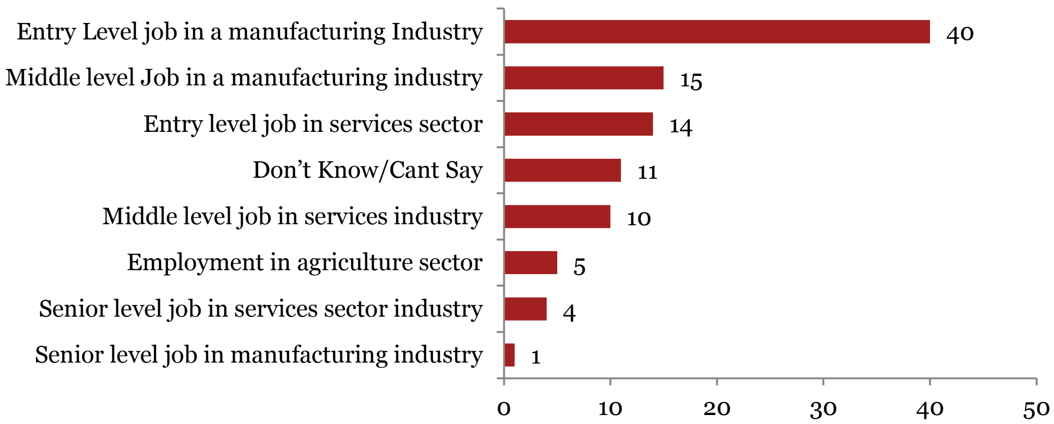
Figure 18: Percentage of respondents aspiring for wage and self-employment - Kutch

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



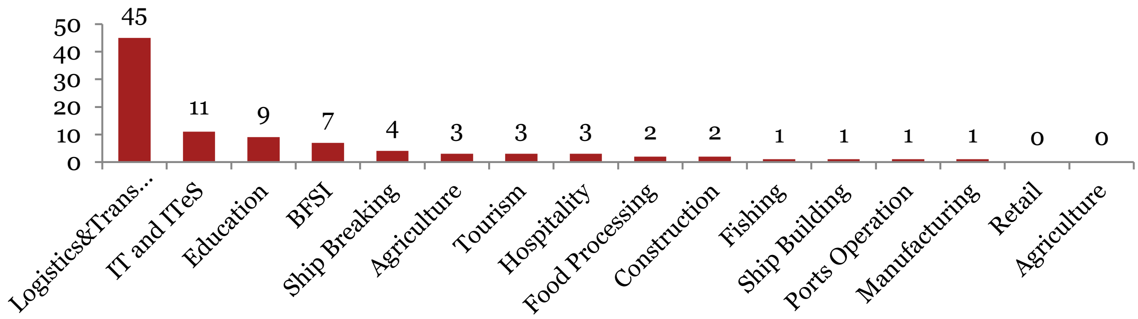
Regarding job aspiration of the respondents after completion of education or training, it can be observed that there is a demand for manufacturing sector with 15% aspiring for middle level jobs and 40% aspiring for entry level jobs in manufacturing sector. This is followed by demand for service sector with 14% aspiring for entry level jobs and 10% for middle level jobs. (Figure 20).

Figure 20: Desired job profile after completion of education/training - Kutch



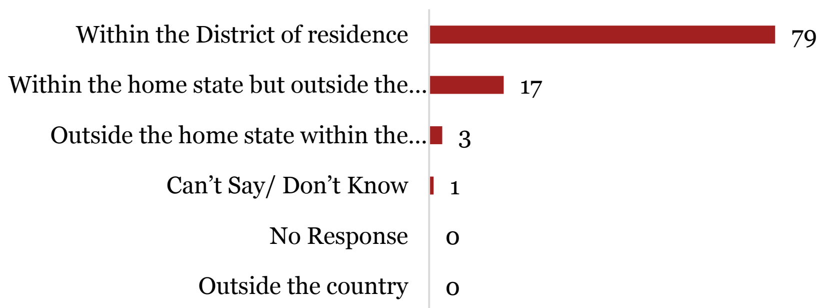
Further, Logistics & transport (45%), IT & ITeS (11%) and Education (9%) have been identified as sectors in which the respondents feel that they are mostly likely to get a job which is in alignment with their aspiration for a job in the service sector space. The details of other sectors are mentioned in Figure 21.

Figure 21: Sectors in which respondents foresee getting a desired job (%) - Kutch



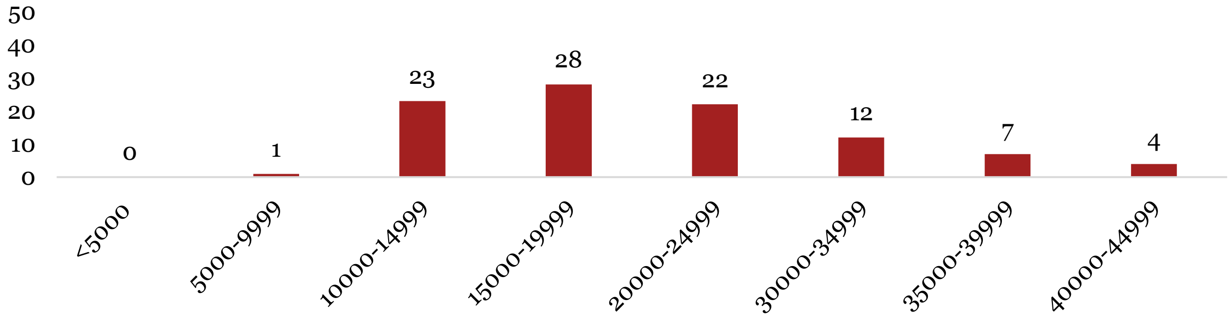
Out of the total respondents, 967 preferred to work in in the same State. It is important to note that nearly fourth-fifth of the respondents (79%) preferred to work in the same district and 17% expressed willingness to migrate to other districts in the same state suggesting lack of flexibility among the youth of the district (Figure 22).

Figure 22: Preferred work location of candidates - Kutch



For majority of the respondents (50%), the monthly salary expectation was INR 15,000-25,000. And for 23% of respondents the expected salary is reported to be in range of 10,000-15,000 per month (Figure 23).

Figure 23: Monthly salary expectation of respondents - Kutch



Training Aspiration

Regarding willingness of the respondents to participate in the training programme in next one year, 86% expressed interest whereas only 5% expressed dis-interest which reflects a great demand for skilling courses (Figure 24).

Further, when enquired about the key focus areas of skill training, 63% of the respondents reported that emphasis must be laid on technical skills, followed by proficiency in English (21%) and life skills (12%) (Figure 25).

Figure 24: Willingness to participate in trainings (%) - Kutch

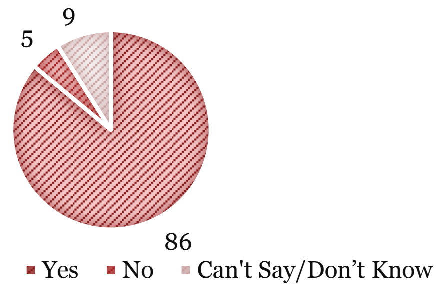
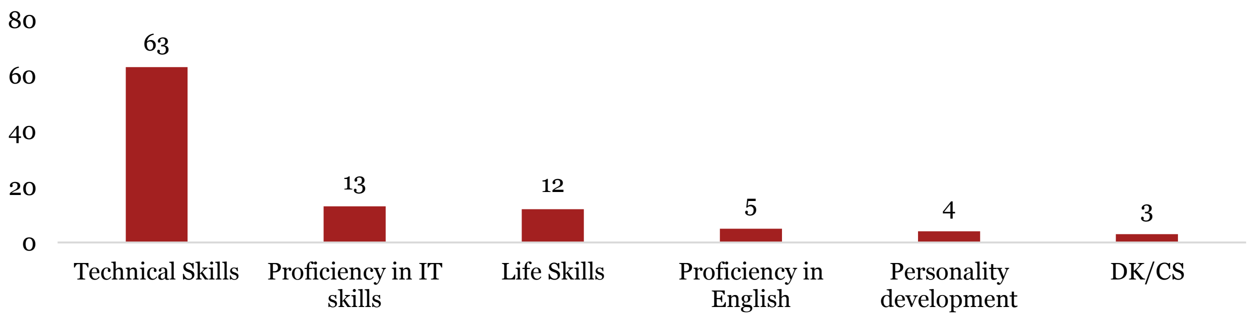


Figure 25: Focus area on skills training - Kutch



Overall there is a demand for training in tourism (44%), ship building and repair (43%), logistics (42%), shipping operations (41%), port operations (36%) and food processing (36%) (Figure 27)

Self-Employment

Regarding current status of the Entrepreneurial Venture of the respondents who aspired for self-employment, 36% were in family business and 33% were in their ideation stage (Figure 26).

Figure 26: Current Status of Entrepreneurial Venture (%) - Kutch

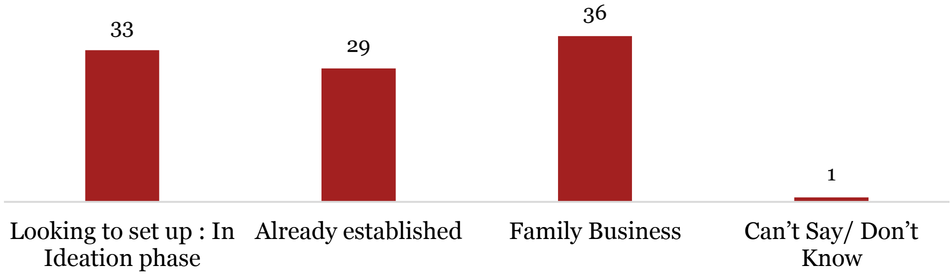
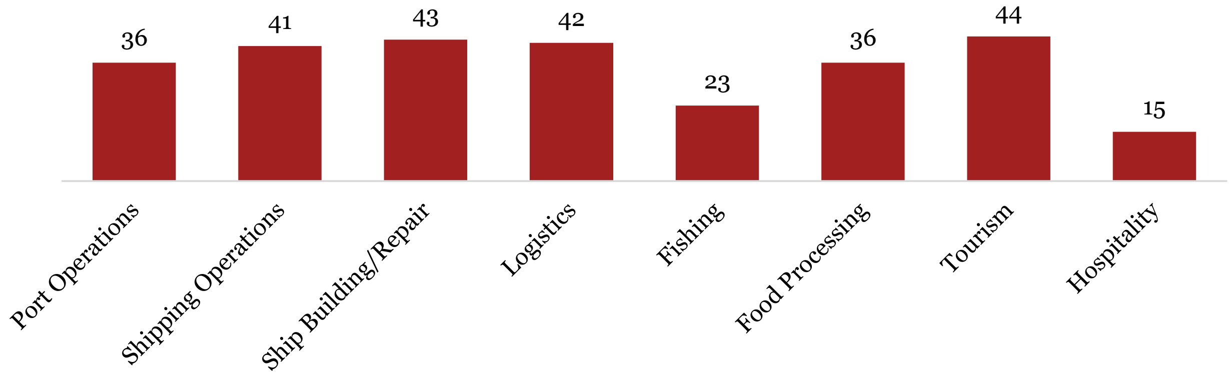


Figure 27: Willingness of respondents to participate in trainings of different sectors - Kutch



It is noteworthy that 93% of the respondents expressed a desire to undergo a training programme for enhancing their entrepreneurial skills (Figure 28).

Figure 28: Interested in skill development for enhancing entrepreneurial skills (%) - Kutch

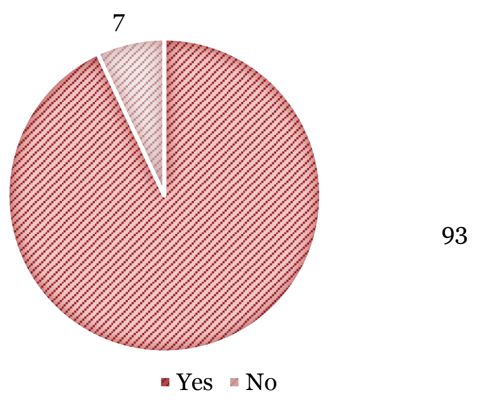
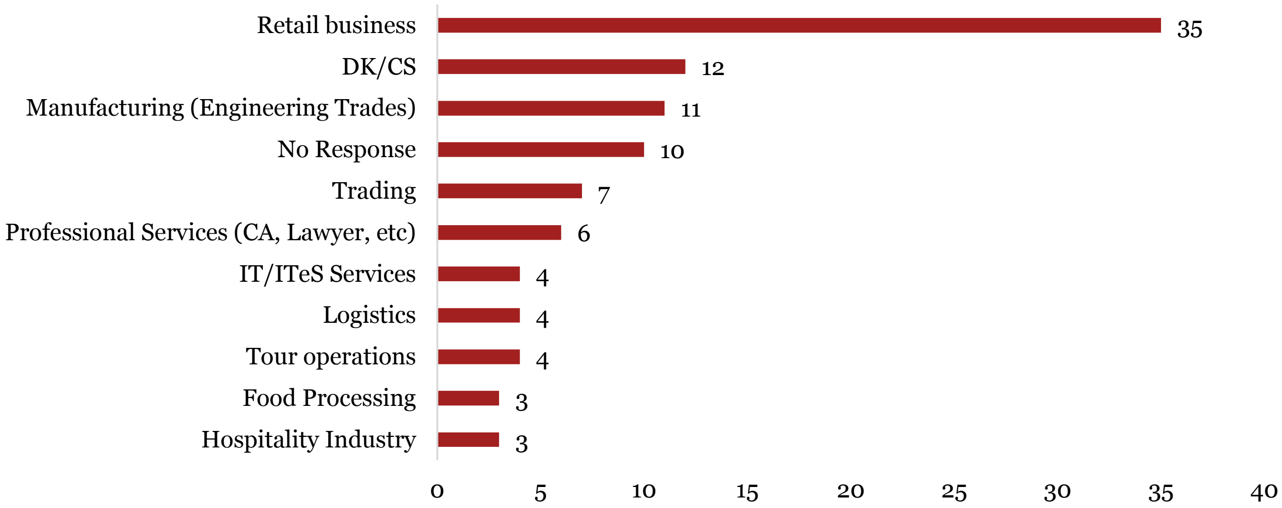


Figure 29: Sectors for establishing enterprise - Kutch

Retail business (35%), manufacturing (engineering trades) (11%) and trading (7%) have been identified as most preferred sectors for setting own enterprise (Figure 29).



1.2. Bhavnagar

About Bhavnagar

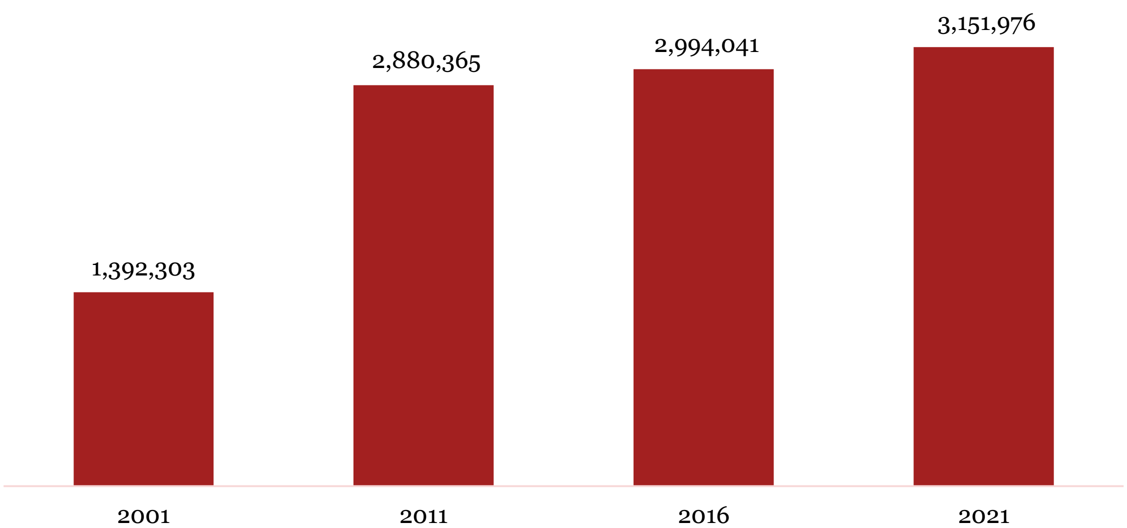
Ship breaking/recycling is the biggest industry in the district. It is considered as the largest graveyard of ships in the world. At present, 131 Plots at Alang and Sosiya have been allotted for ship breaking activity, which in turn support the down-stream industries like rolling mills and induction furnace. Bhavnagar also has one of its kind lockgate port in India which helps keep the ship afloat during the low tide. Another major industry in the district is diamond cutting and polishing which provides employment to approximately 74,000 employees[9]. Bhavnagar is also an emerging hub for cement, chemicals and food processing industries.

1.2.1. Demographic Profile[10]

Indicator	Value
Total population	2,880,365
Decadal rate of growth of population (2001-11)	17%
Rural population	59%
Female	48%
SC population	6%
ST population	.3%
Workforce participation	40%
Main Workers (As % of total population)	34%
Marginal (As % of total population)	6%
*Number of people with vocational training in the age group of 15+ in the state	65 per 1000

Population trends[11]

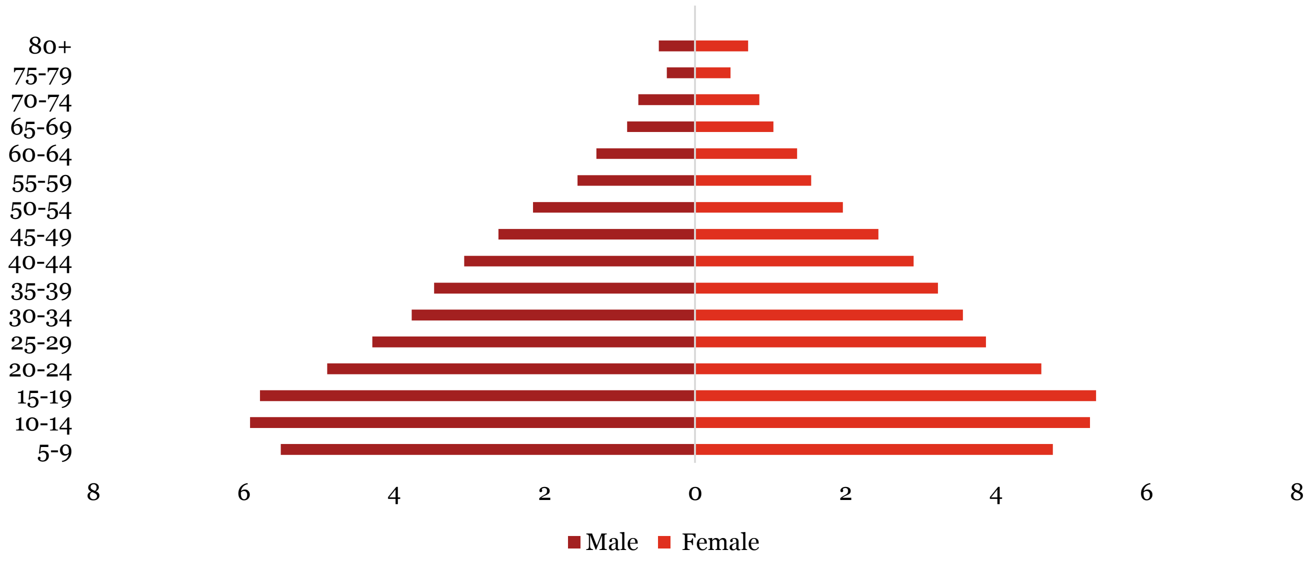
Figure 30: Population trend in Bhavnagar (2001-2021)



[9] Brief Industrial Profile of Bhavnagar District, MSME
[10] Census 2011
[11] Based on census 2001, 2011

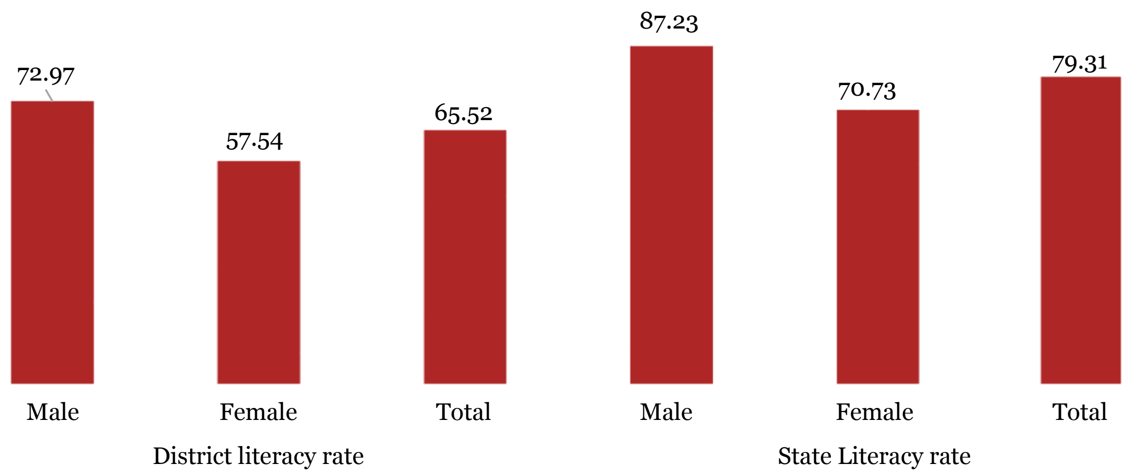
In the next decacde (2021), the demographic dividend bulge in Bhavnagar will hold the same pattern that it held in the last decade; based on the extrapolation done on the Census 2011 figures, it is estimated that the population in 2016 and 2021 will be 2,994,041 and 3,151,976 respectively. The projected absolute growth in the population from 2016 to 2021 will be 5%.

Figure 31: Population pyramid Bhavnagar - 2011



Literacy rates[12]

Figure 32: Bhavnagar vs Gujarat literacy rates (2011)



[12] Census 2011

Total literacy rate of Bhavnagar, as per the Census 2011, is approximately 65.5%, which is far below the State's literacy rate of around 79%. Also, the female literacy rate of Bhavnagar is 57.5% which is substantially lower than the male literacy rate of 73% as per Census 2011.

Age specific population trends and education levels for 2011[13]

As per Census 2011, the population in the age-group of 15 to 24 years was 912,011 (31.6% of the overall population). Estimating the population in the age group of 15-59 years is expected to be 2,156,348 and 2,270,095 in 2016 and 2021 respectively. The projected absolute growth in the population from 2016 to 2021 is 5%.

Figure 33: Growth trend of population in the age group 15-59 years in Bhavnagar (2001-2021)

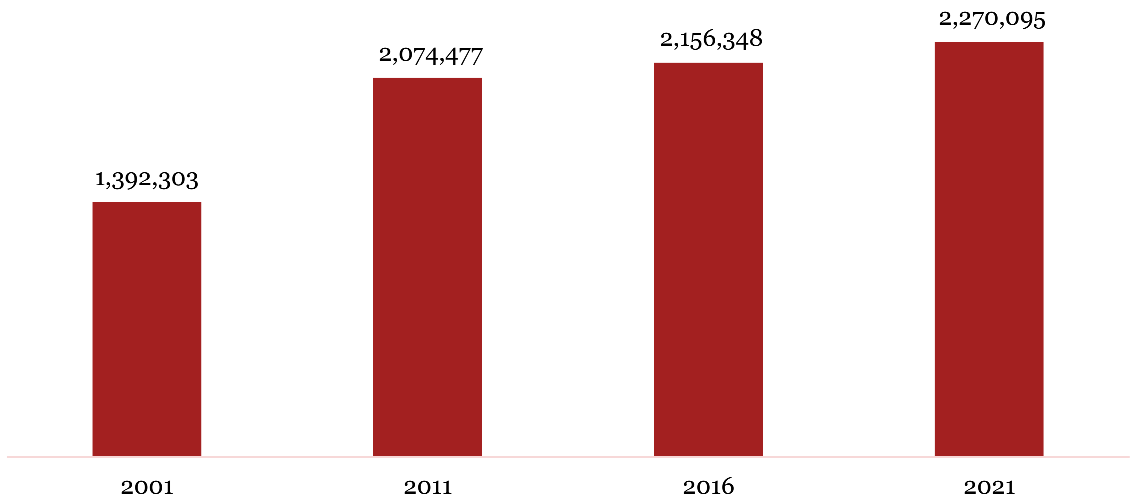


Figure 34: Age specific population in Bhavnagar (15-24 year)

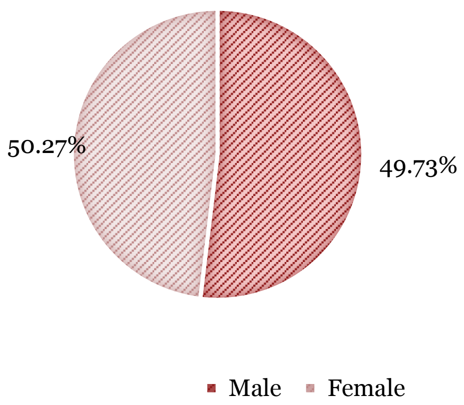
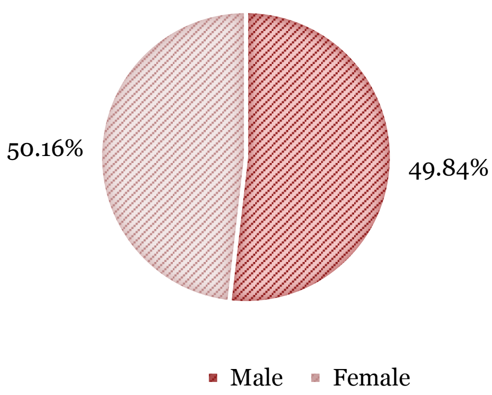


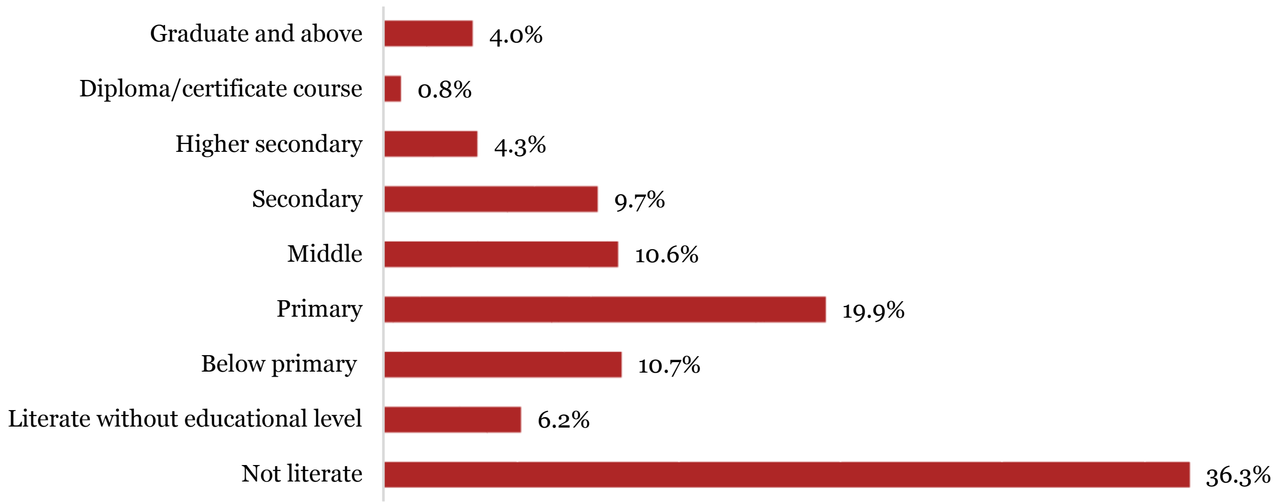
Figure 35: Age specific population in Bhavnagar (15-59 year)



The share of population of both males and females in total population of Bhavnagar is around 50 % each in both the age categories-15-59 and 15-24 years.

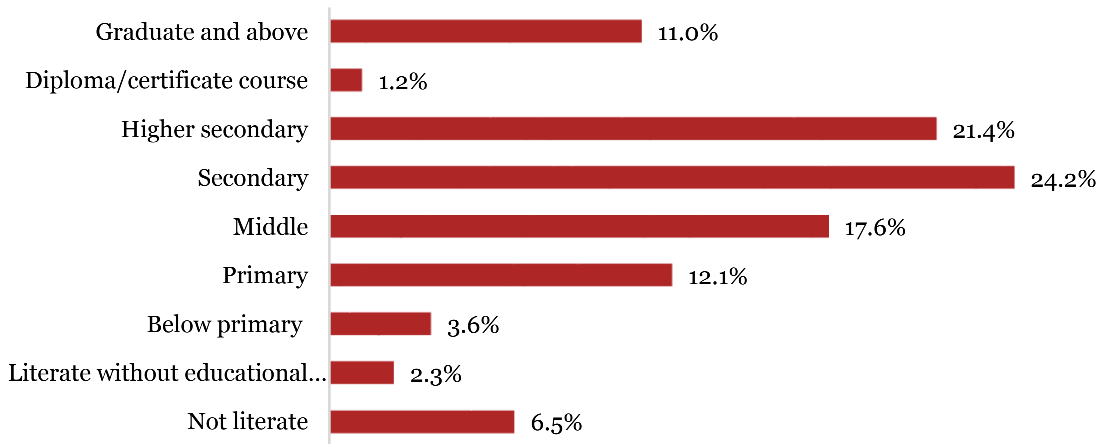
[13] Based on Census 2011 and 2011

Figure 36: Age specific education level in Bhavnagar (15-59 years)



The chart above indicates that for the age category of 15-59 years, 36.3% of the population of Bhavnagar is not literate. 6.2% of the population in the age category of 15-59 years are literate without any educational qualification, 10.7% have attended school till below primary level and 19.9% has completed schooling only up to primary level. Roughly, 10.6% of the literate population has completed schooling up to the middle level, whereas around 9.7% of the population in the 15-59 year age group have been educated till secondary. Only 0.8% of the population of this district have done a certificate/diploma course and 4% have at least graduated, indicating that a graduate/post-graduate degree is more sought after than a certificate/diploma.

Figure 37: Age specific education level in Bhavnagar (15-24 years)



For the age category of 15-24 years, 6.5% of the population of Bhavnagar is not literate. 2.3% of the population in this category is literate without any educational qualification, 3.6% has attended school till below primary level and 12.1% has completed schooling only up to primary level. Roughly 17.6% of the population has done schooling up to the middle level, whereas, around 45.6% of the literate population has been educated till secondary or senior secondary level. Only 1.2% of the population of this district has done a certificate/diploma course and 11% have at least completed graduation.

Age specific distribution of workers and educational level

54% of the population in the age group of 15-24 years are non-workers. 38% of the population are main-workers, whereas 8% are engaged in marginal work i.e. work for 3-6 months during the year. The main and marginal labour force participation rate are 34.4% and 5.5% respectively.

Figure 38: Age specific distribution of workers in Bhavnagar (15-24 years)

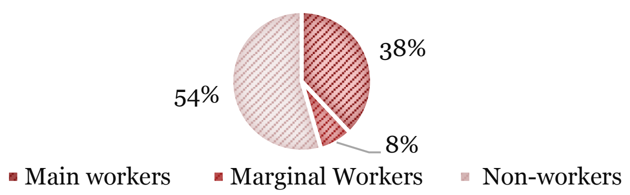
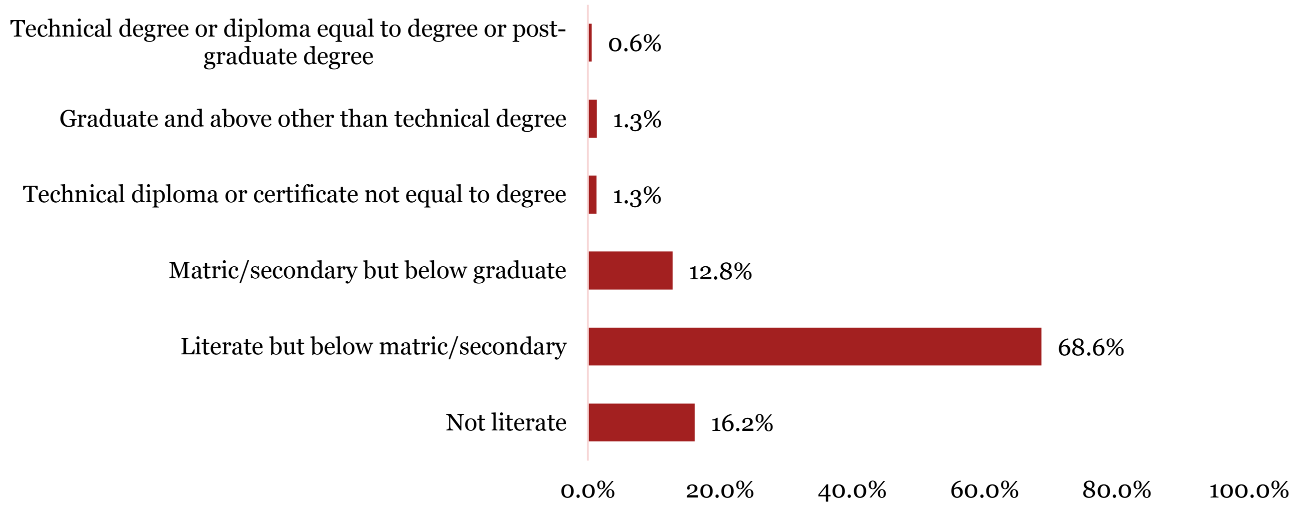
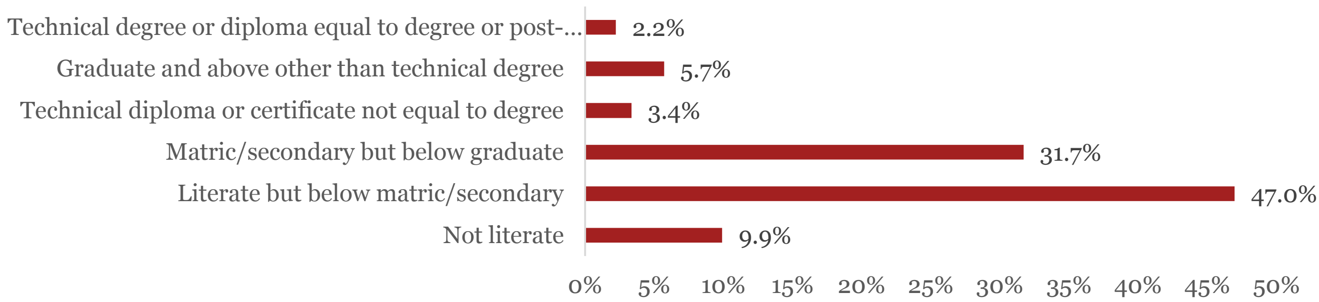


Figure 39: Education level of marginal workers available for work in Bhavnagar (15-24 years)



Amongst the 13,002 marginal workers in the age group of 15-24 years, 79 (1%) hold technical degree or a diploma equal to degree and 174 (1%) are graduate and above, other than a technical degree. 170 (1%) have a diploma or a certificate (not equal to degree). 1,668 (13%) are educated up to the matric/secondary level and 8,916 are (68%) literate with an educational qualification of below matric/secondary level. 2,103 (16%) marginal workers in this age group are not literate.

Figure 40: Education level of non-workers available for work in Bhavnagar (15-24 years)



Amongst the 29,938 non-workers in the age group of 15-24 years, around 2% hold a technical degree or a diploma equal to degree or post graduate degree, around 6% have a graduate and above other than a technical degree. 3% have a diploma or a certificate (not equal to degree). 32% are educated up to the matric/secondary level and 47% are with an educational qualification of below matric/secondary level. Approximately 10% marginal workers in this age group are not literate.

Figure 42: Educational level for main workers available for work in Bhavnagar (15-24 years)

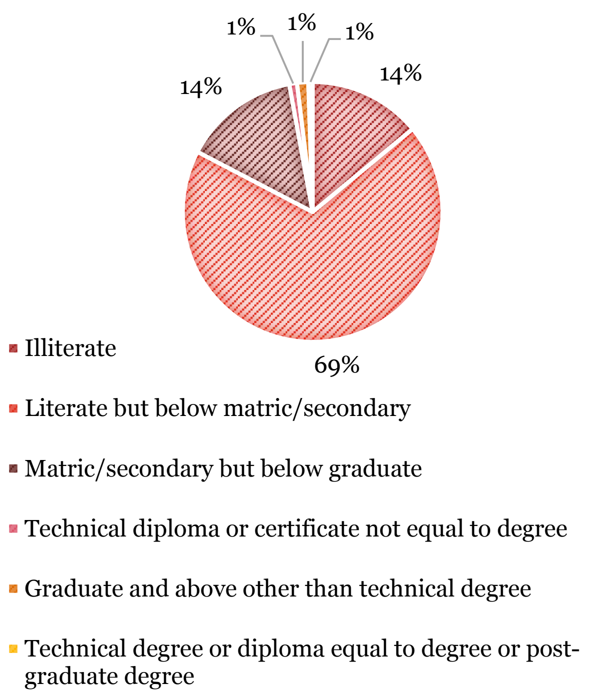
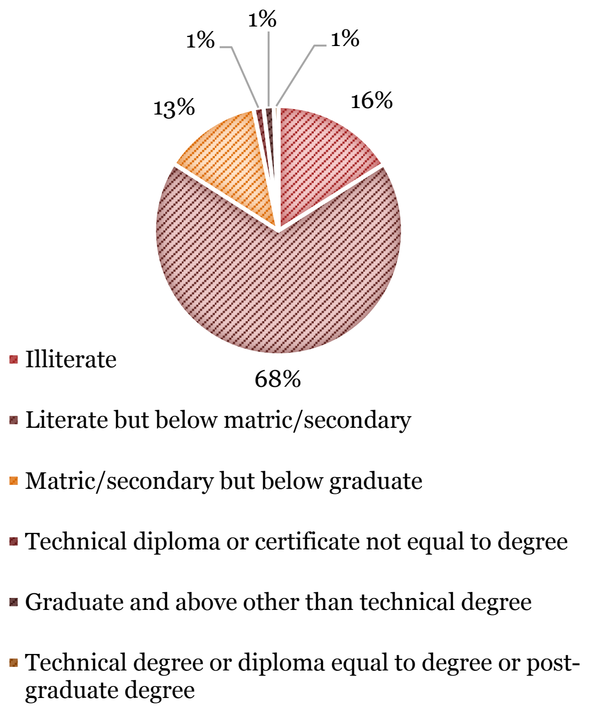


Figure 41: Educational level for marginal workers available for work in Bhavnagar (15-24 years)



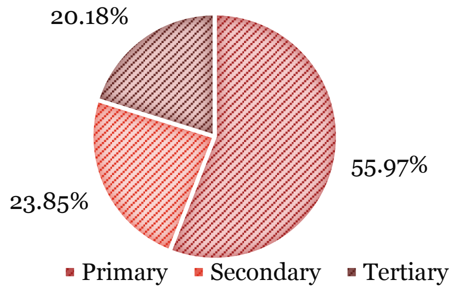
From the charts given above, we find that the proportion of main workers who are illiterate (in the age category 15-24 years) is slightly less (2 percentage point difference between the two) than the proportion of marginal workers available for work and who are illiterate. For the remaining four educational levels, we find that the population shares are more or less the same across the two worker categories (roughly 1 percentage point difference between the two categories).

1.2.2. *Key Economic Drivers*

In the absence of district level GDP figures for Gujarat, we have considered the state level GDP figures which (at constant prices 2004-05) was INR 4,52,625 Crore in 2013- The workforce distribution[14] of the district has been analyzed. It suggests that across sectors more than half (56%) of the district population is engaged in the primary sector while secondary and tertiary sectors witnessed similar patterns in their workforce distribution.

The key economic drivers of the district are illustrated below:

Figure 43: Workforce distribution in Bhavnagar district across sectors



Port, maritime and logistics

- Development of the fourth terminal at JNPT
- Development of Multi-Product Port-based SEZ (textiles, multi services, electronics, logistics, engineering)

Industrial Development

- DMIC- 100 sq. km in Dighi
- National Manufacturing Zone- 230 sq. km in Dighi
- Establishment of chemical clusters

Infrastructure Development

- 4 laning of NH 17
- Jindal and POSCO setting up production
- International airport
- CIDCO's Railway & METRO Projects

Urbanization

- Two Smart City Projects: CIDCO Navi Mumbai (South) – Brownfield and Pushpak Nagar – Greenfield
- CIDCO's NAINA city development

1.2.3. *Priority Sectors*

In Bhavnagar, the priority sectors that have been identified are **Ports and Maritime sector** and other sectors which are **ship recycling and breaking yards, logistics, fisheries, tourism and construction**. Other sectors that have been identified as priority sectors from the point of view of their contribution to district GDP are **manufacturing, gems and jewelry (diamond cutting), salt and plastic.**

1.2.4. *Investments*

According to the information provided by the District Industries Centre, Bhavnagar, the proposed investments in the district for the year 2015-16 amount to INR 8,000 Crores and vary across a range of sectors which include Cement, power, and ship-breaking to name a few.

[14] District wise skill gap study for the State of Gujarat (2012-17, 2017-22), NSDC Report

In the ports and maritime sector, up-gradation and improvement of Bhavnagar port has been identified as an important area of investment and has attracted investments worth INR 20 Crores operationalised in the coming years and includes activities such as upgradation of stacking platforms, provision of security office building etc. The key players for the proposed projects are Gujarat Maritime Board (GMB) and Ship Recycling Industries Association (SRIA). At Alang ship breaking yard, soft loan of USD 180 Million (@ interest of 1.4%) from JICA is currently being reviewed for upgradation of Shipbreaking yards at Alang-Sosiya in order to match the HKC standards. Apart from this, investments planned for Gogha-Dahej RoRo Ferry service include development of terminal worth INR 223 Crores and capital dredging worth INR 233 Crores.

In the manufacturing space too, some significant investments are proposed in the cement industry which include production of Portland Cement by Ultratech worth INR 2750 Crores, manufacturing of cement by NIRMA worth INR 830 crores, and production of Portland cement by NIRMA worth INR 152 crores. These investments in the cement industry is expected to generate employment for over 800 persons.

Power related investments in the district include power generation project worth INR 1394 Crores by Pradip Energy Ltd., generation and transmission of electricity worth INR 452 crores by Aasrit Energy Pvt Ltd. worth INR 452 crores by Suryachakra Energy & Infrastructure Pvt Ltd. These investments in the power sector is expected to generate employment for over 350 persons.

Details of some of the key investments proposed for the district are given below:

Table 2: Proposed Key Investments for the year 2016-22 in Bhavnagar

Sector	Proposed Investment (INR cr)	Number of Projects	Expected Employment	Key Players
Port & Maritime	USD 180 Million (soft loan from JICA)	1	525 persons Construction: 700 persons	GMB, SRAI, JICA
Infrastructure	2,460	4	-	NHAI
Gogha – Dahej Ro Ferry	500	2 (Resultant development of Gogha)	-	GMB, Saruashtra Invero
Projects registered with DIC	8,603	28	4,543 persons	NIRMA, UltraTech
Port & Maritime	USD 180 Million (soft loan from JICA)	1	525 persons Construction: 700 persons	GMB, SRAI, JICA

1.2.5. Youth Aspiration

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

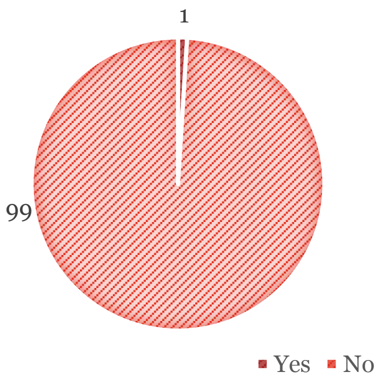
The table below provides an overview of the respondent profile:

Profile	Details
Total Sample Size	384
Gender Profile	Male- 57% Female- 43%
Age Group	15-24 years
Education Level (top 3)	Primary schooling (Class 1 to 5)- 21.3 % Higher secondary schooling with arts(Class 11 to 12)- 15.5% Engineering- 11.4%
APL/BPL/AAY/Don't know	APL-56 % BPL- 31% AAY- 0% Don't know- 13 %
Occupational Profile (top 3)	Self Employed (14%), Labourer outside village/town (14.5%), Agricultural labourer (24.1%)

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, ~99% of the respondents had not enrolled in vocational training course.

Figure 44: Percentage of respondents who completed vocational training courses - Bhavnagar



Of the total respondents who underwent vocational training (which is ~1%), majority were from ITI (31%) and polytechnic (25%). Figure 44: Percentage of respondents who completed vocational training courses - BhavnagarPercentage of respondents who completed vocational training courses - Bhavnagar exhibits the percentage of respondents who completed different types of courses as part of their vocational training.

Further, the respondents were asked level about the level of education they wished to attain. Nearly two-fifth of the respondents (39%) aspired to attain graduation and post-graduation level of education. Whereas 38% of respondents wished to attain higher secondary. The desire to attain technical education is relatively low with only 22% of respondents aspire for graduation or post-graduation in technical fields.

Figure 46: Desired level of education - Bhavnagar

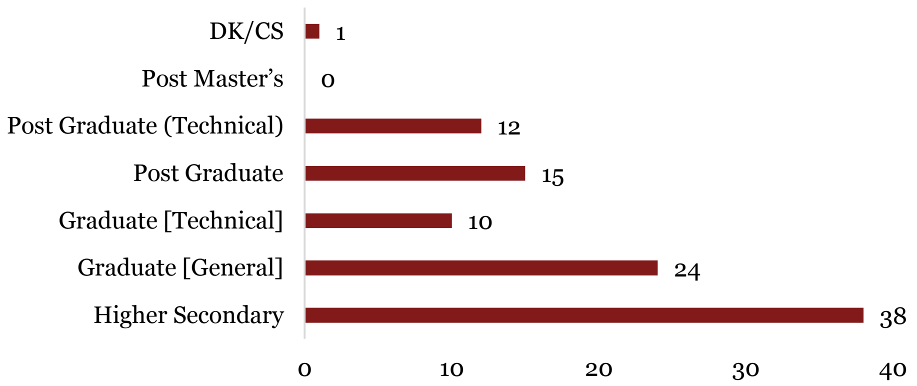
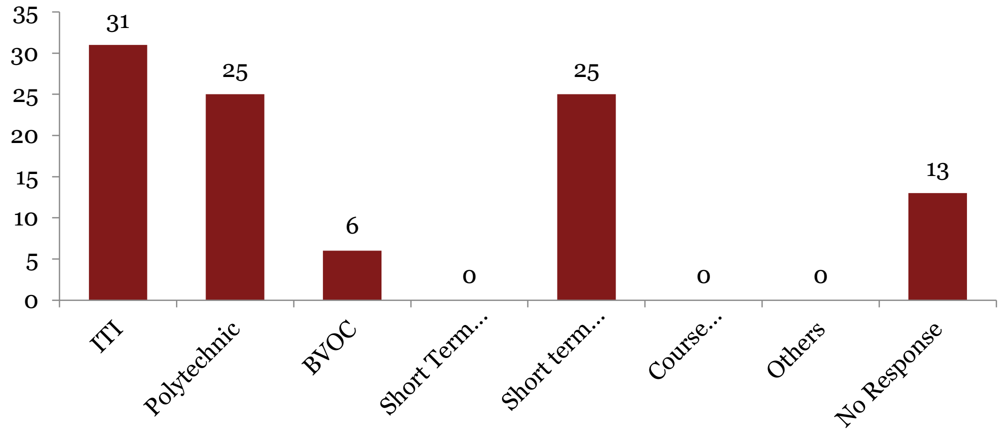


Figure 45: Percentage of respondents completed courses in vocational training - Bhavnagar

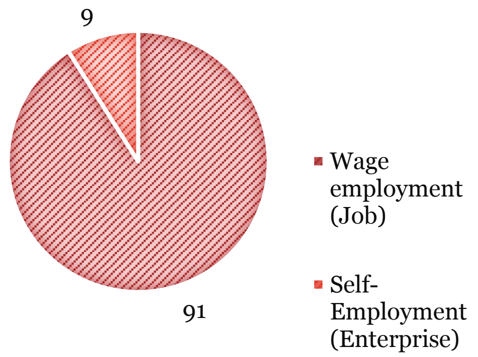


Job Aspiration

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. About 91% of the respondents reported to have preferred wage employment over self-employment.

The respondents were further asked to identify the factors important for securing employment in the area of interest. Nearly two-third (64%) of the respondents identified good personality as most important factor for securing employment followed by degree or certificate in area of work (54%), computer skills (52%) and English speaking skills (42%) followed by computer skills (23%), degree or

Figure 47: Percentage of respondents aspiring for wage and self-employment - Bhavnagar



certificate in area of work (19%) and industry specific skills (22%) (Figure 49: Factors important for securing employment in area of interest (%) - Bhavnagar).

Figure 49: Factors important for securing employment in area of interest (%) - Bhavnagar

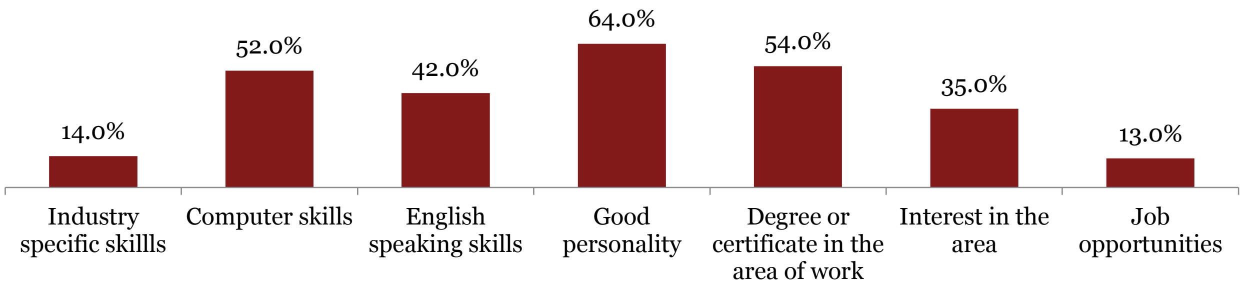
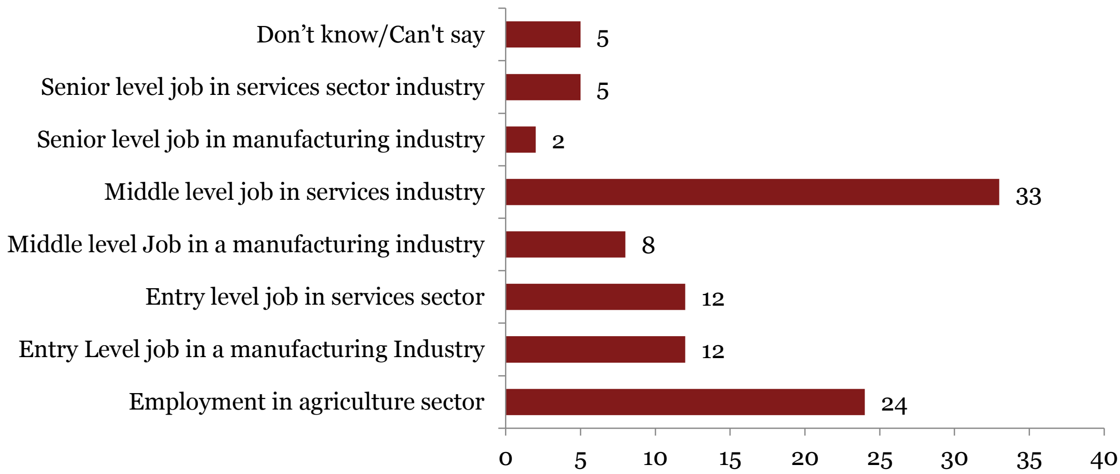


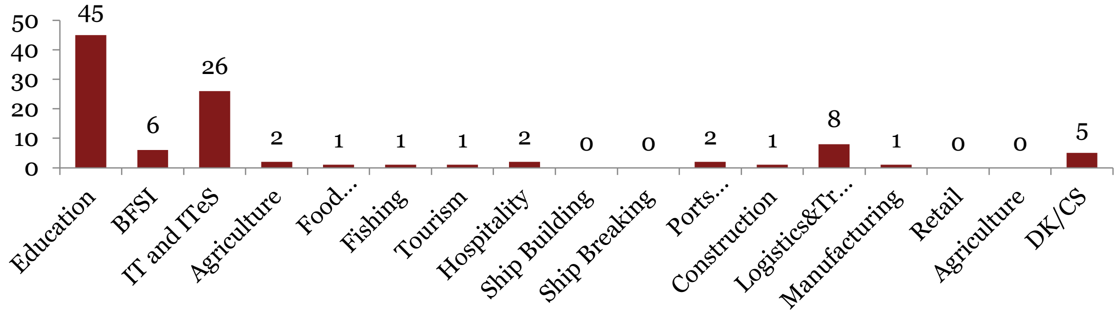
Figure 48: Desired job profile after completion of education/training - Bhavnagar



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 33% aspiring for middle level jobs and 12% aspiring for entry level jobs in service sector. This is followed by employment in agriculture sector (24%) and manufacturing sector (20%) (Figure 48: Desired job profile after completion of education/training - Bhavnagar

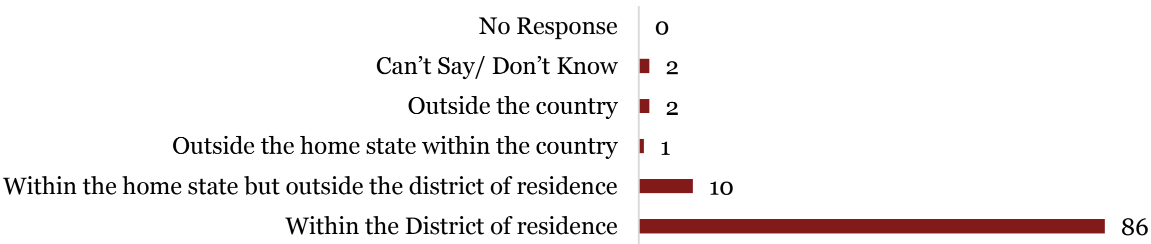
Further, Education (37%), Logistics & transport (18%), tourism (13%) and BFSI (12%) have been identified as sectors in which the respondents feel that they are mostly likely to get job which is in alignment with their aspiration for a job in the service sector space Figure 50: Sectors in which respondents’ foresee getting a desired job (%) - Bhavnagar

Figure 50: Sectors in which respondents' foresee getting a desired job (%) - Bhavnagar



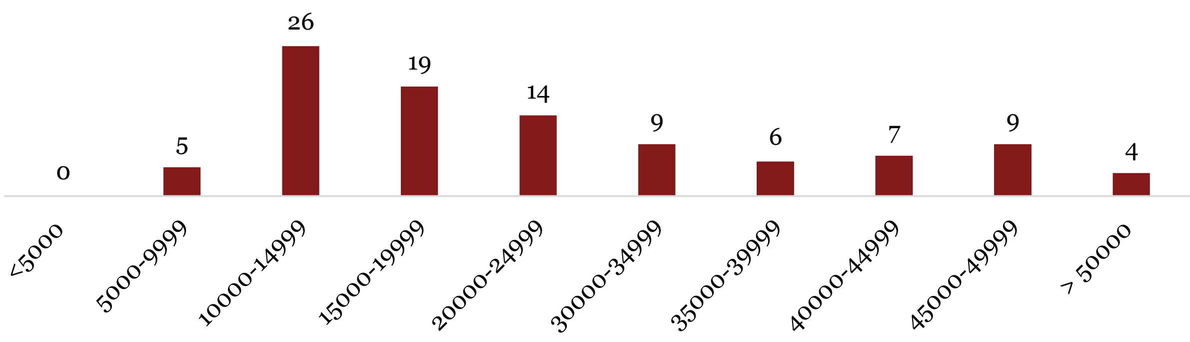
Out of the total respondents, 96% preferred to work in the same State. It is important to note that 86% of the respondents preferred to work in the same district and 10% expressed willingness to migrate to other districts in the same state suggesting lack of flexibility among the youth of the district.

Figure 51: Preferred work location of candidates - Bhavnagar



For majority of the respondents (26%), the monthly salary expectation was INR 10,000-15,000. And for 19% of respondents the expected salary is reported to be range of 15,000-20,000 per month (Figure 52: Monthly salary expectation of respondents - Bhavnagar

Figure 52: Monthly salary expectation of respondents - Bhavnagar



Training Aspiration

Regarding willingness of the respondents to participate in the training programme in next one year, 45% expressed interest whereas 36% expressed dis-interest

Further, when enquired about the key focus areas of skill training, 35% of respondents reported that emphasis must be laid on technical skills followed by personality development (29%) and proficiency in English (15%).

Figure 53: Willingness to participate in trainings (%) - Bhavnagar

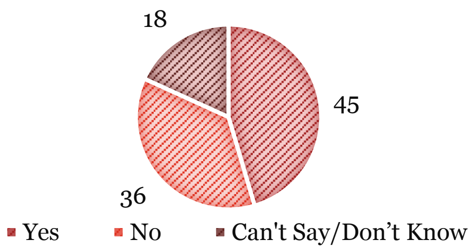
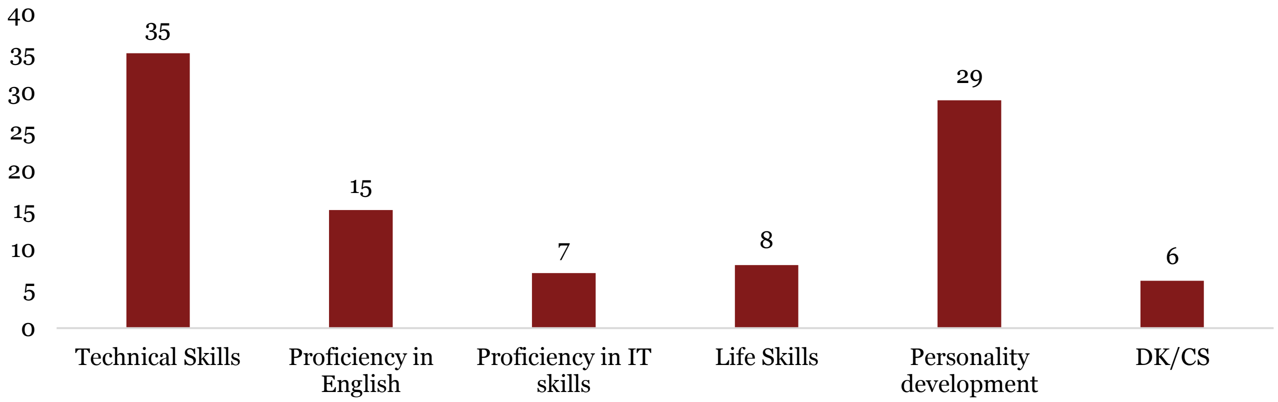
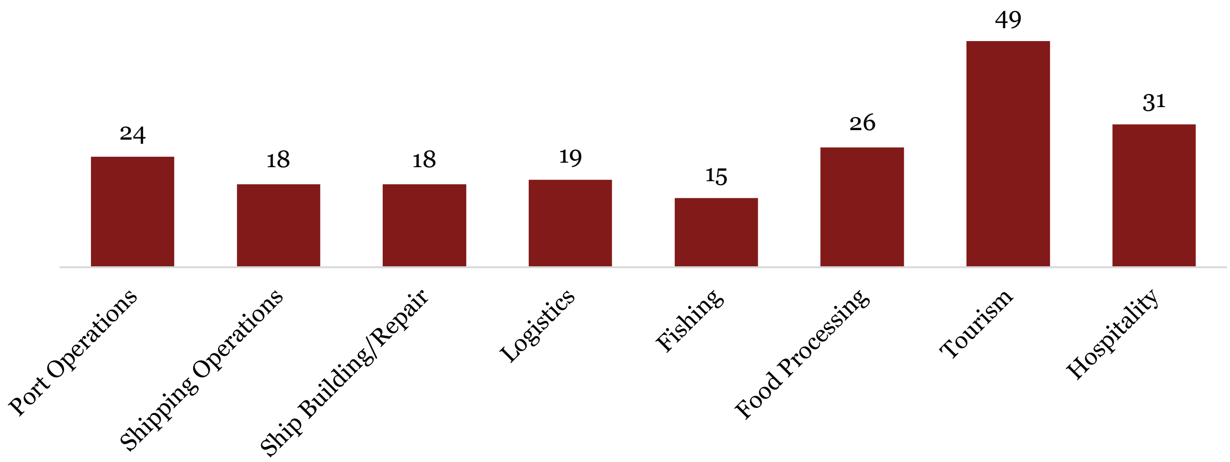


Figure 54: Focus area on skills training - Bhavnagar



Overall there is demand for training in tourism (49%), hospitality (31%), food processing (26%) and port operations (24%) (Figure 55: Willingness of respondents to participate in trainings of different sectors -

Figure 55: Willingness of respondents to participate in trainings of different sectors - Bhavnagar



Bhavnagar

Self-Employment

Regarding current status of the Entrepreneurial Venture of the respondents who aspired for self-employment, 11% were in family business and 36% were in their ideation stage.

Further, only 58% of the respondents expressed a desire to undergo a training programme for enhancing their entrepreneurial skills.

Retail business (14%), hospitality (14%), IT/ITeS services (14%), trading (14%), manufacturing (engineering trades) (14%) and tour operations (14%) have been identified as most preferred sectors for setting own enterprise.

Figure 56: Current Status of Entrepreneurial Venture (%) - Bhavnagar

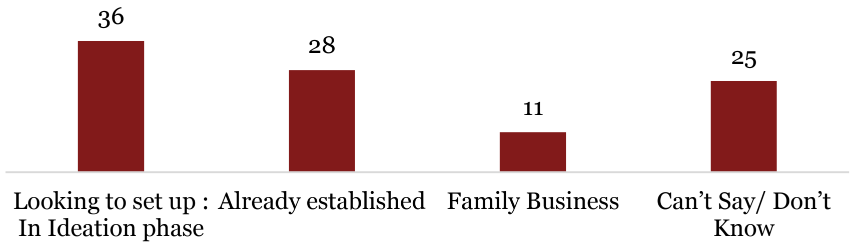


Figure 57: Interested in skill development for enhancing entrepreneurial skills (%) - Bhavnagar

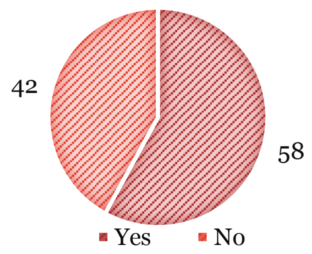
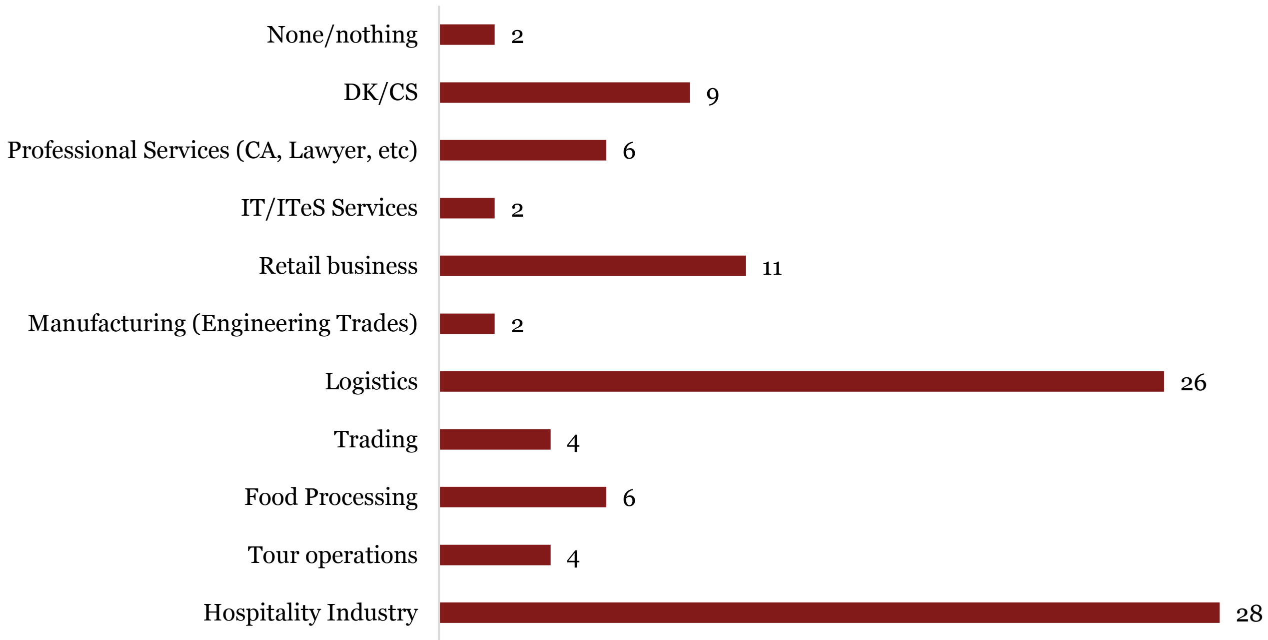


Figure 58: Sectors for establishing enterprise (%) - Bhavnagar



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

2.1. Bhavnagar and Kutch

2.1.1. Incremental Demand for Skilled & Semi Skilled Manpower[15]

The economy of Gujarat is set to be dominated by the Manufacturing Sector, greatly boosted by the strong growth in infrastructure and crucial projects like the Delhi Mumbai Industrial Corridor and emergence of ports of Kandla and Mundra, encouraging an export oriented market. Trade continues to be a driver of the state's economy and is expected to continue its demand for skilled workforce.

Table 3: Incremental Demand for Skilled & Semi Skilled Workers in Gujarat

Sector	2017	2018	2019	2020	2021	2022	Total
Core Sectors							
Logistics	5,909	6,365	6,856	7,386	7,956	8569	43,041
Tourism	10,973	11,681	12,331	13,042	13,573	13927	75,527
Construction	27,760	29,138	30,580	32,097	33,689	35359	188,623
Manufacturing	55,754	56,969	58,210	59,478	60,774	62098	353,283
Trade (Retail & Wholesale)	263,104	34,822	36,387	38,024	39,733	41518	43,386
Agriculture	30,838	30,946	31,053	31,161	31,270	31381	186,649
Total							**890,509**

Key trends in Core Sectors in the selected districts for Skilled Employment

- **Ports and Allied Sectors**:
    - **Bhavnagar:** Largely driven by the ship recycling yard at Alang, the world's largest, and nearing saturation, future demand will be driven for skilled workers for ensuring compliance to Hong Kong Convention, whereby techniques and disposal of hazardous material will get increased focus. The Ro-Pax ferry service between Gogha and Dahej and future connections as part of the Sagarmala project may increase the requirement of skilled manpower in the sector albeit marginally. The minor port of Bhavnagar is increasingly falling into disuse with larger ships unable to use the facility with low draft.
    - **Kutch:** The Kandla Port's mechanization is expected to reduce the employment requirements in the medium term while the process of mechanization can be expected to employ skilled workers in the mechanical and construction trades. Operators of the equipment might be required in the future. Skilled workers in green jobs will be required to support Adani Port's green initiative.
- **Logistics:**
    - **Bhavnagar:** The district acts as an important transit between Ahmedabad and the Port Pipavav and in future the connection to Surat via the Ro-Pax service may increase the requirement of workforce in the sector. In addition, the proximity to the Dholera SIR may add to the traffic to Pipavav. However currently, the district is plagued by problems in connectivity over road, rail, by air and by sea.

[15] District level GDDP/ Employment figures currently unavailable with Govt. of Gujarat. 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.

- **Kutch:** The continued expansion of traffic in Kandla and Mundra can be expected to drive the requirement of the truckers, 3 PL workers etc.

- **Tourism & Hospitality:**
  - **Bhavnagar:** Though currently tourism is bleak and greatly dependent on staff from outside of the State, the operationalization of the Ro-Pax Ferry, the first of its kind in India and the Dholera SIR are expected to provide some spill-over effects into Bhavnagar. Key areas would include tourism in Dahej and in Alang.
  - **Kutch:** The tourism sector has received boost in the form of initiatives like the Rann Festival. These will generate requirement for general tourism and hospitality workers, Food & beverage executives, front office managers etc. In addition, the requirement of language translators might be required to cater to the increased influx of foreign tourists.

- **Construction:**
  - **Bhavnagar:** The lack of major industrial projects or infrastructure development is hindering the growth of construction in a big way in the district. Key projects in the pipeline like the four lane of the Ahmedabad-Pipavav highway are expected to generate marginal increase in demand for labour in the sector.
  - **Kutch:** Supported by availability of minerals and land and port proximity, the Kutch region is expected to attract investments worth INR 40,000 crore in next 2 years. Firms such as Reliance ADA, Binani and DLF are setting up cement plants in the district, and the likes of IL&FS and OPG Power are constructing coal and gas based power plants.

- **Fisheries:**
  - **Bhavnagar:** The muddy shallows of the Gulf of Khambhat are unconducive to development of fisheries or related activities. However brackish water pisciculture is being explored by the Govt. of Gujarat in a small scale
  - **Kutch:** The salt flats of the Rann are pretty unconducive for inland fishing. However initiatives are on to promote aquaculture on the Gulf of Kutch in a small scale.

***Key trends in other Dominant Sectors in the District*.**

- **Manufacturing**:
  - **Bhavnagar:** The diamond processing industry, one of India's largest, is currently seeing migrations to Surat due to logistical challenges in the district and resultant increase in costs. This is decreasing opportunities in the sector. However, the food processing (peanut butter and dehydration of onions and garlic), rolling mills processing steel from the Alang Shipyard can be expected to drive requirement for skilled workforce in the manufacturing sector in the district.
  - **Kutch:** Requirement in the manufacturing sector is expected to be driven by the furniture processing sector which has witnessed consistent growth. In addition, the investments in SAW pipe manufacturing, edible oils are other key areas of skill requirements.

- **Trade**:
  - **Bhavnagar:** Organized retail is in its infancy in the district and can be expected to grow further especially with focus of Jewelry, apparel etc. The growth of tourism around Gogha and Alang can be expected to also contribute to the requirements**.**

- **Kutch:** The potential for trade in the sector is dependent on the tourism and the port sector and organized retail can be expected to be a pull in Gandhidham.

- **Agriculture**:
    - **Bhavnagar:** Cotton, groundnuts, and onions dominate the agriculture sector apart from breeding of cattle for dairy. Programmes like the Better cotton initiative to train farmers to get better yield, the Pradhan Mantri Krishi Sinchalan Yojana (PMKSY) for promoting irrigation and the increased contractual farming of Onions have increasingly demanded upskilling and training in the sector in the district and can be expected to drive the demand for skilled labour.

2.1.2. Bhavnagar

2.1.2.1. Job Roles High in Demand

This sections captures the jobs that have been reported to be high in demand in Bhavnagar. The job roles that are listed below have been identified by the stakeholders. The sub-sections below describe the job roles that are high in demand across the sectors.

2.1.2.1.1. Port and Maritime Sector

In Bhavnagar, gas cutters, crane operators, crane mechanics are high in demand at Alang Shipyard. The training on safety and operations requires further strengthening through specific QP-NOSs at the Alang Safety Training Institute and requires inclusion of full time courses in crane operations.

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

Job Roles: Port operations	Findings
• Crane Operator • Master/Captain • Driver/Chief Engineer • Excavator Operator • Loader Operator	• Poor road and rail infrastructure undermines the developments for Bhavnagar, Pipavav, Alang and Jaffarabad • Trainings required on safety issues
Job Roles: Ship recycling	**Findings**
• Safety Officer • Safety Supervisor • *Mukadam* • Crane Operator • Winch Operator • Gas Cutter	• Ship building is currently very minimal/non-existent • Well trained crane operators are high in demand • The small pool of local skilled workers contributes directly to shortages of qualified workforce • The more complex the skill, the more likely the shortage of suitably qualified local community members
Job Roles: Ro-Ro Services	**Findings**
On Board • Boatswain and Assistants • Stewards • Kitchen Steward • Executive Chef • Motormen • Lasher ***On Shore*** • Boat Jetty Operator • Terminal Executive • Front office Desk Personnel • Maintenance Personnel • Electrician / Plumber	• The Ro-Pax Ferry Service between Gogha and Dahej is eagerly anticipated and has the scope to create employment opportunities • The small pool of skilled local workers may contribute directly to shortages of skilled workforce that is from Bhavnagar

2.1.2.2. Other Priority Sectors

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.

2.1.2.2.1. Logistics

Truckers are high in demand but the existing workforce that is engaged in trucking lacks life skills. The matrix below captures the jobs roles that are high in demand:

Job Roles: Logistics	Findings
• Surveyors • Supervisors • Hydraulic Axle Operator • Truck Driver • Helper	• Life skills training required for truckers • Increased use of ICT and automation in work processes will impact the manual jobs such as gate clerks

2.1.2.2.2. Manufacturing

Emerging technology such as 3D or additive manufacturing will shape the manufacturing sector in next few years and the workforce engaged in manufacturing sector will have to upgrade its skills to be in tune with the emerging market requirements. This sector will also require technological literacy among the workers.

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

Job Roles: Manufacturing	Findings
• Production Assistants • Welder • Fitter • Mechanic • Plumber • Electrician • Turner • Motor Binding	• Supervisory skills are needed in the roles of foremen, leading hands and supervisors • Limited apprenticeship arrangement exists, combining formal training off-the-job with on-the-job training • Stakeholders indicated preference for hiring ITI graduates • Additive manufacturing or 3D printing will impact the manufacturing processes • There will be a general need for medium to high technology literacy throughout the sector

2.1.2.2.3. Fisheries

Shrimp cultivation in brackish water along the coast of Bhavnagar is picking up pace with 1000 acres having been notified by the Government for this purpose. Priority while allotting the land for carrying out shrimp cultivation should be given to the fishermen as they live in abysmal conditions and way below poverty line. They should be given trainings to teach them how to undertake shrimp cultivation with follow ups to see them through in this venture. Further, shrimp export houses in Bhavnagar area demand skilled workforce.

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

Job Roles: Fisheries	Findings
• Cold Storage Technician • Warehouse Manager • Mechanic • Glass/Tunnel/Trolley Freezer Operator • Grading supervisor • De-heading supervisor • Aquaculture Technician	• Bhavnagar can hugely benefit from improved mariculture practices • Export potential for shrimps • Unused land parcels can be used for mariculture • Improved skills are particularly needed for mariculture

Job Roles: Fisheries	Findings
• Mariculture Technician	

2.1.3. Kutch

2.1.3.1. Job Roles High in Demand

This section captures the jobs that have been reported to be high in demand in Kutch district. The job roles that are listed below have been identified by the stakeholders. The sub-sections below describe the job roles that are high in demand across the sectors.

2.1.3.1.1. Port and Maritime Sector

In Kutch, crane operators, pay loaders, truck drivers, surveyors are high in demand. Job roles that require specialized training include on-board stevedoring, crane operators, railway handling operations at the port such as Gangman, Sr. Gangman, and gagging plant operator. LNG terminals are being planned; there may be a need for skilled professionals in petroleum engineering, mechanical and electrical instrumentations.

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

Port operations and Shipping	Findings
• RTG Crane Operator • RMG Crane Operator Pedestal Crane Operator • Straddle Crane Operator • Reach Stacker Operator • Quay Crane operator • Tippers • Mobile Harbour Crane operators • Gangman • Track Cleaning • Winchman • Rivetter • Safety Officers/ Safety Supervisor • Truckers • Surveyors	• Trainings required on safety issues especially in handling crane operations • Well trained crane operators are difficult to find in the job market • Port operators have to train the crane operators for at least three months • High demand for surveyors who could required to assess, monitor and report condition of vessels, containers and cargos as well as inspect damages caused to vessel, containers and cargos • The shortfall in skilled workforce in the sector is being met with migrant labor • Job losses amongst the low skilled in the sector are likely to happen; frequent upskilling of workforce is required

2.1.3.2. Other Priority Sectors

The job roles that are high in demand in the priority sectors are listed in this sub-section.

2.1.3.2.1. Mining and Mineral Based Industries

Cement industries in the district are heavily mechanized and require specialized technical skills and knowledge of cement technology operations. Skill development could focus on developing technical knowledge as well as safety norms. The workforce engaged in this sector will have to upgrade its skills to be in tune with the emerging market requirements. This sector will also require technological literacy among the workers.

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

Job Roles: Mining and Mineral Based Industries	Findings
• Mining Engineers • Mining Sirdar • Mining Mate • Overman • Safety Officers • Heavy Earth Moving Machinery-Mechanic • Excavator Operators • Loader operator	• Given the specialized nature of mining operations, there is shortage of skilled and certified professionals • Supervisory skills are needed in the roles of foremen, leading hands and supervisors • Limited apprenticeship arrangement exists, combining formal training off-the-job with on-the-job training • Stakeholders indicated preference for hiring ITI graduates • There will be a general need for medium to high technology literacy throughout the sector

2.1.3.2.2. Timber

Timber industry mainly employs unskilled labour with little or no training on safety norms which lead to accidents. Skill development with focus on safety norms is essential. Given that timber is extensively imported, value addition in the form of carpentry, furniture production or other wood based products need to be focused upon.

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

Job Roles: Timber	Findings
• Saw Mill Machine Operators • Timber Mill/ Saw yard worker •	• Trainings could focus on safety issues • Limited apprenticeship arrangement exists, combining formal training off-the-job with on-the-job training • The shortfall in skilled workforce in the sector is being met with migrant labor

2.1.3.2.3. Tourism

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

Job Roles: Tourism	Findings
• Tour Guides, Tour Escort • Tour Operators • Chef-de partie • Multi-Cuisine Chef	• Small pool of adequately skilled personnel at the skilled worker level results in a small pool of people from which to draw for higher positions • Work-force is trained, but it generally lacks skills and experience required in the workplace • Focus required on communication skills/public relations; reporting skills; administration skills and financial skills

2.2. Emerging Job Roles

In light of the upcoming projects in the identified sectors across the six districts and interactions with the representatives of the industry and sector experts certain emerging job roles are identified that may be poised to become high demand job roles in near future:

Job Roles	Sector Skill Council	Description
Cross-logistics operator	Logistics	Selects the optimal methods of cargo and delivery, controls and adjusts traffic throughout a multimodal network; monitors logistics hubs; manages traffic flows in transportation networks
Intermodal transport Technician	Logistics	Services technologically driven logistics structures and intermodal cargo hubs, infrastructure, and port facilities

Job Roles	Sector Skill Council	Description
Automated transportation system operator	Logistics	Manages the operations and servicing of robotic transportations networks and drone enabled logistics
Port ecologist	Green Jobs	Specializes in monitoring and controlling the environmental characteristics of the ports, vessels, and the surrounding ecology
Marine infrastructure system	Construction/ Green Jobs	Specialist who implements technologies to augment the resilience of shoreline structures and vessels to different threats
Environmental analyst	Mining	Specializes in environmental threat analysis, and environment protection during resource extraction and recovery activities
Industrial robot operator	Manufacturing	Manages and operates robotic devices for manufacturing (painting, welding, packing and stamping jobs)
3D printing designer in manufacturing	Construction	Designs structural models and selects the best sets of components for their printing; supports the factory floor printing process
Specialist in old structure renovation/ reinforcement	Construction/ Green Jobs	Determines the degree of wear and tear of historical structures and buildings, works out for the renovation and reinforcement of buildings and monuments such as forts
Construction technology upgrade specialist	Construction/ Green Jobs	Professional with a solid knowledge of advanced construction technologies for upgrading existing historical structures and buildings, utilizing advanced solutions for electricity and water supply
Smart house infrastructure designer	Construction/ Green Jobs	Specialist in the designing, installing, and managing smart home management systems
Foreman watcher	Construction	Construction specialist who will use digital structure designs to evaluate the construction progress and adjust the construction processes based on the data analysis
Accessible environment Designer	Construction	Specialist who develops infrastructural solutions for children, senior persons and disabled persons around smart city properties
3D printing designer in construction	Construction	Designs structural models and selects the best sets of components for their printing; supports the house printing process
Solar Panel Technician	Construction/ Green Jobs	Designs and operates structural models for generating power, using renewable energy
Advanced fabrics designer	Apparel	Engages in designing new synthetic fabrics and materials with defined properties
Destination brand manager	Tourism	Works on the web and creates the images and legends of a tourist destinations, and adds designs, news, tourist services, and various events
Robot attendant	Tourism	Specializes in managing and maintaining hotel robots
Integrated industrial security auditor	Security	Specializes in assessment of the state of security at manufacturing industrial and port facilities and monitors all types of threats such as physical damage, fire, environmental threats, and cyber attacks

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 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 district. 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[16] 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 21 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 running the training programmes including 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.

[16] Roughly 300 primary consultations inform the development of this plan

3.4. Summary for Bhavnagar

Sl. No.	Project Name	Job Roles	Type of training	No. of people to be trained
1	Skill Development Centre for Ports and Logistics	Safety Officers and Workers	Fresh and RPL	1500 persons in next 5 years
2	Training for Food Technicians	Food Dehydration Technician, Food Processing Worker	Fresh and RPL	1200 persons in next 5 years
3	Shrimp Cultivation in Brackish Water	Technician	RPL	1500 persons in next 5 years
4	Micro Irrigation Technician and Rain Water Harvesting	Micro Irrigation Technician	Fresh	750 persons in next 5 years

3.5. Action Plan for Bhavnagar

Project 1: Skill Development in Ports and Logistics Sector					
Key economic drivers		• JICA grant for making Alang Ship breaking yard Hong Kong Convention Compliant • Four laning of Ahmedabad-Pipavav Highway • Gogha-Dahej RoPax Ferry Service			
Rationale		While the Safety Training institute, Alang is providing a mandatory basic safety and equipment handling training for all workers at the yard, it has been felt tha a constant updation of safety training is required, to handle increasingly sophisticated ship design. In addition, the HKC compliance requires that there are increased number of safety officers.			
Trainings		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Course on Best Practices to be followed while Ship Recycling for Safety Officers	• Existing Safety Officers / Muqadams • Graduates from the District	Fresh Training	500 persons in the next 5 years
		"Monitoring of Worker Safety" Trainings for Muqadams	• Muqadams in Alang Shipyard	RPL	500 persons in next 5 years
		Refresher Course on Basic Safety for All Workers	• Workers in Alang	RPL	500 persons in next 5 years
Availability of curriculum	**Job Role**	**Target Groups**	**QP/NOS**	**MES**	**CTS**
	Safety Officer	Existing Muqadams, Graduates in the District	No course available	No course available	No course available
	Workers	Workers in the Alang Shipyard	• QP does not exist	No course available	No course available
Investment (INR In lakhs)		**Course on Best Practices to be followed while Ship Recycling for Safety Officers**			

	Operational Expenditure	40
	“Monitoring of Worker Safety” Trainings for Muqadams	
	Operational Expenditure	19
	Refresher Course on Basic Safety for All Workers	
	Operational Expenditure	10
	Total operational expenditure	69
Potential Partners	**Partner**	**Areas of Support**
	Safety Training Institute – Alang (Gujarat Maritime Board)	• Space and infrastructure for establishing the training center • Input for designing curriculum • Provision of used equipment for training • Facilitate implementation of RPL for existing work force • Management of Training Facility
	Ship Recycling Association of India	• Industry interface • Input for designing curriculum • Provision of used equipment for Training • Provision of practical and OJT for trainees
	Training Service Provider	• Training delivery • Co-management of the training facility
	Strategic Manufacturing Sector Skill Council	• Development of QPs for the identified job roles • Develop model training programs for the identified Job Roles • Identification and certification of Trainers • Identification and certification of assessors • Assessment of trainees • Certification of Trainees
Training Delivery	• Safety Training Institute to upgrade/allocate training space • Training facility to be managed and maintained by Safety Training Institute- GMB • Private training operator to provide qualified trainers and mobilize trainees • SRAI to facilitate practical trainings and OJT • Private players to use the training facility to deliver training programme • Strategic Manufacturing Sector Skill Council to assess and certify • SRAI to bring on industry partners	

Work Plan

Port and Logistics	in Months								
	1	2	3	4	5	6	7	8	9
Partnership with SSC, Industry Partners and Knowledge partners									
Development of QPs									
Establishment of Training infrastructure and facility									
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									

Project 2: Training for Food Technicians					
Key economic drivers		• Gujarat produces nearly 50% of the countries peanut and onions, of which Bhavnagar is a major contributor • High demand for processed onions, peanuts domestically and internationally.			
Rationale for Training		There is an increased demand for processed foods like Peanut butter and powdered onion and garlic both in the domestic and international markets. Potential demand in the upcoming years for food technicians in the next 2-3 years. A shortage of skilled labour in the form of food technicians is predicted by the industry due to the remoteness of the district. Trainings of the same can be taken alongside efforts to promote the food processing industry. The industry employs a large number of minimally skilled women. Such trainings can boost their productivity and their own self esteem.			
Trainings		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Food Dehydration Technician	• Local youth	Fresh Training	300 persons in next 3 years
		Food Processing Worker	• Local youth	Fresh Training	300 persons in next 3 years
				RPL	600 persons in next 3 years
Availability of curriculum	**Job Role**	**Target Group**	**QP/NOS**	**MES**	**CTS**
	Food Dehydration	Graduates in the district	• Fruits and Vegetables Drying or Dehydration Technician	Fruits & Vegetables Processing	No course available
	Food Processing Worker	Existing and Potential Food Processing Workers	• Industrial Production Worker – Food Processing	No Generic Course but available for Processing of sugar and Cocoa Confectionary products	No course available
Investment (INR In lakhs)		**Incubation and training center**			
		Operational Expenditure (in Lakhs)	89		
		Capital Expenditure (in Lakhs)	15		
Potential Partners		**Partner**	**Areas of Support**		
		Industries/ MSME	• Classification of Food processing Cluster in Mahuva – Pipavav belt		
		Industry Associations (Food Processing)	• Industry interface • Facilitate recruitment		
		Training Partner	• Training delivery • Co-management of the training facility		

	Food Processing Sector Skill Council	• Develop model training programmes for the identified Job Roles • Identification and certification of Trainers • Identification and certification of assessors • Assessment of trainees • Certification of Trainees
	DDU-GKY/ PMKY/ DET	• Funding
Training Delivery	• The training center will be setup by a training provider in an existing and underutilized infrastructure in Bhavnagar/ Mahuva. The TSP has to be empaneled with FICSI and provide trainings under DDU-GKY/ PMKVY/ Schemes under DET- Gujarat	

Work Plan

Food Technician	in Months				
	1-3	4	5	6	7
Cluster Development					
TSP Affiliation					
Center setup					
Appointment of additional staff members					
Mobilization of prospective trainees					
Enrolment of trainees					
Roll-out of training programme					

Project 3: Shrimp Cultivation in Brackish Water					
Key factors	• 1000 acres having been notified by the government for this purpose • 100 acres have been allotted for this purpose and 300 acres will be allotted in the coming year to individuals, cooperatives and companies				
Rationale for the Trainings	The quality of sea water around Bhavnagar is poor and unfit for marine fishing, thus fishing is a miniscule activity in the district and the fisher folk are impoverished. Shrimp cultivation may enable them to access better livelihoods.				
Trainings		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Aquaculture Technician/Worker	• Primary education	Fresh Training	-
				RPL/Up Skilling	1500 persons in next 5 year
Availability of curriculum	**Job Roles**	**Target Groups**	**QP/NOS**	**MES**	**CTS**
	Technician	Fisher folk	QP Available for • Aquaculture technician • Aquaculture worker • Aquaculture worker	No course available	No course available

			• Brackish water aquaculture farmer • Mariculture operator • Shrimp farmer		

Investment (INR In lakhs)	**Incubation and training center**	
	Operational Expenditure	72
Potential Partners	**Partner**	**Areas of Support**
	Fisheries Dept. and District administration	• Classification of Food processing Cluster in Mahuva – Pipavav belt • Funding of Training through RSETI
	CSMCRI/ CMFRI	• Knowledge partnership and identification of conducive stretches
	TSP	• Training delivery
	ASCI (SSC)	• Develop model training programmes for the identified Job Roles • Identification and certification of Trainers • Identification and certification of assessors • Assessment of trainees • Certification of Trainees
	DDU-GKY/ PMKVY	• Funding
Training Delivery	• The training center to be setup by a training provider in an existing and underutilized infrastructure in Mahua Block with access to agricultural land • District Administration to identify locations suitable for Brackish water Shrimp Cultivation with CSMCRI/ CMFRI • District Administration to allocate land plots to suitable beneficiaries • SSC Empaneled TSP to be Selected by Fisheries Dept. / DDU-GKY	

Work Plan

Shrimp Cultivation	**in Months**				
	1	**2**	**3**	**4**	**5**
Allocation of Land for Cultivation					
Selection of Beneficiaries					
TSP Affiliation					
Center setup					
Appointment of additional staff members					
Mobilization of prospective trainees					
Enrolment of trainees					
Roll-out of training programme					

Project 4: Micro Irrigation Technician and Rain Water Harvesting	
Key factors	• Cotton is a dominant crop in the district owing to the rich soil. Cotton is 40% of the kharif produce in the district

<table>
<tr><td colspan="2"></td><td colspan="4">Irrigation is largely through bore wells and is dependent on rainfall for its dominant crop. Similarly erratic rainfall in recent years has made the yields unpredictable</td></tr>
<tr><td colspan="2">Rationale for Training</td><td colspan="4">Drip irrigation, rainwater harvesting can be used to conserve water and for targeted irrigation of the crop to increase productivity and provide self-employment for youth.</td></tr>
<tr><td colspan="2" rowspan="3">Trainings</td><td>Training courses</td><td>Target Beneficiaries</td><td>Type of Trainings</td><td>Total Number of beneficiaries</td></tr>
<tr><td rowspan="2">Micro Irrigation Technician</td><td rowspan="2">Secondary Education</td><td>Fresh Training</td><td>750 persons in next 5 years</td></tr>
<tr><td>RPL / Up Skilling</td><td>-</td></tr>
<tr><td rowspan="2">Availability of curriculum</td><td>Job Role</td><td>Target Groups</td><td>QP/NOS</td><td>MES</td><td>CTS</td></tr>
<tr><td>Micro Irrigation Technician</td><td>Farmers, Secondary Education completed youth in the district</td><td>Micro Irrigation Technician</td><td>No course available</td><td>No course available</td></tr>
<tr><td colspan="2" rowspan="3">Investment (INR In lakhs)</td><td colspan="4">Incubation and training center</td></tr>
<tr><td colspan="2">Capital Expenditure</td><td colspan="2">4 Lakhs in existing RSETI Centre/ Extension Centre</td></tr>
<tr><td colspan="2">Operational Expenditure</td><td colspan="2">90</td></tr>
<tr><td colspan="2" rowspan="5">Potential Partners</td><td colspan="2">Partner</td><td colspan="2">Areas of Support</td></tr>
<tr><td colspan="2">Agriculture Dept./ Pradhan Mantri Krishi Sichalan Yojana</td><td colspan="2">Design of Scheme
Awareness Generation on Micro Irrigation among farmers
Funding of Training through RSETI</td></tr>
<tr><td colspan="2">Agriculture University and Better Cotton Initiative (BCI)</td><td colspan="2">Knowledge partnership and identification of conducive stretches
Promotion of micro irrigation among farmers</td></tr>
<tr><td colspan="2">TSP</td><td colspan="2">Mobilization and Training of beneficiaries</td></tr>
<tr><td colspan="2">ASCI (SSC)</td><td colspan="2">Develop model training programs for the identified Job Roles
Identification and certification of Trainers
Identification and certification of assessors
Assessment of trainees
Certification of Trainees</td></tr>
<tr><td colspan="2">Training Delivery</td><td colspan="4">The training center will be setup by a training provider in an existing and underutilized infrastructure in the District with access to agricultural land preferably an RSETI Extension Training Centre
SSC to design curriculum
SSC Empaneled TSP to be Selected by Agriculture Dept. / Rural Development Dept.</td></tr>
</table>

Work Plan

Micro Irrigation and Rain harvesting	**in Months**

	1	2	3	4	5
Partnership with SSC, Industry Partners and Knowledge partners					
TSP Affiliation					
Center setup					
Appointment of additional staff members					
Mobilization of prospective trainees					
Enrolment of trainees					
Roll-out of training programme					

3.6. Summary for Kutch

Sl. No.	Project Name	Job Roles	Type of training	No. of people to be trained
1	Skill Development Centre for Ports and Logistics	Drivers, Machine Operators, Crane Operators, Technical Surveyors, Security Guard (particularly at CFS)	Fresh and RPL	2500 persons in next 5 years
2	Incubation and training centre for artisans (with focus on entrepreneurial development)	Mud Mirror, Wood work, leather, handloom, metal bell, and embroidery artisans; producers	Fresh and RPL	500 persons in next 5 years
3	Training in Cement Technology	Cement Technician, Production Staff, Control Staff	Fresh	1250 persons in next 5 years

Sl. No.	Project Name	Job Roles	Type of training	No. of people to be trained
4	Value addition courses in timber industry through carpentry/product designer courses in furniture	Carpenter, Designer	Fresh	750 persons in next 5 years

3.7. Action Plan for Kutch

Project 1: Skill Development Center for Ports and Logistics	
Key economic drivers	• One major port - Kandla and one non-major port – Mundra (Adani) • KPT has massive expansion plans as well as mechanization plans worth USD 700 Mn • Construction of LNG terminal envisaged by Adani port • Proposed SIR in Anjar with an area of 690 sq km
Rationale	Containerization has drastically changed the trade scenario in Shipping. The requirement for surveyors in the sector is continuous as staff is required to assess, monitor and report condition of vessels, containers and cargos as well as inspect damages caused to vessel, containers and cargos. There are several types of surveys that are required to be carried out at the Port on docking of the vessel including Produce Cargo surveys, Container Surveys, Vessel Surveys, Bunker Surveys etc. Bunker surveys are carried out to measure and ascertain the quantity of Bunker (usually Fuel Oil (FO), Diesel Oil (DO), and sometimes Lubricating Oil (LO)) on board at the specific time. Bunker surveyors particularly require technical knowledge (to identify and record depth of Tank, Reference Height, and recommend Measuring Method to be used (Sounding) for each Oil Tank). Other forms of Technical Surveys include Container Inspection Survey to ensure that the container is suitable for the

		transportation of goods, will it be able to withstand the load, and the maintenance has not been compromised for any other unique and specific rating the container might have. Tally surveys of cargo, inspection of produce cargos are some other surveys which are not technical in nature and require mainly literates. The potential employers for trained surveyors will be Shipping Lines firms and Surveyor Agencies. On account of presence of several shipping line firms particularly Customer Freight stations (CFS)/ Inland Container Depots and Shipping line agencies handling containers, the requirement for security personnel is high in Kutch. Cargoes are stationed at CFS and ICD's for several days, hence security is a round the clock requirement. Based on interactions with CFS players, the need for trained security personnel emerged considering the crucial role they play in keeping the cargo's safe at CFS or warehouses.			
Job roles in demand		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Drivers	• Existing Drivers • Coastal communities	RPL	150 persons in 5 years
				Fresh training	150 persons in 5 years
		Machine Operators	• Existing operators • Coastal communities	RPL	300 persons in 5 years
				Fresh training	300 persons in 5 years
		Crane Operators	• Existing crane operators • Project affected people • Coastal communities	RPL	300 persons in 5 years
				Fresh training	200 persons in 5 years
		Technical Surveyors	• Coastal communities	Fresh Training	600 persons in 5 years
		Security Guard (particularly at CFS)	• Coastal communities • Migrants	Fresh training	500 persons in 5 years
Availability of curriculum	**Job Roles**	**Target Groups**	**Available QP/NOS**	**MES**	**CTS**
	Drivers	Drivers	• Commercial vehicle driver • Locomotive driver	Course available for: • Driver HMV • Driver LMV	No course available
	Machine Operators	Machine operators	QP available for • Goods packaging machine operator	No course available	No course available
	Crane Operators	Crane operators	QP available for • Crawler crane operator • Hydra crane operator • Tyre mounted crane operator • Junior crane operator	No course available	No course available

<table>
<tr><td></td><td></td><td></td><td>• Overhead crane operator</td><td></td><td></td></tr>
<tr><td></td><td>Technical Surveyors</td><td>Technical Surveyors</td><td>QP not available</td><td>No. course available</td><td>• Surveyor</td></tr>
<tr><td></td><td>Security Guards</td><td>Security guards</td><td>QP available for
• Unarmed security guard
• Armed security guard
• Security supervisor</td><td>• Industrial security guard
• Security guard (general)
• Security supervisor (general)</td><td>No course available</td></tr>
<tr><td colspan="2" rowspan="12">Investment (INR In lakhs)</td><td colspan="4">Drivers</td></tr>
<tr><td>Operational Expenditure</td><td colspan="3">20</td></tr>
<tr><td colspan="4">Machine operators</td></tr>
<tr><td>Operational Expenditure</td><td colspan="3">36</td></tr>
<tr><td colspan="4">Crane operators</td></tr>
<tr><td>Operational Expenditure</td><td colspan="3">22</td></tr>
<tr><td>Technical surveyors</td><td colspan="3"></td></tr>
<tr><td>Operational Expenditure</td><td colspan="3">48</td></tr>
<tr><td>Security Guards</td><td colspan="3"></td></tr>
<tr><td>Operational Expenditure</td><td colspan="3">72</td></tr>
<tr><td>Total operational expenditure</td><td colspan="3">198</td></tr>
<tr><td>Capital Expenditure for training centre[17]</td><td colspan="3">500</td></tr>
<tr><td colspan="2" rowspan="5">Potential Partners</td><td>Partner</td><td colspan="3">Areas of Support</td></tr>
<tr><td>Kandla port/Adani Port</td><td colspan="3">• Space and infrastructure for establishing the training center
• Access to port facilities for practical training
• Guest faculty
• Input for designing curriculum
• Provision of used equipment for training
• Facilitate implementation of RPL for existing work force
• Provide guest faculty and facilitate on the job training</td></tr>
<tr><td>Industry Associations</td><td colspan="3">• Industry interface
• Facilitate implementation of RPL for existing workforce
• On the job training</td></tr>
<tr><td>Industry Partner</td><td colspan="3">• Training delivery
• Co-management of the training facility</td></tr>
<tr><td>Logistic Sector Skill Council
Security Sector Skill Council</td><td colspan="3">• Development of QPs for the identified job roles
• Develop model training programmes for the identified Job Roles
• Identification and certification of Trainers
• Identification and certification of assessors
• Assessment of trainees
• Certification of Trainees</td></tr>
<tr><td colspan="2">Training Delivery</td><td colspan="4">Option 1
• Kandla port/Adani Port or MoS creates the training facility</td></tr>
</table>

[17] The cost of building a facility of 11,000 sq feet that will have the training centre and residential quarters for trainees and cost of procuring three stimulators. The cost of building the facility is applicable for option 1.

	• Training facility to be managed and maintained by Kandla port/Adani Port or MoS • Kandla port/Adani Port to deliver the training and provide qualified trainers and mobilize trainees **Option 2** • Private training provider to rent/develop the training facility and deliver the training programme

Work Plan

Port and Logistics	in Months								
	1	2	3	4	5	6	7	8	9
Partnership with SSC, Industry Partners and Knowledge partners									
Development of QPs									
Establishment of Training infrastructure and facility									
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									

Project 2: Incubation[18] and training centre for artisans (with focus on entrepreneurial development)	
Key economic drivers	• Kutch is home to around 4000 artisans • The variety of art and craftwork present in the district is immense and includes lacquer work, pottery, mud work, embroidery, block printing, pen knives and nutcrackers to name a few • Export potential of handicrafts
Rationale for the project	The district is home to artisans spread across 4000 villages. The variety of art and craftwork present in the district is immense and includes lacquer work, pottery, mud work, embroidery, block printing, pen knives and nutcrackers to name a few. While most artisans have a home-based business, they are often faced with the issue of sufficient market linkage opportunities or lack the ability to identify and pursue such opportunities. For this reason, entrepreneurship development for these artisans will enable them to understand the market beyond the local, establish strong forward linkages and thus reduce dependence on intermittent wage labour. An incubation centre will have common facility centres, laboratories for product testing, provision of design input, marketing support, and support for patents, etc. It will essentially support artisans and young entrepreneurs to devise business plans, provide an infrastructure to kick-start their enterprise and facilitate links that are congenial for their survival and growth. An important component within the incubation centre will be to provide skilling to enhance the entrepreneurial abilities of the artisans as itis an immediate requirement

[18] The incubation centre will have common facility centres, laboratories for product testing, provision of design input, marketing support, and support for patents etc. It will essentially support artisans and young entrepreneurs to devise business plans, provide an infrastructure to kick-start their enterprise and facilitate links that are congenial for their survival and growth. An important component within the incubation centre will be to provide skilling to enhance the entrepreneurial abilities of the artisans.

		for them and majority of them depend on exhibitions/expos alone, for selling their produce which results in inconsistent source of income. Thus, support in the form of market linkages as well as development of entrepreneurial skills will enable establishment of self-run businesses and hence provide financial stability.			
Job roles in demand		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Handicrafts and Handloom Artisans (Mud Mirror, Wood work, leather, handloom, metal bell, embroidery etc.)	• Local artisans • Local youth and young entrepreneurs	Fresh Training	500 in 5 years
Availability of curriculum	**Job roles**	**Target Group**	**Available QP/NOS**	**MES**	**CTS**
	Mud Mirror, Wood work, leather, handloom, metal bell, embroidery etc.)	• Handicraft and Handloom artisan • Project affected people	QP available for: • Artisans	No course available	
	Entrepreneurial Skills	Entrepreneur	QP does not exist	No course available	No course available
Investment (INR In lakhs)		**Incubation and training centre**			
		Operational Expenditure	87		
		Capital Expenditure[19]	45		
Potential Partners		**Partner**	**Areas of Support**		
		MoSDE (through one of its scheme on Entrepreneurship)	• Space and infrastructure for establishing the incubation and training center		
		Entrepreneurship development Institute	• Inputs in designing curriculum on entrepreneurship skill development • Guest faculty		
		NID	• Input for designing curriculum for various art crafts • Guest faculty		
		Industry Associations	• Industry interface • Facilitate sourcing of crafts to retails chains • Facilitate exports of crafts		
		Training Partner	• Training delivery • Co-management of the training facility		
		Handicraft Sector Skill Council	• Development of QPs for the identified job roles • Develop model training programmes for the identified Job Roles • Identification and certification of Trainers • Identification and certification of assessors • Assessment of trainees • Certification of Trainees		

[19] Cost of establishing the incubation centre

Training Delivery	**Option 1** • The incubation centre to be set up and run by MoSDE **Option 2** • The incubation centre to be set up by MSME but run by empaneled TSP

Work Plan

Handicraft	in Months					
	1	2	3	4	5	6
TSP Empanelment						
SSC affiliation						
QP development						
Training centre setup						
Incubation centre setup						
Appointment of additional staff members						
Mobilization of prospective trainees						
Enrolment of trainees						
Roll-out of incubation centre and training programme						

Project 3: Training in Cement Technology					
Key economic drivers		• Proximity to ports resulting in high requirement of professionals in the construction sector with expertise in cement technology and production/quality • Two major cement players: Sanghi Cements and UltraTech			
Rationale for the project		The cements firms demand skilled workforce.			
Job roles in demand		**Training courses**	**Target Beneficiaries**	**Type of Trainings**	**Total Number of beneficiaries**
		Cement Technician	• Local youth	Fresh Training	500 in 5 years
		Production Staff	• Local youth	Fresh Training	450 in 5 years
		Control Staff	• Local youth	Fresh Training	300 in 5 years
Availability of curriculum	**Job roles**	**Target group**	**Available QP/NOS**	**MES**	**CTS**
	Cement Technician	Cement technician	No QP available	No course available	No course available
	Production Staff	Production technician	No QP available	No course available	No course available
	Quality Staff	Quality	QP available for • Quality technician	Course available for • Quality Inspector-Concrete	No course available
Investment (INR in Lakhs)		**Cement technology**			
		Operational Expenditure	120		
		Production technology			
		Operational Expenditure	93		
		Quality technology			
		Operational Expenditure	62		
		Total operational expenditure	**275**		
Potential Partners		**Partner**	**Areas of Support**		

	Training Partner	• Space and infrastructure for establishing the training center • Training delivery • Co-management of the training facility
	Industry Associations (Cement Association)	• Industry interface • Facilitate in On-Job-Training
	Construction Skill Development Council of India	• Development of QPs for the identified job roles • Develop model training programmes for the identified Job Roles • Identification and certification of Trainers • Identification and certification of assessors • Assessment of trainees • Certification of Trainees
Training Delivery	• Engage a TSP that is affiliated with DDU-GKY and PMKVY to deliver the training • The training partner will be responsible for managing the entire operations of the training centre	

Work Plan

Cement Technology	in Months					
	1	2	3	4	5	6
TSP Empanelment						
SSC affiliation						
QP development						
Training centre setup						
Mobilization of prospective trainees						
Enrolment of trainees						
Roll-out of training programme						

Project 4: Value addition courses in timber industry through carpentry/product designer courses in furniture	
Key economic drivers	• Kutch handles almost 60-70% of Timber imports from the country • Several saw mills/units are located in Kutch region • Kandla also has been declared as an import zone for timber with 952 licensed wood working factories and over 2000 saw mills
Rationale for a training centre	Kutch handles almost 60-70% of Timber imports from the country. This has led to establishment of several saw mills/units in the region. Kandla also has been declared as an import zone for timber with 952 licensed wood working factories and over 2000 saw mills. Ease of raw material availability here presents the opportunity for the district to engage in further value additions and capitalise on the cost economics in timber industry value chain. Local youth can be targeted to take up courses in carpentry and furniture designing and also be supported in setting up furniture studios. While training programmes on carpentry will impart skills training on cutting and trimming of different types of wood, assembling furniture parts, repairing fixtures, etc.; the course on furniture design will include skilling on developing contemporary designs in 2-D and 3-D forms, use of different types of furniture technology, etc. The project will involve delivery of carpentry course at the ITIs in the district and the course on furniture design could be delivered though labs or units set up by specific institutes such as National Institute of Design (NID)

<table>
<tr><td colspan="2" rowspan="4">Job roles in demand</td><td>Training courses</td><td colspan="2">Target Beneficiaries</td><td>Type of Trainings</td><td>Total Number of beneficiaries</td></tr>
<tr><td rowspan="2">Carpentry</td><td colspan="2" rowspan="2">• Local wood workers with min. 2 year experience</td><td>Fresh Training</td><td>250 in 5 years</td></tr>
<tr><td>RPL</td><td>150 in 5 years</td></tr>
<tr><td>Furniture Design</td><td colspan="2">• Local youth</td><td>Fresh Training</td><td>350 in 5 years</td></tr>
<tr><td rowspan="2">Availability of curriculum</td><td>Job roles</td><td>Target group</td><td colspan="2">Available QP/NOS</td><td>MES</td><td>CTS</td></tr>
<tr><td>Carpentry</td><td>Carpentry</td><td colspan="2">QP available for
• Carpenter wooden furniture</td><td>Building carpenter</td><td>Carpenter</td></tr>
<tr><td></td><td>Furniture design</td><td>Furniture design</td><td colspan="2">QP available for
• Assistant carpenter wooden furniture
• Carpenter wooden furniture</td><td>Wooden furniture</td><td>No course available</td></tr>
<tr><td colspan="2" rowspan="5">Investment (INR in Lakhs)</td><td colspan="5">Carpentry</td></tr>
<tr><td colspan="2">Operational Expenditure</td><td colspan="3">65</td></tr>
<tr><td colspan="5">Furniture design</td></tr>
<tr><td colspan="2">Operational Expenditure</td><td colspan="3">Needs to be calculated</td></tr>
<tr><td colspan="2">Total operational expenditure</td><td colspan="3">Needs to be calculated</td></tr>
<tr><td colspan="2" rowspan="4">Potential Partners</td><td colspan="2">Partner</td><td colspan="3">Areas of Support</td></tr>
<tr><td colspan="2">Training Partner</td><td colspan="3">• Space and infrastructure for establishing the training center
• Training delivery
• Co-management of the training facility</td></tr>
<tr><td colspan="2">Industry Associations</td><td colspan="3">• Industry interface
• Facilitate On-Job-Training
• Facilitate placements</td></tr>
<tr><td colspan="2">Furniture and Fitting Sector Skill Council</td><td colspan="3">• Development of QPs for the identified job roles
• Develop model training programmes for the identified Job Roles
• Identification and certification of Trainers
• Identification and certification of assessors
• Assessment of trainees
• Certification of Trainees</td></tr>
<tr><td colspan="2">Training Delivery</td><td colspan="5">• Engage a TSP that is affiliated with DDU-GKY and PMKVY to deliver the training
• Furniture and Fitting Sector Skill Council will affiliate the training centre
• The training partner will be responsible for managing the entire operations of the training centre</td></tr>
</table>

Work Plan

Carpentry and furniture design	in Months					
	1	2	3	4	5	6
TSP empanelment						
SSC affiliation						
QP development						
Training centre setup						
Mobilization of prospective trainees						
Enrolment of trainees						
Roll-out of training programme						

4. List of Stakeholders consulted

4.1 State level consultations- Gujarat

Sl. No.	Stakeholder	Person	E-mail	Cell/Phone
1	Gujarat Maritime Board	Chief Engineer, B.B. Talavia	bhavesh.talavia@gmbports.in	9925153002
2	Directorate of Employment and Training	Shri R.K.Patel Addl. Director (GAS)		
3	Commissionerate of Technical Education	Shri Anis M. Mankad, IAS Commissioner		
4	Gujarat Skill Development Mission (Falls under DET)	Manish Dave Deputy Director	manishmdave@yahoo.com	9825069793
5	Commissionerate of Fisheries	Fisheries Commissioner	commi-fisheries@gujarat.gov.in	9978405983
6	Tourism Department	Mr. N. Srivastava (IFS) ,Commissioner of Tourism and Managing Director		
		K. Biswas	kbiswas@gujarattourism.com	7923977209
7	Urban Development and Urban Housing Development	Shri Y. B. Patel Secretary (Budget/Estt./ Coordination / T.P. Admin / MGSM / NULM)		
8	Commissionerate of Rural Development	Dr. Jayanti S. Ravi, Commissioner & Principal Secretary, Rural Development, Rural Development		
9	Commissionerate of Labour, Labour and Employment Department	Assistant Labour Commissioner, Mr. Shah		
10	Gujarat Fisheries Central Co-operative Association Limited	Shri M.Y.Daxini, Managing Director		
11	Directorate Of Economics and Statistics	R.R Pandya, Joint Director	rakeshpandya3171@yahoo.in	9377298620

4.2 District level consultations- Kutch

Sl. No.	Stakeholder	Person	E-mail	Cell/Phone
1	District Collector Office	District Collector, Shri M. A. Gandhi		Bhavin: 7600290052
2	District Collector Office	District Development Officer		02832-250080
3	District Labour Office	J R Jadeja, Assistant Commissioner of Labour		9727762105
5	District Collector Office	District Statistical Officer		
6	District Employment Office	District Employment Officer, IR Malik	dee-kut@gujarat.gov.in	9904371810
10	Mundra Port (Adani Portsand Special Economic Zone Limited)	Director, Skills and Training Incharge (Rakshit Shah and Mrityunjay)		Mrityunjay: 9376577739
11	Mystic Shipping	Satish Juttika - Joint M.D.	satish@mysticshipping.com	9825693397
12	VELJI P. & Sons	Manager		
13	Empezar	Divij, Director	divij@empezargroup.com	9913388188
14	Kandla Port Trust	Chairman, Secretary		P.S. to chairman: 9979893028
15	JR Roadlines Pvt. Ltd.	Director	jayesh@jrgroupindia.com	9825015129
16	Hotel Clicks	Hotel Manager, jay nair	hm.bhuj@theclickhotels.com	7229076777
17	ITD Cementation India Limited	Deputy Manager		
18	Adani Construction Cell	General Manager		
19	ITI, Gandhidham	Arpit Patel (, Payal Mangukiyu, D.M. Detroja Foreman and Instructor		Arpit: 9426659138
20	IKVK	Ravi Ranjan, Assistant Manager		
21	Vishwakarma Edu Comp Matruchaya Skill Development Centre (VTP)	Bhavesh and Rajendra Joshi Principal , Owner		9909930088
22	Indian Salt Manufacturers Association	President, Bachubhai D Ahir		9825225770
23	Federation of Kutch	Radhika Thacker, Admin Manager	bhuj@fokia.org	9925993819

	Industries Association			
24	Gandhidham Chamber of Commerce	Ashish S Joshi, Hon. Jt. Secretary	india@malargroup.com	9825225143
25	Shreeramchemfood	Rajendra Aggarwal, Director	rajendra@shreeramchemfood.com	9825237382
26	Handloom Design Centre	Vankarji Devji Premji	hdcbhujodi@gmail.com	9429042587
27	Kandla Timber Association	R K Rawal, Executive Secretary	katna.gdm@gmail.com	9376666140
28	Adani Ports and SEZ Ltd.	Mitesh Thacker, Deputy Manager	mitesh.thacker@adani.com	9879012985
29	DIC	Mukesh Pandya, General Manager	gm-dic-kut@gujarat.gov.in	9879661250
30	Swayam Shipping Services Pvt. Ltd.	Tejas Khakhria, Executive	tejas@swayamshipping.com	9825730199
31	All Cargo Logistics Ltd	Gatikkrushna Sutar, Manager	gatilkrushna.sutar@allcargologistics.com	9909031290
32	Regenta Resorts	Madhu, Head		02832-230166
33	Adani Wilmar	Sanjay Sharma, HR Manager	ss.sharma@adaniwilmar.in	9935923795
34	Friends Group of Companies	Santosh Pal HR Manager		02836-234973
35	Ultratech	Samdar Singh, HR Manager		02831-279200
36	Gujarat Mineral Development Corporation	Himanshu Bhushan, DGM		7574818576
37	MSC Agency Private Limited	Prithvi Raj Singh Rathore, Port Captain	prithviraj@mscindia.com	9825112497
38	Master Marine Services	Harshendu Gor, Manager	mgrmdr@mastergroups.com	9377995858
39	Hiralakshmi Memorial Craft Skill Park	Artisians		02832-240495
40	Adani Ports and SEZ Ltd	Mrityunjai Gupta, HR	mrityunjai.gupta@adani.com	
41	Gujarat Industrial Development Corporation	Ashwin Patel		9824232969
42	Emplyment Exchange Dept.	N M Patel		9428397042
43	Sarang Maritime Logistics Pvt ltd	Jaymin Thakkar, Branch Manager	j.thakkar@sarangmaritime.com	9913331434
44	KSR Freight Forwarders	Chauhan Ramesh, OPE Executive	kandla@ksrindia.net	99650832007
45	Kandla Port Trust	S Kirupandanasamay, Sr. Deputy Traffic Manager	kiruba_tn@yahoo.com	9823227049
46	Kandla Port Trust	Rajkumar K Motwani	rajkumarmotwani92@gmail.com	9825435658
47	TransAsia Lines	Vinod Karwani,		02836 - 225410/225433
48	Aarkay Group	Kalpesh Bhadra, Director	info@aarkaygroup.com	98252261519

49	Bharat Food Cooperative Ltd	General Manager(Tech), J K Bhadauria	jk_bhadauria@bharatfoods.com	9375383025
50	Gupta Timbertrader Pvt Ltd	Director, Atul Gupta		9909525354/9638152151
51	Hari Om Travels	Vijay Soni, Head Tour Operations	hariomtourstravels74@gmail.com	9898629858
52	Commissionerate of Fisheries	HG Palanpura, Assistant Commissioner		9274705581
53	ITI, Bhuj	J.P. Chotai, Prinicipal	prlbhujiti@yahoo.co.in	9427768915

4.3 District level consultations-Bhavnagar

Sl. No.	Stakeholder	Person	Designation	E-mail	Cell/Phone
1	District Officer	Brijesh k. Joshi	District Planning Officer	dpo-bav@gujarat.gov.in	0278-2421878
2	Ship Recycling Industries Association	Ramesh Aggarwal	Hon. Secretary	hooghly@gmail.com	9727766701
3	Priya Blue	Rohith Aggarwal	Sustainable Ship Recycling Manager	rohit@priyablue.com	9879121262
4	Hooghly Shipbreakers Limited	Ramesh Aggarwal	Hon. Secretary	hooghly@gmail.com	9727766701
5	Bhavnagar Salt Association	Prakash Gorasiya	President		9426221101
6	Diamond Association	Vithalbhai Medapara	President		9426210351
7	Bhavnagar Polytechnic				
8	Rolling Mill	Ram Vilas			9825200170
9	Ro Ferry				
10	Safety Training Institute	Narendra Upadhyay			9909961622
11	GMB Official				
12	Shivam Trade link (Marine machinery and spare parts supplier)	Nilesh Joshi		Shivam@shivamtradelink.com	9825205365
13	Machinery Association of Bhavnagar	Ramesh			
14	Dainik Bhaskar	Mahebub Kureshi	Chief Sub-Editor	mehboob@dainikbhaskargroup.com	9374254994
15	Chamber of Commerce and Industry	Mahesh Bhatt	President	scci.bhavnagar@gmail.com	9825206833
16	Chamber of Commerce and Industry	Kirit M. Soni	Hon Treasurer	scci.bhavnagar@gmail.com	9824215360
17	Shree Sagar Stevedores Pvt. Ltd.	Shreyas Thakkar	General Manager	admin@shreesagarstevedores.com	9879594813
18	Gujarat Maritime Board	Mahaveer Singh	Safety Officer		9099950565
19	Bhavnagar Port	Mr. Kharadi	Asssistant Port Officer		9925153032
20	Bhavnagar Port		Supervisor		
21	Plastic Association	Bupatbhai Vyas	President		9824293105
22	Bhavnagar University, Marine Science Department	Dr. I R Gadhvi	Head of Department		9427182755
23	The Basil Park Hotel & Parag Travels	Ganesh Das	Manager	manager@basilpark.com	8866096573

24	Misam Naqvi	All India Veg. Dehydrated Manufacturers Association	Manager	aivdmda@gmail.com	9974191472
25	Vitalbhai Koradia	Maharaja Foods			
26	Vishal Ruparel	Ruparel Foods	Propereitor	ruparel@ruparelindia.com	284422625
27	Vishal Ruparel	Ruparel Plastics	Propereitor	ruparel@ruparelindia.com	284422625
28	Pidilite : Triveni Kalyani Foundation Kalsar				9909971556
29	Central Salt and Marine Chemical Research Institute	Ankkur Goel	Professor	ankkurgoel@csmcri.org	
30	District Industries Centre	Harish Vikani	Deputy Managaer		9824873910
31	District Agricultural Office		Dy. DAO	dao.bhavnagar.agri@gmail.com	
32	District Fisheries Centre	Dr. I R Gadhvi	DFO		9427182755
33	KVK Kalsar	Gagan Macwan	Centre Manager	macwansg@gmail.com	9925184813
34	ITI Bhavnagar	PM Pandit	ITI & ATS In Charge	prlbhavnagariti@yahoo.co.in	9879581801