

FISHERIES & MARITIME CTOR SKILLS PLAN



JUNE 2014



NAMIBIA TRAINING AUTHORITY

MESSAGE FROM CHIEF EXECUTIVE OFFICER

We are pleased to present you with the Sector Skills Plan (SSP) for the Fisheries and Maritime Industry. The aim of this SSP is to guide and inform skills development initiatives in this industry from a skills planning perspective. Sector skills planning is a relatively new process for the Namibian Training Authority. We have therefore adopted a developmental approach to this process. We have aligned the SSP to *Vision 2030, NDP4* and the *National Human Resources Plan: 2010 - 2025* of Namibia. Our SSP should resonate with our national vision and policy goals of our government.

Over the last few months we have consulted widely with stakeholders. Many who attended our workshops and focus group sessions participated enthusiastically in the SSP deliberations. We are very encouraged by this, and would like to build strong stakeholder partnerships. The SSP is a living document that should be subject to continuous change and improvement. It should be owned by industry stakeholders.

We have asked the research team to produce a user-friendly plan that will be easily read, understood and applied. The intention is not to write a thesis or peer-reviewed academic journal, but rather to produce a document that will be used by all interested organisations and individuals. We will achieve this without compromising the integrity of the research. We want practitioners and managers in the workplace to read the document.

The primary target audience are employers, managers, unionists, public policy-makers and planners, researchers, career counsellors and education managers as well as others who have an interest or stake in this industry.

We have made a strong start by putting a workable plan on the table for skills development in the fisheries industry. We are committed to improving the skills of workers and new entrants. Let's join hands and take this industry to new heights.

We hope you contribute to the further development of the SSP in future iterations.

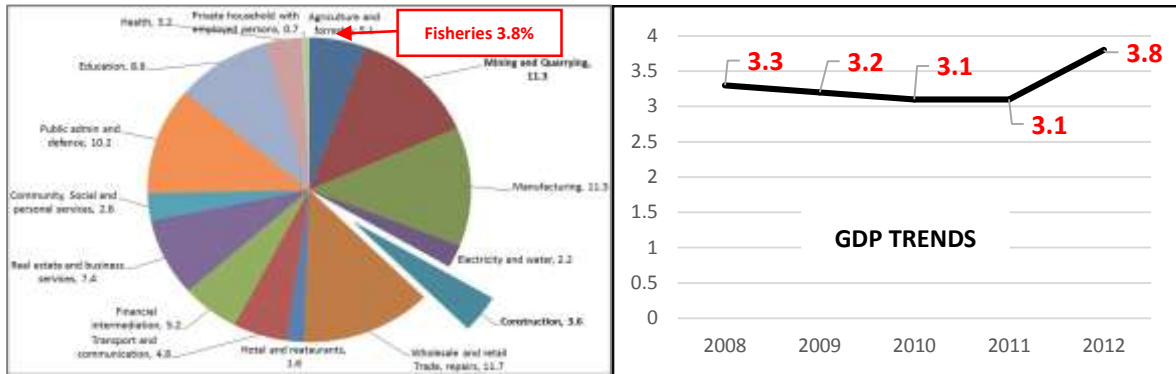
Best wishes!

Ms Ester Anna Nghipondoka
Chief Executive Officer
National Training Authority

CONTENTS

MESSAGE FROM CHIEF EXECUTIVE OFFICER	1
FISHERIES SECTOR SKILLS PLAN	4
1. INDUSTRY DEMARCATION	4
2. INDUSTRY STRUCTURE	6
3. MAJOR INDUSTRY STAKEHOLDERS	7
4. ECONOMIC PROFILE	8
5. LABOUR MARKET PROFILE	9
6. CHANGE DRIVERS	10
7. RESEARCH DESIGN AND METHODOLOGY	11
8. SKILLS DEMAND	14
9. SKILL GAPS	17
10. SKILLS SUPPLY	18
11. NAMFI COURSES	18
12. STRATEGIC PARTNERSHIP BETWEEN EDUCATION AND INDUSTRY	20
13. STRATEGIC PLAN	22

NAMIBIA'S FISHING AND MARITIME SKILLS CHALLENGE



SKILLS ISSUES

CHANGE DRIVERS

- ✓ *Maintaining stock recovery*
- ✓ *Compliance control*
- ✓ *Industrial development*
- ✓ *Namibianisation*
- ✓ *Advancement of socially or educationally disadvantaged persons*
- ✓ *Improving the services of the Ministry of Fisheries and Marine Resources*
- ✓ *Successfully promoting regional co-operation in marine fisheries*

Strong Partnerships Essential



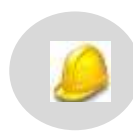
SKILLS SHORTAGES



Marine
Capture
Fishing
Specialists



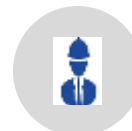
Maritime
Specialists



OHS
Specialists



Maritime
Specialists
Public
Office



Engineers /
Technicians/
Artisans

SKILLS PRIORITIES

Literacy and numeracy

Support for NAMFI

OHS and Environmental Training

Occupational Health & Safety

Establishment of a Maritime School

Focus on workplace skills training

Technical skills training

Training of Maritime Specialists

Recognition of prior learning

FISHERIES SECTOR SKILLS PLAN

1. INDUSTRY DEMARCATION

According to the International Standard Industrial Classification of All Economic Activities (ISIC)¹ the scope of industry coverage for fisheries are as follows:

DIVISION	GROUP	CLASS	DESCRIPTION
Division 3			Fishing and aquaculture
	031		Fishing
		0311	Marine fishing
		0312	Freshwater fishing
	032		Aquaculture
		0321	Marine aquaculture
		0322	Freshwater aquaculture
Division 50			Water transport
	501		Sea and coastal water transport
		5011	Sea and coastal passenger water transport
		5012	Sea and coastal freight water transport
	502		Inland water transport
		5021	Inland passenger water transport
		5022	Inland freight water transport

- Fisheries is a diverse industry sector, covering a maritime component, onshore and offshore fish processing component, and a developing aquaculture component. Since Namibia's independence in March of 1990, this sector has become increasingly important in the national economy. It is also a food industry with all the associated food safety skills requirements, particularly as it is primarily an export industry, mostly to first world countries with strict regulatory requirements which the Namibian fishing industry must comply with.
- Namibia contains some 20 different fish species, and is one of the more productive fishing grounds based on the Benguela current system. Most fish from the Atlantic Ocean are exported after being headed, cleaned, sliced and packaged by fish processing companies in Walvis Bay and Luderitz.
- The country has limited domestic consumption of seafood due to its small population, and their meat orientated diet. As a result, Namibia exports some 90% of its gross fish catch. Namibia imports tuna and salmon from SA (34% of import value), Spain (32%) and China (11%).

¹ United Nations, 2008, ISIC, Revision 4

- Foreign investors play a key role in the Namibian fishing industry. In particular, the Spanish are involved in the hake industry since Spain is the most significant consumer of hake.
- Namibia has embarked on the development of its aquaculture component in order to create employment for Namibians, reduce poverty and increase economic growth. Aquaculture and Mari culture are considered important to enhance food security, generate income, and improve rural livelihoods. As can be seen from data on educational attainment, the fishing industry caters largely for the under skilled, marginalised sector of the population.
- In December 1991 the *White Paper "Towards Responsible Development of the Fisheries Sector* came into force. The document set out to achieve 3 objectives: the building of Namibia's plundered fish stocks; the establishment of an effective monitoring, surveillance and control system, and the establishment of a viable national fishing and processing industry with maximum Namibianisation of jobs and empowerment of previously excluded people. The White Paper has helped create a business environment that has resulted in the establishment of a healthy and vibrant industry that pays a fair price for using Namibia's marine resources².
- The Namibian government has been largely successful in sustainably managing its fisheries. It has had mixed results with its program to "Namibianise" the fishing industry which had been dominated by foreign (mostly Spanish) companies. Government incentives to increase Namibian participation have resulted in a proliferation of fishing companies and overcapacity in onshore processing. However, the industry has created jobs for previously disadvantaged Namibians.
- Walvis Bay is Namibia's largest commercial port, handling on average 3,000 vessel calls per year and over 5.3 million tons of cargo. There is a Syncrolift dry dock facility at Walvis Bay harbour, for lifting ships out of the water for repair, separate from the port facilities proper. Walvis Bay is linked to landlocked SADC countries via road corridors mainly the Trans Caprivi, Trans Kalahari, Trans Kunene and Trans Oranje.
- Namibia has two ports, namely the Port of Walvis Bay and Port of Lüderitz. The Port of Walvis Bay is the largest commercial port, handling on average 3 000 vessel calls per year and over 5 million tons of cargo. Facilities at the port include a container terminal, privately operated bulk cargo terminal and six tugboats. The container terminal at the port of Walvis Bay can accommodate grounds slots for 3875 containers with provision for 482 reefer container plug points.
- The Port of Lüderitz is the second largest port, functioning mainly as a fishing port; but has expanded in recent years to ship cargo from the mining industry and to support and service offshore petroleum exploration and diamond mining activities. The Port has the potential to serve as an important gateway and logistics base for various mineral operations as well as the petroleum industry.

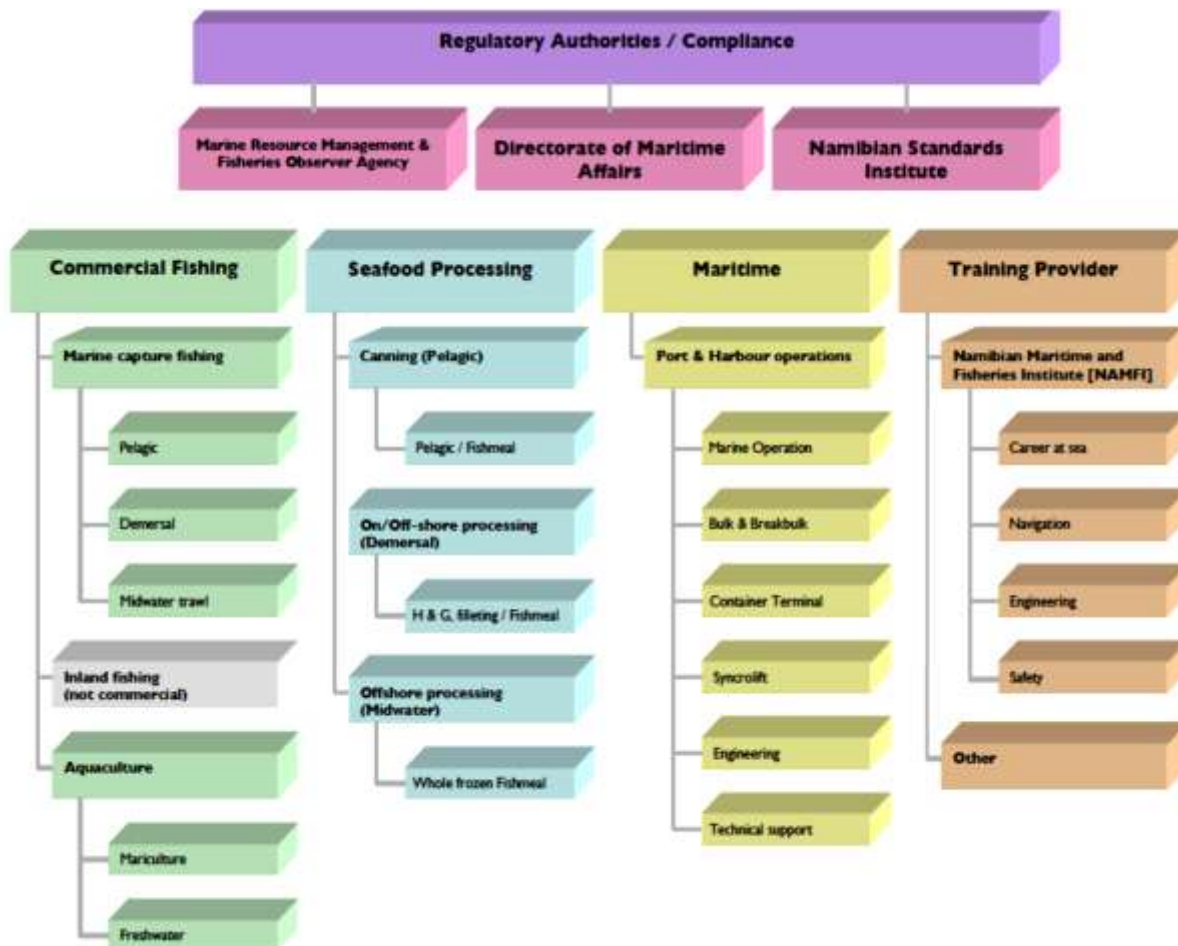
² Ministry of Fisheries and Marine Resources, 2001, *Towards Responsible Development of the Fisheries Sector*.

- By 2017, the volume in cargo handling and rail-transported cargo is double that of 2012, and the Port of Walvis Bay has become the preferred African West coast port and logistics corridor for southern and central African logistics operations.
- Regarding maritime infrastructure, the Port of Walvis Bay is already practically running at full capacity. If it is not expanded as soon as possible, the port will become congested, eroding one of Namibia’s key pillars of competitiveness in maritime transport, namely a quick turnaround time.

2. INDUSTRY STRUCTURE

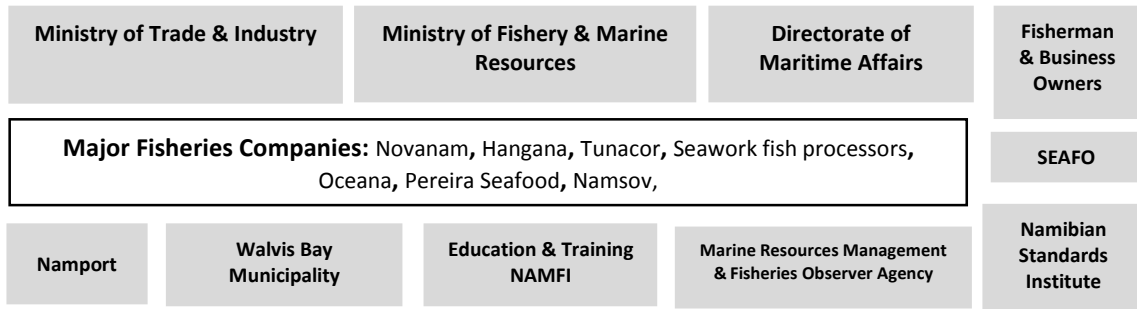
We have included the Maritime Industry in the diagram below because it is an integral part of the Fisheries industry. However, since Maritime also falls within the Transport Sector, this sector will be discussed in the Transport Sector Skills Plan.

The associated industry structure is shown below:



Source: Occupational Mapping Fishing and Maritime Industry, April, 2012, Ten (Pty) Ltd

3. MAJOR INDUSTRY STAKEHOLDERS



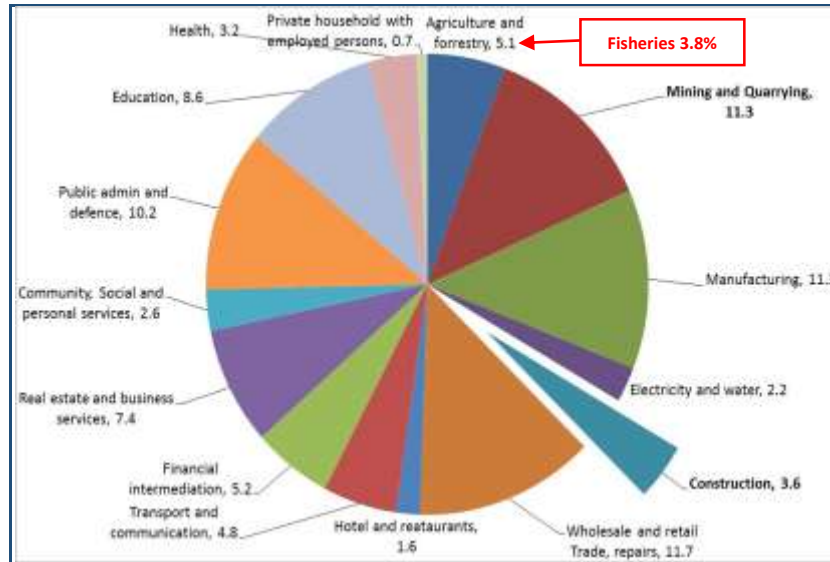
On the training front, the Namibian Maritime and Fisheries Institute (NAMFI) provides training for the Commercial Fishing Industry. The training does not extend to senior maritime qualifications, such as is required on the large vessels in the “Midwater Trawl” fishing sector.

NAMFI training appears to have a number of shortcomings in the “Demersal” fishing sector, namely:

- The certificate is not recognised outside Namibia;
- Many of the seamen try to get the qualification but cannot pass the NAMFI tests;
- Graduates from NAMFI often lack the necessary Maths knowledge.

4. ECONOMIC PROFILE

Sector Contribution to GDP (2012)

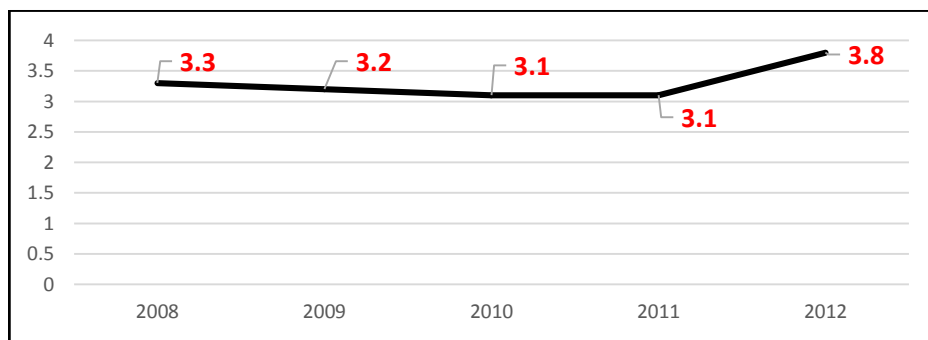


Source: Statistics Office, 2012, Labour Force Survey

- The Fisheries Sector’s contribution to GDP was 3.8% in 2012.³ In this respect it is a relatively small sector of the economy.

GDP Trends

GDP contribution trends by industry-2008-2012



Source: Bank of Namibia, December 2013. Economic Outlook Namibia

- For the period 2008 to 2012 the sector has not been able to grow out of the 3% to 4% threshold.

³ Statistics Office, 2012, Labour Force Survey (Namibia)

5. LABOUR MARKET PROFILE

The figures below are the most reliable for the Fisheries Industry to date. According to the Ministry of Fisheries and Marine Resources “*Employment Verification Report - 2010*” the total direct employment in the Namibian Fishing Industry has increased by 24.5 % since 2008.

Employment

Species Name	2008	2009	2010
Hake	7603	8439	8956
Monk and Sole	205	340	350
Line fish	388	387	395
Crab	71	81	81
Rock Lobster	550	531	455
Small Pelagic	979	1838	1361
Seals	81	81	80
Sea Weed	80	80	80
Large Pelagic	536	728	593
Horse Mackerel	261	880	1029
Grand Total	10754	13385	13380

Onshore and Offshore Employment

	2008	2009	2010
Onshore	7012	9112	9386
Offshore	3742	4273	3994
Total	10754	13385	13380

	2008	2009	2010
Males Offshore	3935	4442	4160
Males Onshore	2800	4411	4449
Total Males	6735	8853	8609

	2008	2009	2010
Females Offshore	17	41	42
Females Onshore	4002	4491	4729
Total Females	4019	4532	4771
Grand Total	10754	13385	13380

Nationality

	2008	2009	2010
Namibians	10299	12807	12866
Foreigners	455	578	514
Grand Total	10754	13385	13380

Marginalised & Disabled (Hake - demersal sector and Horse Mackerel - midwater trawl sectors)

	2008	2009	2010
Marginalised	0	0	0
Disabled	11	15	15
Grand Total	11	15	15

Source: Ministry of Fisheries and Marine Resources, 2010. Employment Verification Report

6. CHANGE DRIVERS

Critical main sector issues in White Paper entitled *Towards Responsible Development of the Fisheries Sector (December 1991)* are as follows:

<p>Maintaining stock recovery: This is required to ensure the sustainable utilisation of marine resources. This will be achieved by the promotion of stock recovery to long term sustainable yield levels through the conservation of marine resources and the protection of the Namibian EEZ. The current strategy is setting total allowable catches (TACs) at levels low enough to promote recovery of depleted stocks.</p>
<p>Compliance control: To protect the Namibian EEZ, the Ministry will continue to curb illegal fishing and harmful fishing practices. Monitoring, control and surveillance will become an even more important issue in the future, since the enhanced status of fish stocks will become an increasingly attractive target for illegal fishing.</p>
<p>Industrial development: To ensure that gains in rebuilding fish resources are translated into economic gains in terms of increased private incomes, employment and government revenue, the industry must be given a viable economic environment. Furthermore, to ensure that the central importance of maintaining a policy environment that encourages investment is recognised. This is especially important in on-shore processing and in areas such as quality control and export promotion.</p>
<p>Namibianisation: To be able to take up opportunities provided by development of the fisheries sector, Namibians must be able to acquire skills through training. In addition, to increase the role which Namibian businesses play in the sector, supporting policies and programmes are needed for the allocation of fishing rights and quotas. This goal will be achieved by strengthening the research and training capacities of the fishing industry.</p>
<p>Advancement of socially or educationally disadvantaged persons: To ensure greater beneficial participation in the sector for Namibians coming from groups previously subject to discriminatory laws and practices. This will be achieved through affirmative action.</p>
<p>Improving the services of the Ministry of Fisheries and Marine Resources: This is required to ensure effectiveness, efficiency and economy of the Ministry. Achieving this requires the training of qualified and competent personnel in the fishing industry, as well as the Ministry. Also, fair returns from the fishing industry to the government need to be ensured. The Ministry must guarantee the conservation and protection of Namibia's freshwater fish resources. To remain a focused Ministry and to keep abreast of the changes in the industry, the Ministry has developed a strategic plan spelling out strategies and initiatives for a period of five years.</p>
<p>Successfully promoting regional co-operation in marine fisheries: Regional co-operation is to be enhanced through the activities of the SADC Sector Co-ordinating Unit for Marine Fisheries and Resources.</p>

According to the Occupational mapping of the Namibian Fishing and Maritime Industry (2012) the following impacts on training in the industry:

<p>Commercial Fishing</p>
<p>Marine Capture Fishing</p>
<p>In the area of demersal fishing, where fish stock numbers and total allowable catches are on the increase, more jobs will become available across the board in the future, with resultant additional training demands.</p>
<p>In pelagic fishing, vessel crews, particularly in the small pelagic sector, are primarily a younger generation with good skills. Here, NAMFI training has been valuable in Namibianising the local small pelagic fleet and maximising competitiveness. In the large pelagic sector there will be emphasis on Namibianising the pole and line tuna sector in the immediate future, with consequent training needs requirements. It is envisaged that</p>

in the next decade, there will be a need for trained Namibian surface long line vessel crews, to compete with foreign vessels.

In **midwater trawl fishing**, greater Namibian fishing and maritime skills capacity on midwater trawl (horse-mackerel) vessels are required – particularly in top-level positions, where foreigners currently fill 35% of jobs. This fishery is also experiencing an upsurge in fish stocks, resulting in increases in total allowable catches, which will create expansion of the sector. Crew of Russian and Eastern European origin who are highly qualified, but do not demand high payment currently operate these Russian vessels. This makes it hard to attract qualified local personnel into these positions.

Aquaculture

Development of **aquaculture** in Namibia is a key government priority because of the potential to enhance food security, reduce poverty, generate employment, and improve rural livelihoods; as well as generate foreign currency earnings. A determined process of human skills capacity building is required here, as limited training currently exists in this emerging sector.

Commercial activities in the area of **mariculture** will benefit from a long list of competencies to be trained. Starting from basic literacy, numeracy and language skills, to learning the in-house procedures of closing chillers and cold store doors, covering and wetting oysters in hot weather, basic food hygiene, understanding the effects of time temperature and trauma on live animals, and mechanical training on pumps and outboard engines.

Freshwater aquaculture also identified a list of skills shortages for this sub-sector to function effectively, including training in production techniques and extension methodologies, fish marketing, processing and quality assurance, and other aspects relating to the business of producing and selling fish. Key positions should be filled within 5 – ten years.

Seafood Processing

In the Seafood Processing **“Demersal”(Onshore and offshore) sector**, sub-sector **Filleting & Fishmeal**, value addition in the demersal fisheries requires better technical expertise to manufacture fishing products - both directly inside processing factories, and by support services looking after factory machinery. Good marketing and strategic personnel are required, to ensure profitability from value addition. Namibia needs qualified Namibians in the marine technical and mechanical fields.

With reference to the **Onshore “Pelagic” Seafood Processing sector**, in the sub-sector Canning, Filleting, Loins, Steaks & Fishmeal made from pelagic fish, lack of ongoing supply of people with expertise to achieve specific canning requirements in the **small pelagic sector**, is a concern. The **large pelagic sectors** moving towards greater value addition of the product, and likewise requires more technical expertise to manufacture fish product both directly inside processing factories, as well as supporting services looking after factory machinery.

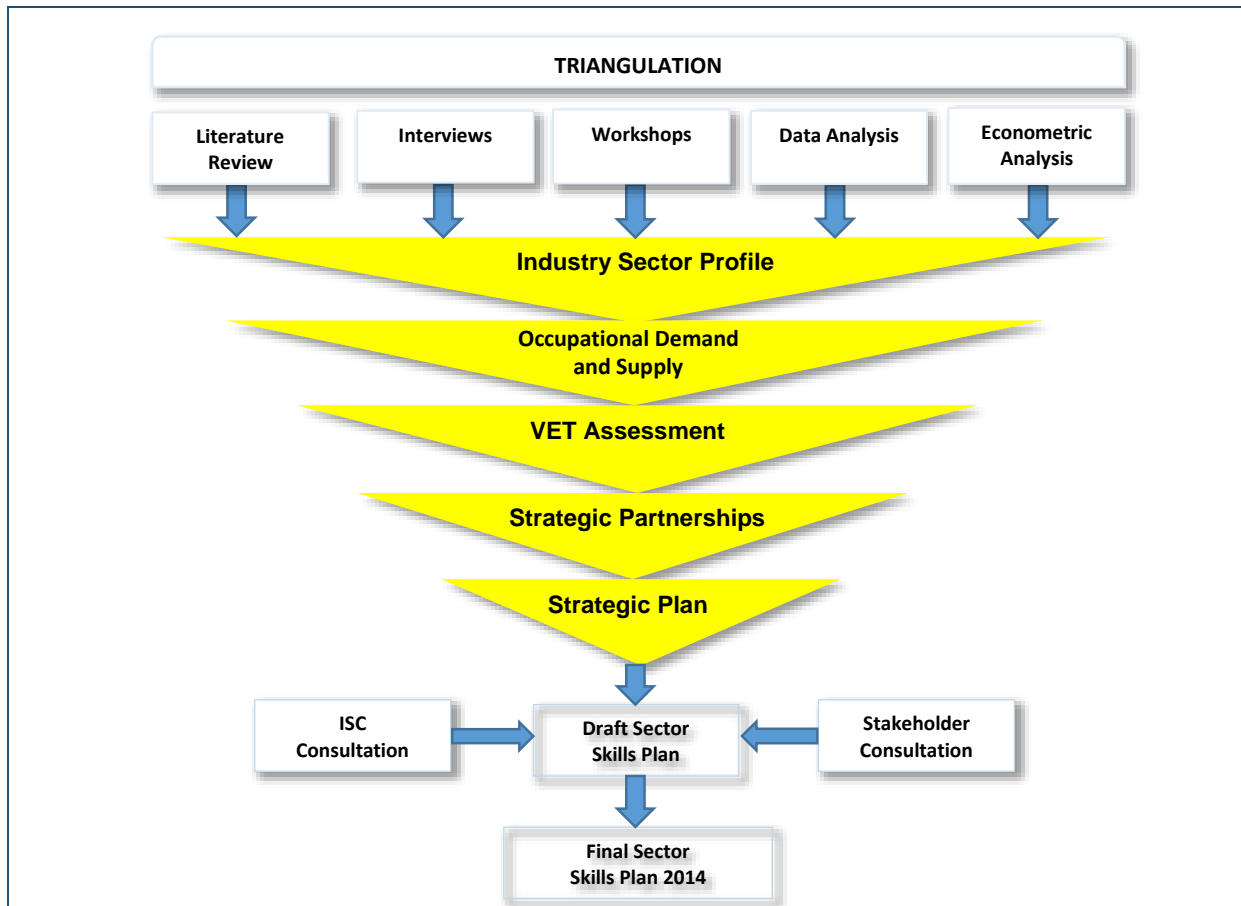
In terms of **Off-shore Seafood Processing**, mid-water trawl horse mackerel is currently all processed at sea as frozen whole product, with some turned into fishmeal. There was in the past experiments to value add by filleting the fish but at the time this was not successful. Continued exploratory efforts to value add product will be required, greater employment being an outcome.

7. RESEARCH DESIGN AND METHODOLOGY

A well-considered research design, using appropriate methods, is essential to identify and anticipate occupational shortages in designated industries. The design is based on a mixed method approach, which brings together different research methods. This approach uses

qualitative and quantitative research techniques. The chosen method is intended to ‘triangulate’ different information sources to identify occupational skills shortages. This ensures the credibility and legitimacy of the sector skills plan.

The research design is set out as follows:



- Multiple data sources in order to identify occupational shortages and skills gaps in the labour market.
- Information is gathered on the occupational labour market, demand and supply of occupations, skills gaps, VET assessment and strategic partnerships to develop a strategic plan for the industry sector.
- Stakeholder consultations take place at all stages in the SSP development cycle.

Data Collection: Data was collected from the following sources:

Review of existing data and information sources
Literature search of studies in the sector
Analysis of industry market reports
Review of national strategies
Annual Reports of employer associations and companies
Interviews with key informants in the sector
Group discussions with stakeholders
Revision of the Sector Skills Plan
Presentation of SSP to Industry Skills Councils
Adoption of SSP by NTA

To add further value, qualitative research methods were used. Various focus group consultations with stakeholders were held in the development process.

The following research techniques were employed to make a determination on occupational demand:

Interviews: Interviews were conducted with key informants in the industry sector. These individuals were assumed to possess deep knowledge, understandings and insights of skills development in their respective sectors. The interviews were conducted using a semi-structured interview schedule. This kind of interview is partially structured with open-ended questions to elicit information that would not be obtained by closed questions. The interviewer is free to deviate from the questions so long as the issues are covered by the conclusion of the interview.

Workshops: Workshops were held with a larger group of industry sector experts to ascertain their views on skills developments in their respective industry sector.

Literature Review: A review of literature was conducted in the industry sector. Industry publications such as company annual reports, research studies, employer newsletters, economic reports, sector studies, and risk analysis reports were examined to establish evolving trends and skills needs in the industry sector.

Econometric Forecasts: The National Planning Commission undertakes econometric forecasting. The findings were used in this study as research evidence.

By using multiple research methods, it is possible to draw comparisons, establish occupational trends, identify occupational shortages, and make decisions based on the weight of supporting evidence rather than subjective inclinations.

Data Analysis: Data is analysed from a comprehensive array of market-based measures (signals and indicators) in the economy for proposing interventions in education and training. Reliance on a composite of labour market signals, rather than on a single forecast, allows the researcher to form judgments on the basis of the weight of evidence.

The identification and interpretation of labour market signals require a basic understanding of the analytical processes which can be applied to occupational supply and demand. It also implies the availability of reliable labour market data for: guiding education and training decisions; managing training systems; and planning for education and training.

8. SKILLS DEMAND

Based on the value chain, the following skills are in demand:

COMMERCIAL FISHING										
Occupations in Demand	Marine Capture Fishing						Aquaculture			
	Small / Large Pelagic (512)		Commercial Fishing (9306) Demersal		Mid-water Trawl – Horse Mackerel (1029)		Oyster Farming / 500 / (less than Mari-culture)		Fresh water Aqua Culture (less than 500)	
	2015	2020	2015	2020	2015	2020	2015	2020	2015	2020
Skipper	150	300								
Superintendent Engineer	100	200								
Chief Engineer	150	250	50	75	30	50				
Fleet Technical Superintendent	50	80	30	60						
Fleet Operations Supply Superintendent	40	70	30	50						
Bosun	100	150			100	150				
Engineer (Class 2)	100	200								
Engineer (Class 5)	150	250								
Cook	150	250			100	130				
Engineer (Class 6)	150	300								
Captain			50	80						
Maintenance Planner			100	200			10	20	10	20
Superintendent Netloft			100	200						
Fleet Technical Foreman			200	300						
Marine Electrician			150	300	100	200				
Marine Fitter			200	400						
Crane Operator			30	60						
Master					100	150				
Ship Doctor					50	120				
Chief Trawler Master					100	150				
Mechanical Adjustor					100	150				
Motorman					100	150				
Electrician					150	250	5	10	5	10
Welder					200	300				
Turner					100	150				
Joiner/Fitter					100	150				
Oyster Hatchery Manager					30	50	10	20		
Offshore Manager					50	75				
Marketing Manager					50	75				
Skipper (small vessel)					100	150				
Offshore Supervisor					100	150				
Onshore Supervisor					100	150				
Lobster Farm Manager					50	75				
Commercial Diver					100	150				

SEAFOOD PROCESSING						
Occupations in Demand	Canning, Filleting, Loins, Steaks & Fishmeal					
	Small / Large Pelagic (1954)		Filleting & Fishmeal Demersal (9306)		Midwater Trawl (Horse Mackerel) (1029)	
	2015	2020	2015	2020	2015	2020
Seafood Safety Manager	75	150				
Vessel Factory Manager	100	150				
Supervisor Quality Control	100	200				
Production Superintendent			100	150		
Canning Master			100	150		
Seamer Mechanic (Canning)			100	120		
Quality Controller			50	100		
Production Supervisor			50	100		
Fitter & Turner			150	200		
Safety and Environmental Officer			100	220		
Production Supervisor			100	150		
Marel Production System Technician			100	150		
Safety and Environmental Officer			150	250		
Foreman Refrigeration			50	100		
Refrigeration Mechanic			75	100		
Assistant Refrigeration Mechanic			100	150		
Refrigeration Operator			100	150		
Baader Mechanic			50	100		
Forklift Driver			250	500		
Chief Technologist					100	150
On-board Quality Controller					150	200
Fish Master					100	150

FISHERIES AND MARINE RESOURCES OBSERVER AGENCY		
Occupations in Demand	Observer Agency	
	2015	2020
Fisheries Observer		
Trainee FO – Grade 0	30	60
FO – Grade 1 Commercial sampling	30	60
Snr. FO – Grade 2 Commercial sampling	30	60
Chief FO – Grade 2 + FIOC	30	60
Chief FO – Grade 2 + FIOC + International Conventions	30	60

FISHERIES AND MARINE RESOURCES OPERATIONS		
Occupations in Demand	Operations	
	2015	2020
Chief Control Fisheries	20	30
Control Fisheries Inspector	20	30
Chief Fisheries Inspector	50	50
Senior Fisheries Inspector	50	50
Chief Fisheries Biologist 4A L1	20	30
Chief Fisheries Research Technical 3A L2	50	50
Chief Technical Assistant 2A L2	50	50
Clerk 1C L2	100	150
Clerical Assistant 1C L2	100	150
Clerical Assistant 1B L3	100	150
Deputy Director Gr: 4A (M)	30	40
Fisheries Biologist 3A L1	50	50
Fisheries Biologist 3B L1	50	50
Fisheries Biologist 4A L (P)	50	50
Fisheries Research Technician SP2	50	50
Fisheries Research Technician 2C L1	50	50
Fisheries Research Technician 3A L2	50	50
Fisheries Research	50	50
Handyman 1B L2	50	50
Principal Fisheries Biologist SP3	50	50
Senior Fisheries Biologist 3B L1	50	50
Technical Assistant 1C L3	50	50

FISHERIES AND MARINE RESOURCES		
Occupations in Demand	NSI	
	2015	2020
Manager	50	100
Senior Inspector	50	100
Inspector	50	100

MARITIME		
Occupations in Demand	2015	2020
Managers		
Terminal Managers	10	20
Port Finance Managers and Accountants	30	50
Port Manager	5	8
Port Captain	5	8
Procurement Manager	10	15
Maritime Lawyers	5	10
Supply Chain and Distribution Manager	30	40
Professionals		
Berth and Terminal Planners	10	15
Marine Engineer	15	25
Ship's Master	15	20
Maritime Trainer/Assessor	50	100
Marine Pilot	50	100
Marine Engineer	50	80
Mechanical Engineer	50	100
Electrical Engineer	50	100
Engineers (civil and maintenance)	40	80
Tug-boat Pilot	15	15
Fire-fighters	20	30
Paramedics	30	60
Craft and related trades workers		
Deck Officer	50	1000
Stevedore – Crane Driver, Equipment Operators	150	250
Vessel Traffic Services (VTS) Operator	50	100
Electrician	100	200
Boiler maker	100	250
Welder / Cutter	200	400
Millwright	100	150
Cargo Superintendent	150	200
Fitter	200	400
Plant and machine operators and assemblers		
Crane, Hoist or Lift Operator	250	350
Deck Hand	200	400
Terminal Operators	150	250
Cook	100	150

9. SKILLS GAPS

The following is a summary of priorities as well as overall conclusions for the different industry sectors.

- Basic literacy and numeracy are lacking;
- Communication skills are required in English and Afrikaans;
- Maths and science skills are lacking;
- Namibia does not have many qualified Namibians in the marine technical and mechanical fields;

- Entry qualification requirements into industry – the feeling is that often current grade 10 graduates are not equipped with the necessary knowledge and skills to enter work in the commercial sector. Hence, one frequently sees the entry level qualification requirement being Grade 12 – especially in the aforementioned areas of literacy; and numeracy, communication, maths and science.

10. SKILLS SUPPLY

Namibian Maritime and Fisheries Institute [NAMFI]

- NAMFI was formally established in July 1996 by the Ministry of Fisheries and Marine Resources (MFMR) as a Trust. The primary responsibility of NAMFI is to provide maritime and fisheries training in order to enable students to take up qualified positions within the maritime and fisheries industries in Namibia and elsewhere. Thus building capacity in the field of maritime and fisheries sectors in and around Namibia.
- The Namibian Maritime and Fisheries Institute (NAMFI) has three training departments: Navigation, Engineering and Safety. The training at NAMFI is in accordance with International Standards, for example, the International Maritime Organization (IMO).
- The Republic of Namibia has acceded to the *International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STCW-78/95)* convention as amended. The *STCW 78/95* had entered into force for Namibia on 24 April 2005 in accordance with the provisions of article X1V of the Convention.
- The Directorate of Maritime Affairs (DMA) within the Ministry of Works and Transport is an IMO accredited authority. NAMFI is accredited by DMA and the training activities are in accordance with the *STCW 78/95* convention as well the Namibian Merchant Shipping Act of 1951, particularly in the areas of education, training, and certification of Namibian seafarers.

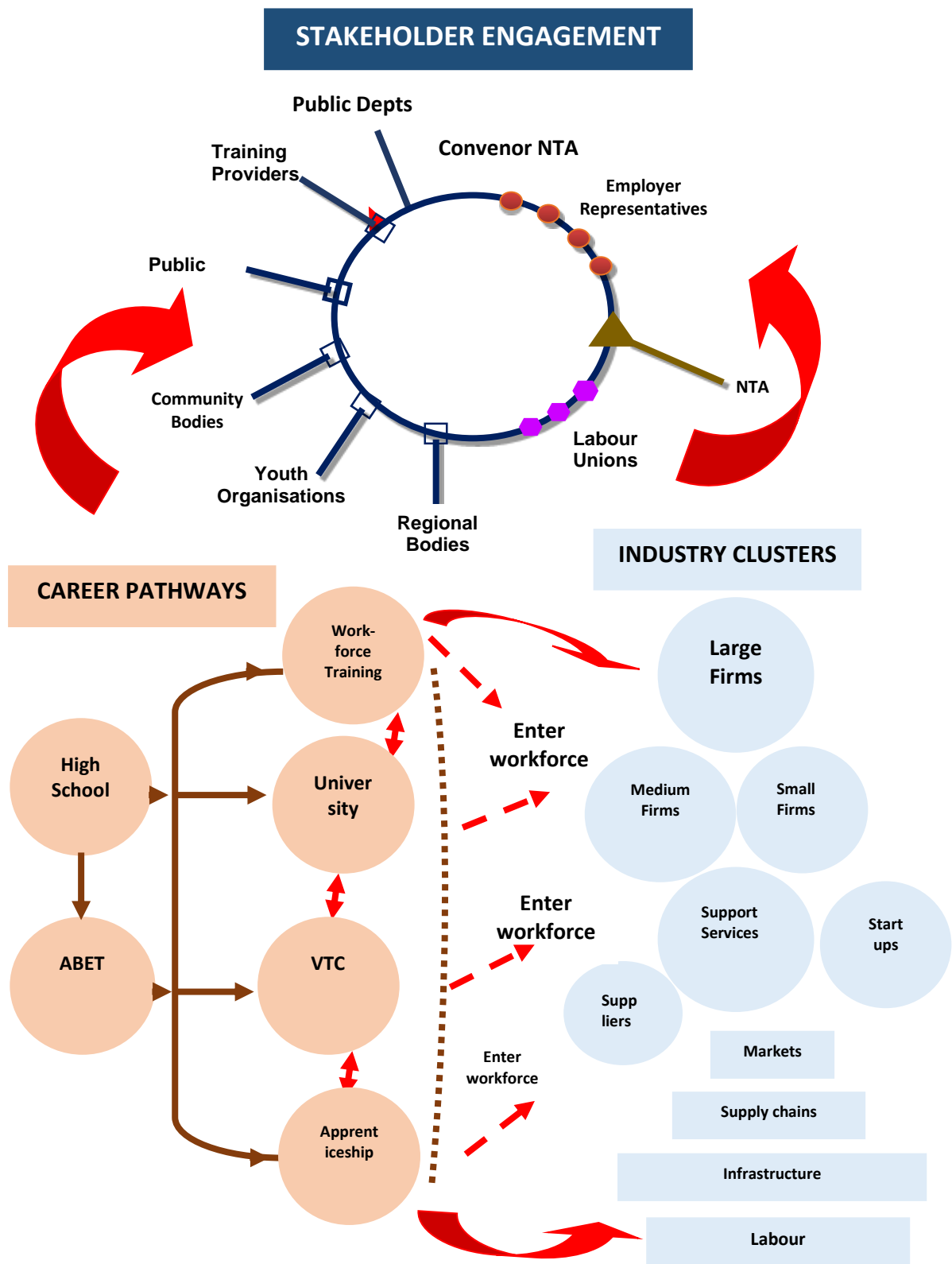
11. NAMFI COURSES

The following courses are offered by NAMFI:

COURSE	REQUIREMENTS	DURATION
Deck Officer Class 6. Mate II Skipper II – STCW –95 F	Grade 12 with Maths, English and physical Science supported by 12 months sea time OR • Fisherman Gr. 4 ticket. OR • Grade 10 with Maths, English and Physical Science support by 36 months sea time as deckhand	Approximately 6 months

COURSE	REQUIREMENTS	DURATION
Deck Officer Class 5. Mate I/ Skipper I, STCW-95/F (include Medical Care only)	Deck Officer Class 6 ticket OR Fisherman Grade 3	Approximately 6 months
Deck officer class 4 STCW-95 F	<i>Deck officer class 5 ticket</i> OR <ul style="list-style-type: none"> • Grade 12 with a D symbol or higher in English, Math and physical Science supported by • 36 months sea time • OR Old Deck officer class 4	Approximately 9 months
Marine Engineer Officer Class 6 STCW –95 F	<ul style="list-style-type: none"> • Grade 12 with Maths, English and physical Science supported by 12 months sea time OR • Marine motorman Gr. 2 ticket. OR • Grade 10 with Maths, English and physical Science support by 36 months sea time as Engine Room rating. 	Approximately 6 months
Marine Engineer Officer Class 5 STCW –95 F	Marine Engineer Class 6 ticket OR Marine Motorman Grade 1 ticket	Approximately 6 months
Marine Engineer Officer Class 4 STCW-95 F	Marine Engineering class 5 ticket OR Grade 12 with a D symbol or higher in English, Math and physical Science supported by 36 months sea time OR Old Engineer officer class 4	Approximately 10 months
Source: NAMFI Website		

12. STRATEGIC PARTNERSHIP BETWEEN EDUCATION AND INDUSTRY



INDUSTRY PRIORITIES	ACTIONS
<p>Stakeholder Engagement</p> <ul style="list-style-type: none"> ▪ Stakeholder partnership should be formed by the industry to address common skills needs and generate co-ordinated solutions that benefit all stakeholders. ▪ Stakeholders working together create career pathways based on industry needs for workers. 	<ul style="list-style-type: none"> ▪ Stakeholders work together to identify education and training problems and propose solutions through qualifications and programme development. ▪ Stakeholders devise career pathways. ▪ Better utilising of skills and improving the quality of jobs. ▪ Gearing skills development to the specific needs of the industry
<p>Industry Cluster</p> <ul style="list-style-type: none"> ▪ Firms in an industry cluster benefit from synergies of association of related to shared infrastructure, supply chains, labour, markets and innovation. ▪ Industry cluster increases bargaining power. 	<ul style="list-style-type: none"> ▪ Pooling of resources for education and training in the industry cluster. ▪ Developing industry standards or benchmarks. ▪ Fostering and adapting new areas of growth.
<p>Career Pathways</p> <ul style="list-style-type: none"> ▪ Inputs from industry clusters inform stakeholder discussions. ▪ Effective career pathways requires co-ordination across education and training programmes by the NTA in order to offer a clear sequence of industry coursework and credentials to job seekers. ▪ Workers graduate with industry credentials that enable them to get work. ▪ Workers can progress vertically and laterally in their careers. 	<ul style="list-style-type: none"> ▪ Developing sector skills plans to improve the performance of the industry. ▪ Creating a skilled and adaptable workforce. ▪ Employment progression and career definition.

13. STRATEGIC PLAN

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
STRATEGIC PRIORITY 1: BUILDING EFFECTIVE STAKEHOLDER PARTNERSHIPS FOR SKILLS DEVELOPMENT IN THE INDUSTRY SECTOR			
<i>RATIONALE: Stakeholder partnerships are increasingly becoming the adopted approach to meeting industry needs for skilled workers and workers' need for better jobs. Stakeholder partnerships are forged with industry, government agencies, education institutions, labour, and community organisations to focus on the workforce needs in an industry within a labour market. Partnerships address current and emerging occupational needs and skill gaps. It offers a mechanism to focus scarce resources on industries that are major job providers in an area, as well as to focus comprehensively on the workforce skills, from entry level to advanced, required in the economy. Partnerships provide a means for the NTA and VET institutions to engage directly with industry across traditional boundaries better aligning training programmes and resources. Partnerships help to reduce inefficiencies and streamline state efforts by co-ordinating various projects and braiding various funding streams intended for the same purpose.</i>			
1.1.	Promote partnerships and linkages with employer bodies, education institutions, government agencies, and civic groups to respond to industry and local training needs, build better networks and design responsive training interventions.	<ul style="list-style-type: none"> ▪ The NTA develops a policy implementation framework to promote stakeholder partnerships. ▪ Guidelines and training interventions to support the development and management of partnerships are developed and measured. ▪ The number, type and outputs of partnerships are evaluated and recorded. ▪ Agreements are entered with partners on training projects linked to promoting local economic development. 	NTA/VET institutions/Employer Bodies/Labour Unions/Community Groups/Government Agencies/International Donors
1.2.	Establishing and strengthening stakeholder relationships.	<ul style="list-style-type: none"> ▪ Support to establish a Co-operative Learning Unit in each public VET institution is provided. ▪ Workshops to inform stakeholder of different partnership modalities and develop successful partnerships are held in all regions. 	
1.3.	Information is disseminated to partners to keep them abreast of NTA activities to promote skills development.	<ul style="list-style-type: none"> ▪ Information on NTA and ISC activities, training levy, sector skills plan, occupations in high demand and skills gaps in the industry sector are communicated to stakeholders. 	
1.4.	Encourage industry training clusters where large, medium and small firms in a single industry come together and benefit from synergies of association related to shared skills training, instructors,	<ul style="list-style-type: none"> ▪ NTA facilitates development of industry training clusters. ▪ The number of training industry clusters established. 	NTA/DTI

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
	facilities, benchmarking and best practices.		
1.5.	Encourage public-private partnerships and investment (PPPs) in the VET sector to increase intake capacity and programme choices.	<ul style="list-style-type: none"> ▪ NTA develop a discussion document on PPPs with a view to approval and implementation. 	NTA/Ministry of Education
STRATEGIC PRIORITY 2: Increasing access to occupationally-directed learning programmes to support come to industry growth			
<p>RATIONALE: <i>To become an industrialised country, Namibia needs to address the problem of skills shortages across all sectors of the economy. The issue of Namibia's skills shortages and mismatches have been well documented since independence. There are considerable skills shortages for middle level artisanal skills and high level professional skills that must be mitigated to transition Namibia to a knowledge-based economy in accordance with Vision 2030. The problem of skills shortages is more pronounced among marginalised groups and in the rural communities. High unemployment, particularly for youth, sits alongside job vacancies pointing to structural unemployment in the labour market. By increasing access to occupationally-directed learning programmes, labour market outcomes of the unemployed, marginalised and youth are improved considerably. Access to learning programmes and recognition of prior learning for employed workers can also improve their skills, productivity and promotional opportunities.</i></p>			
2.1.	Occupations in high demand and skills gaps of the industry sector should be prioritised to expand access and allocation of resources.	<ul style="list-style-type: none"> ▪ Occupations in high demand are mapped to qualifications and career pathways in the industry sector contributing to improved relevance of training and greater mobility and progression. ▪ Qualifications and accredited training programmes for occupations in high demand are developed, if they do not exist. ▪ Strategies for fast-tracking the development of new qualifications to meet occupational shortages are developed and implemented. ▪ The number of students enrolled for occupational training programmes in high demand are increased annually to meet the demand-side needs of the labour market. ▪ Accredited short skills courses geared towards addressing skills gaps (top up skills) of employees are developed. 	ISC/VETCs/COSDECS/NTA/NQA/Ministry of Education/Ministry of Labour and Social works/Donor Agencies
2.2.	Relevant apprenticeships and traineeships should be developed with the support of industry for occupations in high demand currently not registered under the apprenticeship and traineeship scheme.	<ul style="list-style-type: none"> ▪ A campaign to promote apprenticeship and traineeship in firms is devised. ▪ Competency standards for new apprenticeships and traineeships are developed. ▪ Performance of apprentices and trainees monitored and evaluated. 	

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
		<ul style="list-style-type: none"> ▪ A national databank of instruments for assessment and moderation of artisan trade tests and traineeship programmes is developed. ▪ A national database of registered assessors and moderators is developed. ▪ Number of apprentices and trainees in VET institutions is increased annually. 	
2.3.	Traineeships and apprenticeships at all public VET Centres will have a liaison officer whose job will be to ensure that the role of the trainee or apprentices both at the workplace or training centre are monitored.	<p>The VET institutions are required to deliver the following:</p> <ul style="list-style-type: none"> ▪ Theoretical training to trainees or apprentices is provided at VETC. ▪ Assessment process of trainees or apprentices undertaken. ▪ Ensure all trainee or apprentices have log books and that supervisors at the workplace sign off the logbook. ▪ All traineeship and apprenticeship contracts are in place. ▪ Provision of traineeships and apprenticeships in firms are increased. 	
2.4	Capacity of COSDECs is improved to offer accredited training programmes.	<ul style="list-style-type: none"> ▪ An improvement plan is developed to upgrade COSDECs to offer accredited training programmes. ▪ The capacity of COSDECs is expanded to accommodate a diverse student population. 	
2.5	Offer skills programmes needed by industry in Health and Safety, freight forwarding and handling and fire-fighting.	<ul style="list-style-type: none"> ▪ Programmes offered by VTCs and tertiary institutions 	
STRATEGIC PRIORITY 3: Improving the efficiency and effectiveness of the VET sector			
<p>RATIONALE: <i>The VET sector has a contributory role to play in transforming Namibia into an industrialised nation with improved quality of life for all Namibians. VET institutions should be geared to address occupational shortages in the country, particularly for technical, technological and employability skills at artisanal level. Currently the VET system is small, underfunded, undifferentiated with poor quality outputs. In this respect it is not meeting the growing needs of students, employers, workers, and marginalised sections of society. Most of the VET institutions are faced with the problem of where demand for places exceeds the supply-side capacity of institutions. There are a large number of young people that should be accommodated in VET institutions and become equipped with the requisite knowledge and technical skills for productive employment and self-employment. In addition to expansion of the VET sector, access should be made for employed workers wanting to enrol on training programmes at VET institutions whilst in employment. Equally important is the need to align the VET sector to the country's overall developmental agenda with links to various strategies such as Vision 2030, NDP 4 and the National Human Resource Development Plan. This will enable the VET sector to contribute more effectively to the goal of inclusive growth and development, and contribute to reducing unemployment and poverty.</i></p>			
3.1.	Expand capacity (institutions and	<ul style="list-style-type: none"> ▪ An audit of VET institutions earmarked as key providers of 	NTA/Ministry of Education/ISC/VETC/COSDECs

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
	infrastructure) to provide training to address occupations in high demand and skills gaps, enabling improved productivity, economic growth and the ability of the workforce to adapt to changes in the labour market.	<p>industry training is undertaken to establish what improvement, upgrading and expansion is needed.</p> <ul style="list-style-type: none"> ▪ Approval and funding for such upgrading and improvements are obtained. ▪ An audit of potential institutions to become training providers is undertaken to create the required training capacity to meet occupational demand. Funding for upgrading and improvements for such institutions is obtained. 	
3.2.	Expand student access and increase the range of training programmes at existing VET institutions in trades and occupations that are critical for economic growth and industry competitiveness.	<ul style="list-style-type: none"> ▪ Student intake at existing VETC facilities is increased using a range of delivery modes (full-, part-time, distance and blended). ▪ Increase the number of accredited private training providers in the VET sector for national qualifications. ▪ A baseline of current training by firms in the industry should be established and a 3 year stretch targets of the number of workers in firms that should be trained by VET institutions should be set. 	
3.3.	Promote differentiation in the VET sector in terms of programme mix and target population.	<ul style="list-style-type: none"> ▪ Grade 9 learners, employed workers, youth and unemployed adults should be accommodated by VET Centres and COSDECs and progressively increased annually. 	NTA/Ministry of Education/ISC/VETC/COSDECs
3.4.	Develop training programmes to grow the pool of VET instructors and improve the subject knowledge and competencies of existing VET instructors.	<ul style="list-style-type: none"> ▪ An audit to establish the number and profile of existing VET instructors is undertaken to determine capacity constraints. ▪ Establish what upgrading and retraining they require to meet CBET and other requirements to be registered as competent instructors with the NTA. ▪ Create the capacity to provide train-the-trainer programmes for those trainers requiring retraining and upgrading. ▪ Number of new VET and existing VET instructors that underwent training. 	
3.5.	Improve the capacity of VET managers to run institutions effectively and efficiently.	<ul style="list-style-type: none"> ▪ Professional development programmes are offered in: leadership, organisational development, performance management, strategy, marketing, finance, human resources, client 	

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
		relationships management and finance. <ul style="list-style-type: none"> ▪ The number of VET Managers trained are increased annually. 	
STRATEGIC PRIORITY 4: Supporting workplace-based skills development in firms in the industry sector			
<p>RATIONALE: Planning and implementing skills development in the workplace is essential to identifying current and future workforce needs in firms. The business environment is dynamic, competitive and can change quickly. Firms that support skills development of employees are in better position to grow their business, improve productivity, support job creation and economic development. Skills development motivates employees to do better in the workplace and support business objectives. For policy-makers and education institutions to develop training solutions that meet the needs of firms, employers should communicate workforce training needs to supply-side institutions in the labour market. This will contribute significantly to building the capacity of the VET sector to deliver training programmes that align to workforce needs and ensure work ready graduates that have both the skills and knowledge required by employers.</p>			
4.1.	Encourage firms to invest in upgrading the skills of their employees above 1% compulsory training levy.	<ul style="list-style-type: none"> ▪ A baseline is established of training activity in firms in the industry. ▪ Number of firms offering training to employees is increased annually. ▪ Number of employees receiving training is increased annually. ▪ Number of firms spending in excess of 1% of payroll on training is increased annually. 	NTA/Firms
4.2.	Develop the capacity of individual firms to engage systematically in workforce skills planning and implementation.	<ul style="list-style-type: none"> ▪ The NTA develops a workforce skills planning programme firms to undertake the following: <ul style="list-style-type: none"> ○ Identify workforce training needs ○ Align business objective to skills development ○ Develop a workplace skills plan and training report ○ Advise firms on top-up skills, occupations in high demand, accreditation, sourcing training providers, apprenticeships and traineeships, RPL and the use of the training levy ○ Appointing s skills development facilitator ▪ The programme is delivered in all regions annually. 	
4.3.	Promote skills development in small businesses.	<ul style="list-style-type: none"> ▪ A national database of small businesses supported with skills development is established and the impact of training reported on. ▪ NTA through skills planning research identify the skills needs of small and emerging businesses in their industry and 	

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
		promote relevant training programmes through incentives.	
STRATEGIC PRIORITY 5: Addressing unemployment and employability skills to eradicate poverty and build sustainable livelihoods			
RATIONALE: <i>High unemployment, particularly for youth, is a major challenge for Namibia. The other challenge is high levels of poverty among the population. To transform Namibia into an industrialised country with improved living standards it is necessary to eradicate poverty, high unemployment and underdevelopment. Skills development provides opportunities for the unemployed and marginalised to acquire employability and self-employment skills. The training of workers in the informal economy on basic and generic skills (such as literacy and numeracy) as well as entrepreneurial skills facilitate the transition from self-employment in the informal economy to micro-enterprise development in the formal economy.</i>			
5.1.	The Skills Fund is effectively used to address unemployment, develop employability and entrepreneurship skills, and build sustainable livelihoods.	<ul style="list-style-type: none"> ▪ Develop and implement training projects that target the unemployed, marginalised and rural communities to secure employment and build sustainable livelihoods. ▪ Numerical targets to reach vulnerable groups are set annually. ▪ NGOs working in local communities are supported. ▪ Link programmes such as TIPEEG with skills development. ▪ Training activities to improve employability and entrepreneurship skills are designed and offered. 	NTA/NGOs/VETC/COSDECs
5.2.	Support the development of low skill, low wage workers for skills development and career advancement	<ul style="list-style-type: none"> ▪ Number of training projects focused on low skill, low wage workers implemented. ▪ Number of worker given recognition of prior learning. 	
STRATEGIC PRIORITY 6: Establishing institutional research capacity for national skills planning			
RATIONALE: <i>There is a need to build institutional skills research capacity and improve labour market diagnosis within the NTA, Industry Skills Councils and VET Centres to analyse skills imbalances and make appropriate funding allocations. The NTA has an important role in conducting industry skills research, gathering statistics and disseminating findings to the public. Their close contact with government agencies, industries and VET institutions puts them in a good position to skills trends, undertake national training needs studies, develop baseline labour market indicators and postulate solutions. Strong research capacity will improve the capacity of decision-makers to determine industry skills needs and guide education and training investments effectively and efficiently. By establishing institutional research capacity, an evidence-based policy-making culture will be developed in the skills development environment.</i>			
6.1.	Develop a three year Research Strategy and Implementation Plan (2014-2017) that will include the following: institutional research aims and objectives; research activities; capacity-building interventions; information	<ul style="list-style-type: none"> ▪ Research strategy and implementation plan approved by NTA Board. ▪ One national skills conference per year. ▪ One tracer study and one employer survey every two years consecutively. 	NTA/ISC/Board

NO	ACTIONS	SUCCESS INDICATORS	LEAD AGENCY
	management; establishment of a research committee; and communication and dissemination of information.	<ul style="list-style-type: none"> ▪ A sector skill plan per industry sector is updated annually. ▪ Occupational mapping analysis per industry is undertaken. ▪ Two industry sector workshops are held annually. ▪ Number of staff research training interventions. ▪ Number of research partnerships developed. ▪ Research Committee established. ▪ Number of research internships recruited. 	
6.2.	Strategic planning in VET institutions and COSDECS are responsive to labour market shortages	<ul style="list-style-type: none"> ▪ The research skills of VET education managers are improved to analyse training needs in local labour markets. ▪ VETCs and COSDECS conduct employer surveys and tracer studies annually. 	
6.3	Industry skills research is required to inform sound decision-making, monitor industry labour market trends, and measure the impact of interventions and funding allocated.	<ul style="list-style-type: none"> ▪ Research on relevant areas are commissioned and conduct as agreed by the ISC and distributed to stakeholders. 	