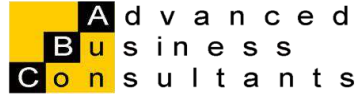


الأعمال المتقدمة للإستشارات المالية والإدارية



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Submitted to



MINISTRY OF COMMERCE, INDUSTRY AND INVESTMENT PROMOTION
SULTANATE OF OMAN

&



PUBLIC ESTABLISHMENT FOR INDUSTRIAL ESTATES
SULTANATE OF OMAN

AUGUST 2021

PRE-FEASIBILITY REPORT (DRAFT)

FOR

SETTING UP A

FIBER GLASS BOAT BUILDING PROJECT

IN OMAN

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1. INTRODUCTION

1.1. PROJECT BRIEF

This report relates to a study on the feasibility of setting up a Boat Building unit in Sultanate of Oman.

The following is the Brief illustration of the project:

Name of Product		Boat Building Project
Domestic Market Size (as of 2019)		2,963 Units
Export Potential (as of 2019)		Not Considered
Capacity of the Project		210 Boats (8 meter Boats)
Total Investment		RO 380,000
Equity Investment		RO 152,000
Key Appraisal Criteria:		
IRR on total investment		18.25%
IRR on Equity		26.7%
Payback period of Total Investment		5 years 10 month
Payback period on equity		4 years 8 months
Break Even Point (as % of Capacity)		78%
Cash Break Even Point (as % of Capacity)		69.9%
Debt Equity Ratio		1.5 : 1
DSCR		2.82
Manpower	Total	24
	Nationals	9

1.2. PROJECT RATIONALE

Oman's economic vision 2040 indicates that the fisheries sector will become increasingly managed by Omanis and will employ young Omanis. As more employment opportunities are created through the special programmes of the Government in the fisheries sector, the product can be easily marketed considering the following:

- Fisheries are Oman's second largest natural resource. The coastline of Oman extends to about 3165 km on three different water bodies: Arabian Sea, Sea of Oman and the Arabian Gulf. The rich marine biodiversity and productive ecosystems with valuable fishery stocks are the main characteristics of this coastline.
- Oman is a leading country in the utilization, production and export of fisheries in the region and the world.
- Fish landing in Oman in 2019 is 580,240 tons compared to 553,445 tons in 2017.
- Oman's fisheries sector has drawn praise from international organizations, including the World Bank.
- The findings of Tanfeedh labs have facilitated this sector, including through issue of licenses and approvals, providing plots for fish farming and processing projects and allowing commercial fishing fleets access to operate on the high seas.
- The Ministry of Agriculture and Fisheries (MoAF) has been attracting more experts, specialists and company owners to develop the sector.

2. INDUSTRY ANALYSIS

2.1. MACROECONOMIC CONDITIONS

The recently published statistical bulletin from National Centre for Statistics and Information (NCSI) indicates that the GDP at market prices reduced by 15% during Year 2020 when compared to the Year 2019. This is mainly due to the dual impact of slump in oil prices and the COVID - 19 pandemic.

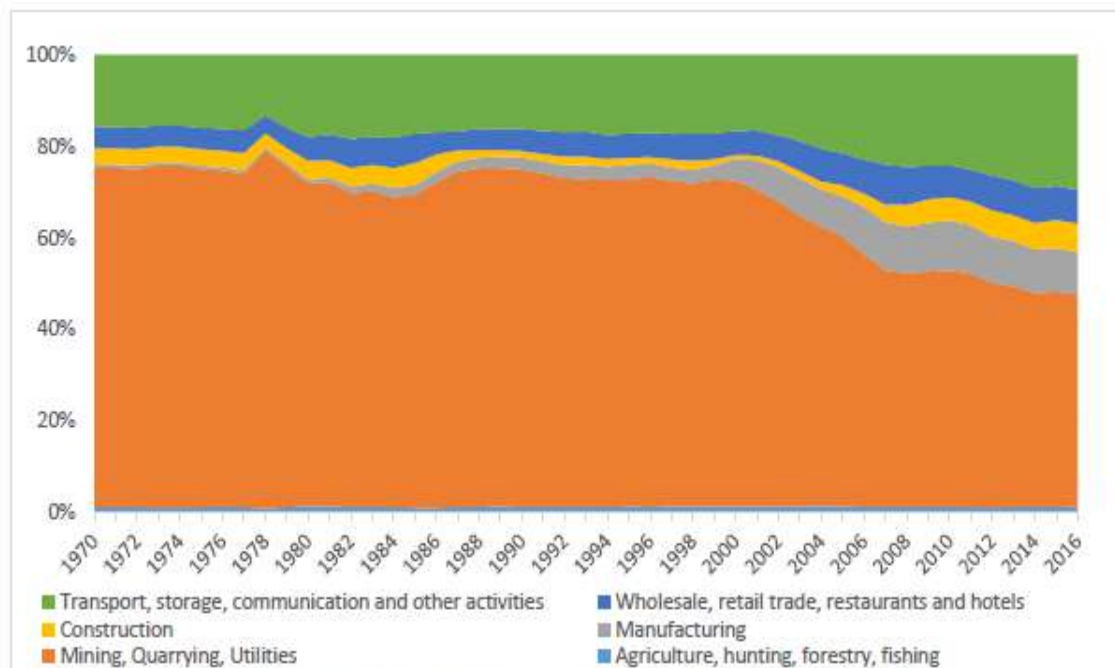
As per the World Bank outlook a revival is expected in 2021 and in 2022 on an average of around 4%. The estimated GDP of Oman considering the past trend, current situation and the expected recovery is illustrated below:



The average price of Oil for 2020 was USD 46/Barrel. We expect this to go up to USD 50/barrel in 2021 and USD 60/barrel in 2022.

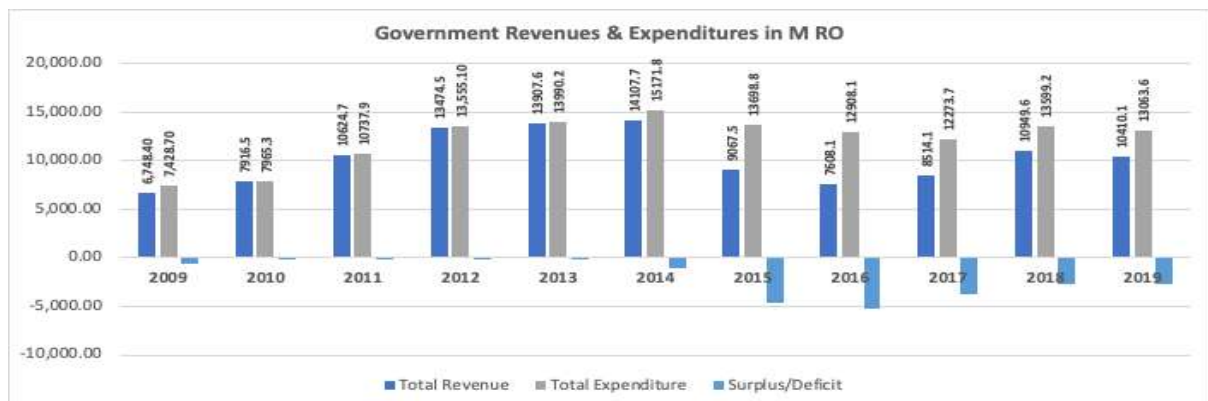
2.2. TREND IN ECONOMIC DIVERSIFICATION

Since the beginning of the millennium our economic activity has significantly moved away from oil as indicated below. The following graph gives data up to 2016. In 2019 Crude Petroleum contributed to 29.11% of GDP.



Source: UNIDO elaboration based on UN Statistics Division (2018)

However the Government income is still substantially dependent on Oil sector. The tightening of spending, introduction of VAT and increased revenues from Gas are expected to contain deficits to manageable levels by 2022.



2.3. FISHERY SECTOR IN OMAN

The Sultanate of Oman has a long coastline, the vast majority of which faces the Gulf of Oman and the Arabian Sea. The main economic activity of many coastal communities is fishing which provides an important supply of fish to local communities, urban areas and for the export markets. Oman is one of the largest fish producers in the region and a net exporter of fish and fish products.

2.3.1. Overview

Fisheries are Oman's second largest natural resource. The coastline of Oman extends to about 3165 km on three different water bodies: Arabian Sea, Sea of Oman and the Arabian Gulf. The rich marine biodiversity and productive ecosystems with valuable fishery stocks are the main characteristics of this coastline.

- Oman is one of the largest producers and consumers of fish in the GCC.
- Fish landing in Oman in 2017 is 347,841 tons compared to 279,610 tons in 2016. This production level showed an increase in the landing of 24 %.
- Oman's per capita consumption of fish is the highest in the GCC after UAE, at 27 kg per capita per annum.
- Oman's largest export markets for fish are the UAE and Saudi Arabia, constituting 50% and 16% of total export by Oman.
- Employing about 50,000 people even today, fisheries are maturing as an industry that can significantly contribute to the non-oil economy.

Oman's economic vision is that, by 2040, the fisheries sector will become increasingly managed and financed by Omanis and will employ young Omanis.

2.3.2. GDP Contribution by Fisheries Sector – Trend Analysis

The following table illustrates the trend in the GDP contribution of Fisheries sector during 2008 to 2019.

Details	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total GDP	18,548	22,548	26,122	29,487	30,352	31,158	26,850	25,490	27,140	30,679	29,349.5
Fisheries GDP (RO million)	98.7	110	113.2	141.9	162.3	181.9	167.6	196.3	214.5	235.2	257.6
Fisheries GDP to Total GDP	0.5%	0.5%	0.4%	0.5%	0.5%	0.6%	0.6%	0.8%	0.79%	0.77%	0.88%
YoY Growth (%)	9%	11%	3%	25%	14%	12%	-8%	17%	9%	10%	10%

Source: Statistical Year Book, NSIC 2020

In Oman, the sector is dominated by artisanal fishermen using traditional fishing methods. The capture fishery sector is dominated by the traditional fishing methods. It accounts for 99% of all landings.

2.3.3. Omani National Fleets & Segments

- **Artisanal fleet:** There are two types of fishing units: Dhows (wooden or fiberglass vessels) and Fiberglass boats.
- **Coastal fleet:** the total number of vessels in 2019 was 162 vessels, with a high concentration in the Arabian Sea, and precisely from Ras AL Had in Al Sharqiya to Dhofar.
- **Industrial fleet:** consists of vessels undertaking pelagic fishing activities and represents only 0.1% of the total fishery production in 2018.

2.3.4. Fishing Boats / Vessels & Fishermen

The Table illustrates the details regional distribution of fishing boats in 2019.

Details	Governorates						Total
	Dhofar	Al Wusta	Ash Sharqiyah	Muscat	Al Batinah	Musandam	
1 Fishing Licenses	11,394	5,462	10,023	5,538	14,541	3,447	50,405
2 Fishing Boat	4,573	4,057	4,874	2,507	6,300	2,025	24,336
3 Long line Fishing Vessel	-	-	-	11	-	-	3
4 Coastal Fishing Vessel	-	-	-	162	-	-	150

Source: Statistical Year Book, NCSI, 2020

2.3.5. Traditional Fishery – Fisherman & Boats by Governorate

Fishing Centers by Governorate	2015		2016		2017		2018		2019		CAGR	
	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen
Musandam Governorate												
Bukha	191	327	193	346	208	357	222	366	230	379	4.75%	3.76%
Khasab	1,009	1,849	845	1,615	902	1,686	947	1,752	1,091	1,902	1.97%	0.71%
Daba	519	881	536	905	791	1,237	585	927	797	1,166	11.32%	7.26%
Leema	0	0	192	297	0	0	207	304				
Total	1,719	3,057	1,766	3,163	1,901	3,280	1,691	3,349	2,118	3,447	5.36%	3.05%
Al Batinah North & South												
Shinas	949	1,929	970	1,972	998	2,034	980	2,102	1,021	2,178	1.85%	3.08%
Liwa	278	775	281	788	279	790	280	837	273	850	-0.45%	2.34%
Sohar	1,024	2,764	1,058	2,830	1,100	2,877	1,136	2,922	1,136	2,970	2.63%	1.81%
Saham	861	2,056	871	2,098	886	2,152	906	2,218	908	2,298	1.34%	2.82%
Al Khaburah	605	1,321	593	1,440	543	1,389	545	910	540	928	-2.80%	-8.45%
Al Suwaiq	971	1,933	988	1,976	986	2,043	994	2,046	1,003	2,125	0.81%	2.40%
AL Musannah	471	1,005	476	1,035	482	1,071	498	1,104	520	1,141	2.51%	3.22%
Barka	837	1,763	850	1,695	870	1,860	891	1,996	918	2,051	2.34%	3.86%
Total	5,996	13,546	6,087	13,834	6,144	14,216	6,230	14,135	6,319	14,541	1.32%	1.79%
Muscat Governorate												
As-Seeb	521	1,201	524	1,248	564	1,342	1,412	599	612	1,442	4%	4.68%
Bosher	311	668	313	708	327	722	741	331	337	756	2%	3.14%
Mutrah	252	551	239	493	237	507	598	300	306	613	5%	2.70%
Muscat	673	1,440	682	1,549	716	1,582	1,542	728	743	1,562	3%	2.05%
Quriyat	458	1,055	461	1,056	478	1,076	1,137	491	511	1,165	3%	2.51%
Total	2,215	4,915	2,219	5,054	2,322	5,229	5,430	2,449	2,509	5,538	3%	3.03%

Fishing Centers by	2015		2016		2017		2018		2019		CAGR	
	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen	Boats	Fishermen
Al Sharqiyah South												
Sur	1,525	3,140	1,537	3,263	1,564	3,574	1550	3633	1,814	3,766	4.43%	4.65%
Jalan Bu Ali	3,082	5,438	5,461	5,461	2,965	5,416	2872	5582	2,980	5,372	-0.84%	-0.30%
Jalan Bu Hassen	257	567	213	589	319	811	317	853	421	885	13.13%	11.77%
Masirah	1,308	1,875	1,371	1,950	1,423	2,019	1647	2028	1,506	1,902	3.59%	0.36%
Total	6,172	11,020	8,582	11,263	6,271	11,820	6,386	12096	6,721	11,925	2.15%	1.99%
Al Wusta												
Mahoot	942	1,929	1,133	1,886	1,090	2,067	991	2129	1,065	2,090	3%	2.02%
Al Duqm	706	1,024	509	792	801	1,085	406	747	865	745	5%	-7.64%
Al Jazir	574	695	575	794	779	707	771	725	782	725	8%	1.06%
Ras Mudrkah	0	0	278	368	0	0	0					
Total	2,222	3,648	2,495	3,840	2,670	3,859	2,168	3601	2,712	3,560	5%	-0.61%
Dhofar												
Shalaim & Hallaniyat	762	653	775	661	776	663	768	669	783	674	0.68%	0.79%
Sadah	599	1,510	586	1,512	571	1,517	556	1545	551	1,575	-2.07%	1.06%
Mirbat	894	2,619	902	2,628	900	2,648	850	2673	905	2,723	0.31%	0.98%
Taqah	322	1,023	321	1,035	319	1,049	324	1056	338	1,095	1.22%	1.71%
Salalah	1,615	4,025	1,620	4,081	1,628	4,166	1625	4279	1,668	4,442	0.81%	2.50%
Rakhyut	170	378	173	379	173	394	170	407	170	407	0.00%	1.87%
Dhalkut	235	443	238	449	238	458	239	475	236	478	0.11%	1.92%
Total	4,597	10,651	4,615	10,745	4,605	10,895	4,532	11,104	4,651	11,394	0.29%	1.70%
Grand Total	22,921	46,837	25,764	47,899	23,913	49,299	23,726	49,715	25,030	50,405	2.22%	1.85%

Source: Statistical Year Book NCSI 2020

2.3.6. Fish Landing Pattern

Activity Types	2013	2014	2015	2016	2017	2018	2019	% of Total 2019	CAGR
	Fish Landed (Figures in Tons)								
Traditional Fishing	203,454	207,825	254,767	277,014	343,926	548,672	555,210	96%	18%
Commercial Fishing	398	590	210	163	398	413	20,055	3%	92%
Coastal Fishing	2,312	2,618	2,024	2,330	3,140	3,909	3,921	1%	9%
Aquaculture	353	282	170	103	77	451	1,054	0%	20%
Total	206,517	211,315	257,171	279,610	347,541	553,445	580,240	100%	19%

Source: Statistical Year Book, NCSI 2020

2.3.7. Fish Landing by Governorate & Fishing Methods

Total Fish Landed during 2015 to 2019												
Year	Unit	Traditional Fishing by Governorate							Commercial Fishing	Coastal Fishing	Aquaculture	TOTAL
		Dhofar	Al Wusta	Sharqiyah South	Muscat	Al Batina	Musandam	Total				
2015	Quantity (Ton)	34,756	76,736	62,642	19,508	40,813	20,312	254,767	210	2024	170	257,171
	Value (RO Million)	24	26	31	21	43	25	170		2		172
	Unit Value (RO/Ton)	691	339	495	1,076	1,054	1,231	667	0	988	0	669
2016	Quantity (Ton)	43,132	73,750	73,291	21,812	43,207	21,822	277,014	163	2330	103	279,610
	Value (RO Million)	32	30	36	27	51	25	201		3		204
	Unit Value (RO/Ton)	742	407	491	1,238	1,180	1,146	726	0	1,288	0	730
2017	Quantity (Ton)	40,892	112,323	86,115	22,412	49,213	32,971	343,926	398	3140	77	347,541
	Value (RO Million)	23	45	42	26	56	32	224	1	2		228
	Unit Value (RO/Ton)	562	401	488	1,160	1,138	971	651	2,764	764	0	655
2018	Quantity (Ton)	65,064	203,714	150,310	28,371	66,820	34,393	548,672	413	3,909	451	553,445
	Value (RO Million)	37	52	55	26	62	31	264	1	4	1	269
	Unit Value (RO/Ton)	566	255	368	923	928	913	481	1,211	895	1,996	485
2019	Quantity (Ton)	74,383	206,697	144,458	24,264	67,808	37,599	555,210	20,055	3,921	1,054	580,240
	Value (RO Million)	40.9	75	64.3	20.3	58.8	29.7	288	10.6	5.6	2	306.2
	Unit Value (RO/Ton)	550	363	445	837	867	790	519	529	1428	1898	528
CAGR		36.8%	20.95%	28.11%	23.23%	5.61%	13.53%	16.64%	21.50%	212.61%	17.98%	57.80%

2.3.8. Landing by species in 2019 by Regions

The following table illustrates the fish landing (different species) from the various regions of Oman.

Governorate Kind	المجموع الكلّي Total	الإستزراع Aquaculture	الساخلي Coastal	التجاري Comercial	الصيد الحرفي Artisanal Fishery						
					الإجمالي Total	الوسطى Al Wusta	جنوب الشرقية Ash Sharqiyah South	الباطنة ⁽¹⁾ Al Batinah	مسندم Musandam	ظفار Dhofar	مسقط Muscat
Ton											
Big Pelagics											
Yellowfin tuna	37,074	0	41	297	36,735	6,170	17,145	5,381	758	3,309	3,973
Longtail tuna	14,684	0	34	0	14,650	401	2,017	5,833	4,345	210	1,843
Kawakawa	6,702	0	18	0	6,684	1,811	1,580	1,568	531	416	778
Striped bonitto	1,078	0	9	0	1,068	141	502	84	1	266	75
Frigate tuna	1,130	0	10	0	1,119	36	233	473	18	82	277
Skipjack	102	0	0	0	102	0	76	17	2	0	7
Other tuna	2,576	0	976	190	1,410	264	186	370	436	28	126
Kingfish	2,098	0	8	0	2,090	57	88	844	569	174	359
Queenfish	5,340	0	44	0	5,296	1,510	932	1,030	1,360	98	366
Baracuda	10,890	0	130	97	10,662	1,545	665	3,228	3,427	491	1,307
Cobia	173	0	0	0	173	0	20	91	20	8	34
Sailfish	1,495	0	10	15	1,470	13	528	644	21	27	236
Large Jacks	15,177	0	151	0	15,026	4,886	2,354	1,608	2,271	3,338	569
Other	17,061	0	183	39	16,840	8,486	6,304	436	1,197	130	287
Subtotal	115,578	0	1,614	638	113,325	25,320	32,629	21,606	14,955	8,576	10,239
Small Pelagics	0										
Sardine	275,186	0	170	0	275,016	134,989	84,406	14,093	2,125	35,037	4,366
Indian Mackerel	11,301	0	40	0	11,261	3,634	778	2,373	2,298	1,383	795
Anchovy	17,482	0	0	0	17,482	0	0	11,615	2,681	0	3,186
Small Jacks	19,372	0	77	0	19,295	363	3,770	7,077	5,110	9	2,967
Mulletts	5,168	0	27	0	5,141	1,566	959	187	419	1,958	52
Needlefish	1,152	0	0	0	1,152	139	43	15	945	4	5
Other	19,813	0	26	19,247	541	104	27	27	366	8	10
Subtotal	349,475	0	339	19,247	329,889	140,795	89,983	35,388	13,945	38,398	11,380
Demersal											
Emperor	17,041	0	356	0	16,685	5,511	2,654	1,520	695	5,879	426
Seabream	8,662	862	124	0	7,677	1,378	1,083	484	184	4,395	152
Groupper	2,964	0	86	0	2,878	325	292	890	701	577	92
Crocker	9,009	0	197	0	8,812	5,495	1,620	34	0	1,651	11
Sweetlips	3,261	0	143	0	3,118	1,145	562	484	86	701	141
Snapper	7,151	0	1	0	7,150	373	38	527	4,982	1,124	106
Jobfish	2,130	0	12	0	2,118	854	1,133	73	3	21	33
Rabbitfish	8,193	0	9	0	8,184	3,163	2,146	59	122	2,680	14
Catfish	7,435	0	275	0	7,159	3,838	2,320	202	94	580	125
Ribbonfish	15,233	0	131	0	15,102	9,317	4,348	317	15	1,003	102
Other	7,917	0	26	7	7,884	2,039	927	1,821	444	2,161	492
Subtotal	88,997	862	1,361	7	86,767	33,439	17,125	6,410	7,326	20,773	1,695
Sharks & Rays											
Sharks	5,086	0	300	14	4,772	151	1,486	745	763	1,355	272
Rays	841	0	3	0	838	2	6	565	84	0	180
Subtotal	5,927	0	302	14	5,611	153	1,492	1,311	847	1,355	452
Crustaceans											
Lobster	1,049	0	0	0	1,049	430	240	1	1	377	0
Shrimp	863	0	0	0	863	680	183	0	0	0	0
Cuttlefish	14,533	0	305	0	14,229	5,271	2,481	2,330	466	3,326	355
Abalone	24	0	0	0	24	0	0	0	0	24	0
Subtotal	16,470	0	305	0	16,166	6,381	2,905	2,332	467	3,727	355
Unidentified Fish's											
Other	3,794	192	0	149	3,453	610	324	762	60	1,553	143
Grand Total	580,240	1,054	3,921	20,055	555,210	200,317	141,554	65,477	37,133	70,656	23,909

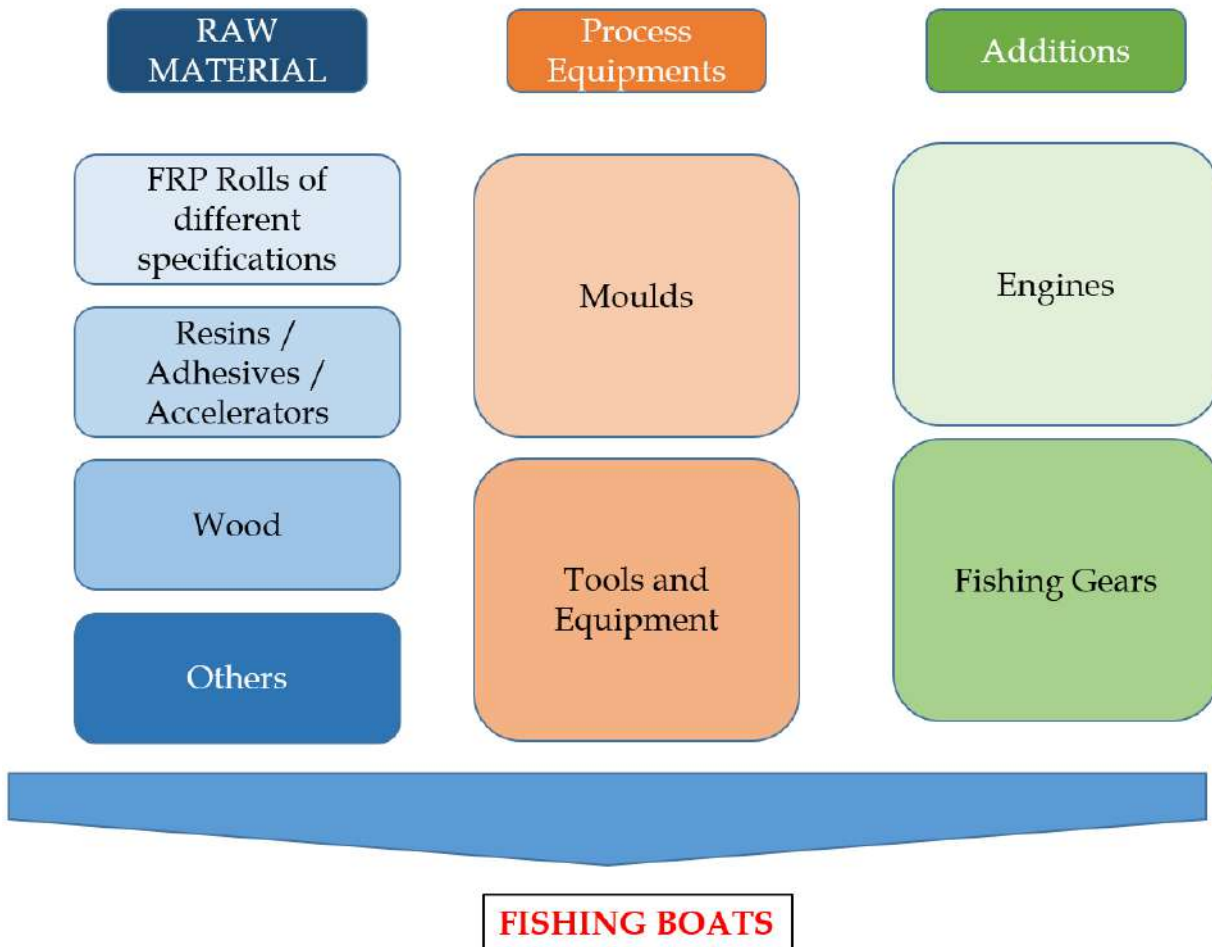
2.3.9. Fisheries Sector Development - Key Initiatives by Government

The ministry has set a plan to develop the coastal fishing sector. The plan includes revising the laws and regulations related to the coastal fishing sector. It also revised and amended the procedures taken with regard to licenses for the coastal fishing vessels. The Ministry is implementing a certain number of development projects, namely:

- Commercial/Industrial fleet development programs for large pelagic and small pelagic (Arabian Sea and Indian Ocean)
- Coastal fleet development programs for demersal and small pelagic resources (Arabian Sea and Indian Ocean)
- Small scale Modern boats (9-less than 14 m) (Oman Sea and Arabian Sea)
- Development of an industrial project for the exploitation and valorization of Mesopelagic resources through the use of specialized fishing vessels (Oman Sea)
- Undertake a trial to exploit the deep sea lobster fishery in the Arabian Sea.
- The ministry, which developed the technical specifications for these vessels, has plans to gradually introduce about 480 coastal fishing vessels by 2023.
- The ministry targets to increase the fish production to 1.4 million tons annually and fisheries sector's contribution to the sultanate's GDP is expected to reach RO 740 million by 2023.
- The fisheries sector is expected to provide 4,000 direct jobs by 2023
- The private sector will contribute for 93 per cent of investments in the fishing sector, which have been approved by the Tanfeedh programme. Ninety one investment projects and initiatives for the private sector have been approved. The contribution of the private sector to these initiatives is expected to reach RO 1 billion by 2023.

2.4. FISHING BOATS VALUE CHAIN ANALYSIS

Small size fishing boat manufacturing is a Labour intensive process with basic raw materials from different sources and using simple moulds and equipment for manufacture. The following chart illustrates the value chain analysis of fishing boats:



2.5. REGIONAL (GCC) VALUE-CHAIN

Fishing boats are being manufactured in all the GCC countries. While most of the raw materials and the accessories including engines and the fishing gears are imported. Fishing is a major economic activity in all the GCC countries and hence there are end users of the fishing boats in the various GCC countries.

2.6. VALUE CHAIN IN OMAN

In Oman there are over 30 manufacturers of fishing boats of various sizes for different types of fishing activities. However, the major raw materials including resins, FRP sheets as well as the accessories including engines and the fishing gears are imported.

2.7. MISSING VALUE CHAIN ACTIVITIES IN OMAN

While manufacture of a range of fishing boats and its use for traditional fishing is widely prevalent in Oman the manufacture of the raw materials and accessories is not available in Oman. Discussions with the industry experts indicates that the volumes of the raw materials required by this industry do not justify investments in establishing manufacturing units for the raw materials and accessories.

3. MARKET ANALYSIS

3.1. PRODUCT & ITS USES

A boat is a watercraft of a large range of types and sizes, but generally smaller than a ship, which is distinguished by its larger size, shape, cargo or passenger capacity, or its ability to carry boats. Boats can be grouped according to its uses as leisure, passenger, patrol and fishing boats.

3.1.1. Based on End Use

A **fishing vessel** is a boat or ship used to catch fish in the sea, or on a lake or river. Many different kinds of vessels are used in commercial, artisanal and recreational fishing.

- Fishing boats are classified according to its size as to Small, Medium and Large. Industry roughly classifies fishing boats up to 7.5m in size as small, 7.5m to 15m as medium and above 15m as large.
- Large fishing boats are used for deep sea fishing.
- Various fishing equipment and accessories are provided as required. Cold storage facilities for storage of fish of suitable capacity are also standard feature of fishing boats.
- Leisure boats or pleasure boats are made to various sizes with facilities depending on requirement of customers.

Different sorts of fishing vessels are used to serve this purpose. On the basis of the purpose they serve, fishing vessels are categorized as follows

- Commercial fishing vessels,
- Artisanal fishing vessels
- Recreational fishing vessels.

Commercial fishing vessels or Industrial fishing vessels are the vessels employed for catching fish and other seafood generally from wild fisheries for commercial profit.

3.1.2. F R P Boats – The focus of the current Project

Fibre Reinforced Plastic, commonly known as FRP, is an alternative for conventional boat building materials. Use of Fibre Reinforced Plastic in the marine sector is currently made to build boats, canoes, lifeboats, utility vessels. It is mostly used to build recreational boats due to its durability and cost efficiency.

The project shall focus on manufacture of Small size FRP for fishing.

3.1.3. Advantages of F R P Boats

FRP boats have the following distinct advantages compared to the conventional steel / wooden boats.

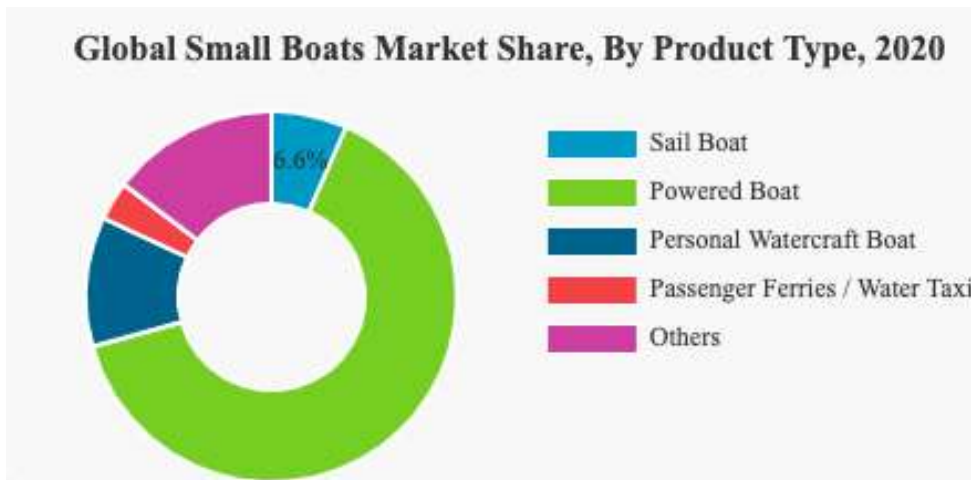
- They are lightweight, resulting better fuel efficiency.
- They can be easily and economically repaired
- They are good is aesthetics
- Complicated shapes as per design can be made easily.

3.2. INDUSTRY OVERVIEW

3.2.1. Global Scenario - Small Boats

The global small boats market size was USD 25.09 billion in 2020. The global impact of COVID-19 has been unprecedented and staggering, with small boats witnessing a positive demand shock across all regions amid the pandemic. Based on the analysis of Fortune Business Insights, the global market exhibited a modest growth of 4.1% in 2020. The global small boats market is projected to grow from \$26.89 billion in 2021 to \$57.78 billion in 2028 at a CAGR of 11.0% in forecast period, 2021-2028. The sudden fall in CAGR is attributable to this market's demand and growth returning to pre - pandemic levels once the pandemic is over.

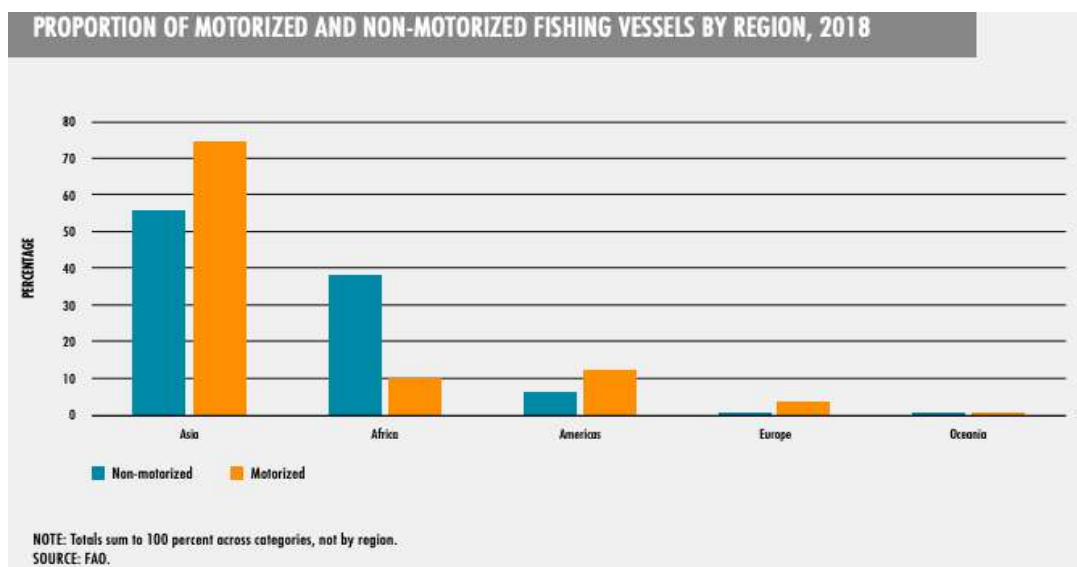
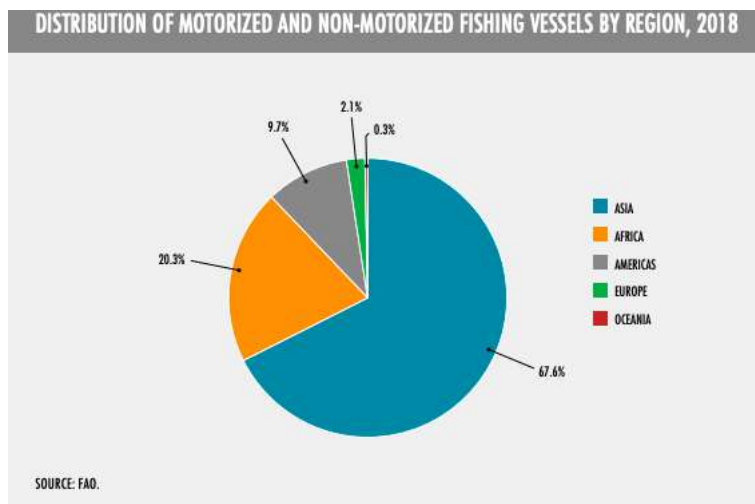
A rapid increase in fishing and pleasure riding is anticipated to boost the growth of the market.

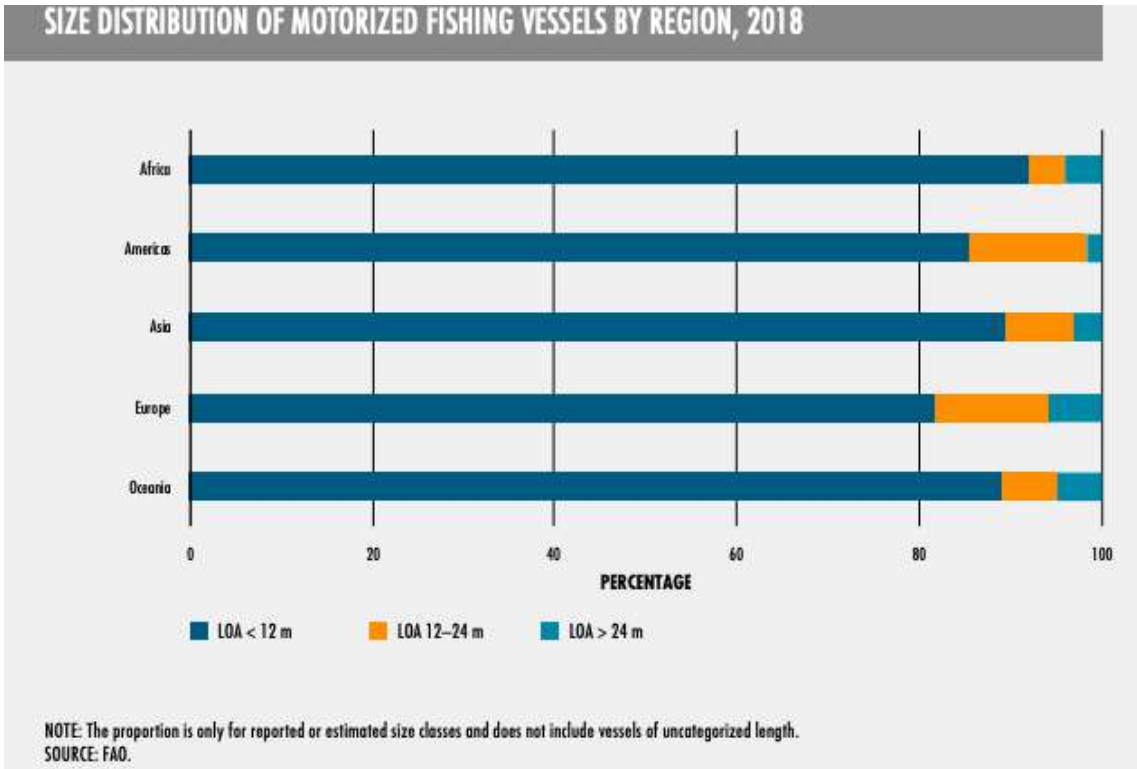
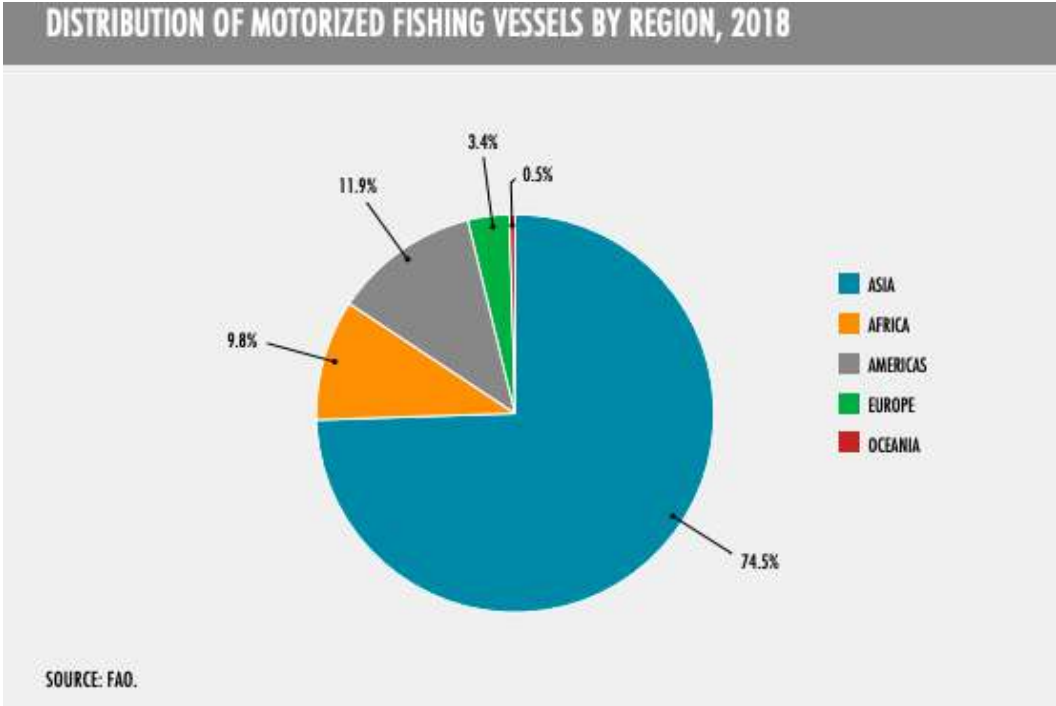


- Based on product type the market is segmented into powered boats, sailboats, personal watercraft and others.
- The powered boat segment holds the largest share in the global market.
- Based on application type, the market is segmented into pleasure, fishing, defence and others.
- The fishing segment is estimated to have the highest market share over the coming years owing to increasing demand for fish products across the globe.
- Fishing boats are available in different types and sizes that are used in both freshwater and salt water bodies. These boats possess qualities such as durability, stability and strength to survive various kinds of waterways and harsh conditions.
- The market size in Europe stood at USD 5.16 billion in 2020. The region dominates the small boats market share owing to the increasing prevalence of urbanization and the rising interest in fishing and pleasure tours.
- The market in North America is projected to exhibit a healthy growth rate owing to the increasing prevalence of urbanization and the rising interest in fishing and pleasure tours. Several players in this region are investing a high percentage of their revenues in the marine and fishing industry, which in turn is expected to fuel the demand for these boats.

- Asia Pacific is also expected to show significant growth in the market owing to increased government funding and initiatives to promote the fishing and marine tourism industry. The rising demand for boating and recreational activities in countries, including India, China, Japan and Australia is expected further boost the regional market growth.
- The demand for small boats in the rest of the world including South America and the Middle East & Africa is witnessing moderate growth as prices of boats in these countries are decreasing due to the entrance of new players in the market.
- ***Fishing Boat Market Trends***
 - There has been a rise in recreational activities, such as fishing and boating, across the globe, which has created rise in demand for fishing boats. The advanced features offered by fishing boats, such as long shelf life, durability, customization and environment-friendliness, further attract more customers. Therefore, the demand for fishing boat is anticipated to further increase over the forecast period.
 - Increase in demand for fishing globally and rise in awareness about health benefits associated with seafood, such as tuna, ground -fish and salmon, create more demand for the product. Outdoor participation along with the demand for seafood has tremendously fueled the fishing boat market and it is anticipated to drive further over the forecast period.
- ***The Status of the Fishing Fleet***
 - In 2018, the global total of fishing vessels, from small undecked and non-motorized boats to large industrial vessels, was estimated to be 4.56 million, a 2.8 percent decrease from 2016.
 - Asia continues to have the largest fleet with 3.1 million vessels, 68 percent of the global total.

- The global total of motorized vessels has remained steady at an estimated 2.86 million vessels, or 63 percent of the total fleet.
- In 2018, about 82 percent of the motorized fishing vessels (which had a known length classification) in the world were in the LOA class of less than 12 m, the majority of which were undecked, and those small vessels dominated in all regions. Worldwide, FAO estimated there were about 67 800 fishing vessels with an LOA of at least 24 m.
- The increase in 2018 was mostly driven by marine capture fisheries, with production from marine areas increasing to 84.4 million tones in 2018 – up from 81.2 million in 2017.





3.2.2. Major Global Manufacturers

Top Key Manufacturers in Worldwide Boat Building Market

Manufacturer	Country
--------------	---------

Zamakona Yards	Spain
White River Marine Group	USA
Brunswick Corporation	USA
Damen Shipyards	Romania
Duckworth Boats	USA
Kleven Verft	Norway
Karstensens Skibsvaerft	Denmark
Master Boat Builders	USA
Astilleros Armon	Germany
Correct Craft	USA
Weihai Xiangda Marine Co.,Ltd	China

3.2.3. Global Trade

The HS Code 890399 Vessels for pleasure or sports; rowing boats (excluding motor boats and motor yachts powered ... is considered for boats. The following sections provide an overview of the Global trade of Boats

3.2.3.1. Major Global Exporters

Exporters	2016		2017		2018		2019		2020		
	Exported quantity	Value in USD'000	Exported quantity	Value in USD'000	Exported quantity	Value in USD'000	Exported quantity	Value in USD'000	Exported quantity	Value in USD'000	Unit Value
Canada	411,914	107,506	413,389	113,542	390,668	115,908	341,823	113,123	451,832	134,410	297
USA	82,468	654,996	75,073	742,409	85,235	796,992	64,638	804,877	55,109	689,991	12,520
Thailand	47,945	16,058	83,356	18,602	72,425	15,667	34,812	27,551	43,500	11,476	264
Poland	16,574	301,092	19,131	392,537	20,362	470,273	22,295	494,875	21,401	516,502	24,134
China	206,391	136,013	249,706	118,950	297,325	134,816	10,900	132,877	12,643	148,980	11,784
South Africa	18,230	6,551	13,992	4,440	11,262	4,047	185,772	4,447	4,615	4,714	1,021
Taipei, Chinese	4,513	172,472	3,549	146,475	3,914	163,025	5,176	224,950	4,084	196,515	48,118

Pre-Feasibility Report - Boat Building Project

Australia	7,325	8,697	3,980	7,864	9,526	130,202	4,646	13,568	3,648	14,733	4,039
Portugal	1,732	27,107	1,903	31,823	2,290	42,373	2,031	43,809	2,411	53,959	22,380
Finland	2,890	71,786	2,613	65,715	2,656	70,629	2,091	60,094	2,264	74,204	32,776

Source: UNCOM Trade

3.2.3.2. Major Global Importers

Exporters	2016		2017		2018		2019		2020		
	Imported quantity, Tons	Value in USD'000	Imported quantity, Tons	Value in USD'000	Imported quantity, Tons	Value in USD'000	Imported quantity, Tons	Value in USD'000	Imported quantity, Tons	Value in USD'000	Unit Value
UAE	112	1,279	263	1,774	318	1,896	329	2,360			
USA	36	961	2	246	171	1,020	28	593	20	149	7,450
Qatar		-		-	39	233					
Kuwait	3	3		-	31	183	18	99			
China	11	49		-	23	138	1	11	11	83	7,545
Singapore		-		-	17	101					
Italy		-	8	399	8	50					
Australia	-	6		-	7	41					
France	3	42		-	5	29	2	32	2	92	46,000
Bahrain	7	29	1	5	5	27	1	6			

Source: UNCOM Trade

3.3. DEMAND ANALYSIS FOR FISHING BOATS

3.3.1. Domestic Demand

The requirement of fishing boat is met from the local production and import.

3.3.1.1. Local Production

There are more than 30 local manufacturers that are mainly manufacturing small boats. Thus for larger boats, there is limited competition in Oman. The competition on large boats comes from other European manufactures.

Oman imports fishing boats of various types from UAE, Europe and other countries.

3.3.2. Foreign Trade

The following are the HS Codes considered for fibre glass boats.

- HS 89039910: Fiberglass boats with outboard motor
- HS 89039920: Fiberglass boats without outboard motor

3.3.3. Imports

The imports of fiber glass boats into Oman for the last 5 years have been detailed in the following table.

HS Codes	Details	2015	2016	2017	2018	2019	2020
89039910: Fiberglass boats with outboard motor	Quantity in tons	104	120	174	212	245	360
	Nos				1,589	116	
	Value in RO	343,707	460,863	519,172	450,975	799,350	2,753,202
89039920: Fiberglass boats without outboard motor	Qty in tons	51	47	49	93	155	115
	Nos				44	102	
	Value in RO	132,456	374,896	95,855	279,049	337,358	387,518

3.3.4. Import Sources - 2019

- 89039910: Fibreglass boats with outboard motor

Country	RO	Nos	Unit Value (RO/Unit)
UAE	500,944	90	5,566
USA	257,717	17	15,160
Kuwait	34,173	7	4,882
Bahrain	1,081	1	1,081
Saudi	5,435	1	5,435
Total	799,350	116	6,891

- **89039920: Fiberglass boats without outboard motor**

Country	RO	Nos	Unit Value (RO/Unit)
UAE	322,584	56	5,760
China	2,168	44	49
Qatar	4,906	1	4,906
Kuwait	7,700	1	7,700
Total	337,358	102	18,416

As it can be seen majority of imports are from UAE at an average rate of RO 5,500 per boat.

3.3.5. Omani National Fleets & Segments

- **Artisanal fleet:** There are two types of fishing units: Dhows (wooden or fiberglass vessels) and Fiberglass boats.
- **Coastal fleet:** the total number of vessels in 2019 was 162 vessels, with a high concentration in the Arabian Sea, and precisely from Ras AL Had in Al Sharqiya to Dhofar.
- **Industrial fleet:** consists of vessels undertaking pelagic fishing activities and is only 0.1% of the total fishery production in 2018.

3.3.6. Fishing Boats / Vessels & Fishermen

The Table illustrates the details regional distribution of fishing boats in 2019.

Details	Governorates						Total
	Dhofar	Al Wusta	Ash Sharqiyah	Muscat	Al Batinah	Musandam	
1 Fishing Licenses	11,394	5,462	10,023	5,538	14,541	3,447	50,405
2 Fishing Boat	4,573	4,057	4,874	2,507	6,300	2,025	24,336
3 Long line Fishing Vessel	-	-	-	11	-	-	3
4 Coastal Fishing Vessel	-	-	-	162	-	-	150

Source: Statistical Year Book, NCSI, 2020

- As per the NCSI Statistical Year Book the number of registered boats in the country as on December 31, 2019 was 24,336.
- In addition unregistered boats engaged in fishing will be of good number.

The Table below illustrates the number of fishing boats in Oman

Fishing Centers	2015	2016	2017	2018	2019	CAGR
	Boats					
Musandam Governorate						
Bukha	191	193	208	222	230	4.75%
Khasab	1,009	845	902	947	1,091	1.97%
Daba	519	536	791	585	797	11.32%
Leema	0	192	0	207		
Total	1,719	1,766	1,901	1691	2,118	5.36%
Al Batinah North & South						
Shinas	949	970	998	980	1,021	1.85%
Liwa	278	281	279	280	273	-0.45%
Sohar	1,024	1,058	1,100	1136	1,136	2.63%
Saham	861	871	886	906	908	1.34%
Al Khaburah	605	593	543	545	540	-2.80%
Al Suwaiq	971	988	986	994	1,003	0.81%
AL Musannah	471	476	482	498	520	2.51%
Barka	837	850	870	891	918	2.34%
Total	5,996	6,087	6,144	6230	6,319	1.32%
Muscat Governorate						
As-Seeb	521	524	564	1412	612	4%
Bosher	311	313	327	741	337	2%
Mutrah	252	239	237	598	306	5%
Muscat	673	682	716	1542	743	3%
Quriyat	458	461	478	1137	511	3%
Total	2,215	2,219	2,322	5430	2,509	3%
Al Sharqiyah South						
Sur	1,525	1,537	1,564	1550	1,814	4.43%
Jalan Bu Ali	3,082	5,461	2,965	2872	2,980	-0.84%
Jalan Bu Hassen	257	213	319	317	421	13.13%
Masirah	1,308	1,371	1,423	1647	1,506	3.59%
Total	6,172	8,582	6,271	6,386	6,721	2.15%
Al Wusta						
Mahoot	942	1,133	1,090	991	1,065	3%
Al Duqm	706	509	801	406	865	5%
Al Jazir	574	575	779	771	782	8%
Ras Mudrkah	0	278	0	0		
Total	2,222	2,495	2,670	2,168	2,712	5%
Dhofar						
Shalaim & Hallaniyat	762	775	776	768	783	0.68%
Sadah	599	586	571	556	551	-2.07%
Mirbat	894	902	900	850	905	0.31%
Taqah	322	321	319	324	338	1.22%
Salalah	1,615	1,620	1,628	1625	1,668	0.81%
Rakhyut	170	173	173	170	170	0.00%
Dhalkut	235	238	238	239	236	0.11%
Total	4,597	4,615	4,605	4,532	4,651	0.29%
Grand Total	22,921	25,764	23,913	23,726	25,030	2.22%

Source: NCSI Statistical Year Book 2020

As it can be seen from the above table the number of boats have been growing at a CAGR of 2.22% in the last 5 years.

3.3.7. Fishing Boat Licenses

The table below details the number of new licenses issued at each Governorate in the last 3 years.

Governorate	2017	2018	2019
Muscat	89	107	68
Dhofar	15	25	57
Musandam	128	148	82
Al Batinah	2	99	86
Ash Sharqiah South	0	117	206
Al Wusta	51	53	48
Total	285	549	547

Source: NCSI Statistical Year Book 2020

The table below details the new and renewed licensed by Governorate in Oman for the year 2019.

License Type	Dhofar	Al Wusta	Ash Sharqiyah South	Muscat	Al Batinah	Musandam	Total
Fishing Boat	4,573	4,057	4,874	2,507	6,300	2,025	24,336
Long Line Fishing Vessel				11			11
Artisinal Fishing Vessel	78	161	341	2	19	93	694
Coastal Fishing Vessel				162			162

Source: NCSI Statistical Year Book 2020

3.4. DEMAND ESTIMATES

As per the data collated and discussion with industry experts, it is estimated that the life of a boat is 7 years. The total number of boats for the year 2019 was 25,030 numbers. Considering the life of boats as 7 years the estimated annual replacement of boats works out to around 3,576 boats. The average new licenses for the last 3 years was around 460 boats. Considering the above the annual demand for boats is estimated to be around 4,036 boats.

Details are illustrated in the table below:

Details	Numbers
Total Number of Boats in 2019	25,030
Life of Boats (Years)	10
Annual Replacement (25,030 nos. / 7 years)	2,503
New Licenses (Average of last 3 years)	460
Estimated Annual Demand	2,963

3.5. DEMAND PROJECTION

The estimated annual demand for fiber glass boats for the year 2019 was around 2,963 boats. As it can be seen the boats are growing at a CAGR of 2.22%. Assumption of 2% growth in number of new fiber boats is conservative, considering the growth of the industry and the requirement of replacement of old boats. Thus, the demand for fishing boats for the next five years is projected as below.

Year	2019	2020	2021	2022	2023	2024	2025
Demand (Nos)	2,963						
Projected Growth Rate	%	2%	2%	2%	2%	2%	2%
Projected Annual Demand		3,023	3,083	3,145	3,208	3,272	3,337

The project can also export boats to GCC countries as there is good potential for the fishing boats.

3.6. COMPETITION

3.6.1. Major Sources of Supply

The Major sources of boat supply in Oman are from the local manufacturers. Discussions with the local manufacturers indicates that there are more than 30 manufacturers of small fishing boats in the Sultanate.

In addition to the boat manufacturers there are many dealers who are the local distributors of boats imported into in the Sultanate.

3.6.2. Product Range

While the length of the boat is the major consideration, discussions with the manufacturers indicate that the range of fishing boats are wide ranging depending on the waters they are used, the type of fishing they plan to undertake, the size of the engine, the storage capacity etc.

Manufacturers	Size of Boat
Small Size	Up to 8 meters
Medium size	Above 8 meters up to 24 meters
Large size	More than 24 meters

3.6.3. Pricing

Different sizes of fishing boats manufactured by the company and its price varies based on the size, the construction, the facilities (like storage requirement, engine power, size of bait storage, provision for a steering wheel etc. and the equipments used.

For the purpose of the study and the financial modeling a representative size of 8 meters with a storage capacity of 1.5 tons and provision for mounting a steering wheel is considered at RO 2,300 per boat. It may be noted that this pricing is for the boat only and does not include any accessory including the engine / fishing gear etc.

3.6.4. Promotion

Each manufacturer specializes in their own method of construction and carved a name for themselves in the local market. Discussions indicate that word of mouth promotion by satisfied clients is the most effective way of promoting business.

3.6.5. Distribution

The companies sell its product directly to the buyers. The company also bids in tenders floated by Ministry of Agriculture & Fisheries.

3.7. PROPOSED MARKETING MIX STRATEGY FOR THE COMPANY

3.7.1. Product Mix

The proposed project shall focus on manufacture of smaller boats up to 8 meters. The design will be as per the end user / customer requirements and shall take into consideration a range of features including the following:

- The proposed geographical region where the boat is planned to be deployed.
- Type of engine and its power
- Fishing gear planned
- Fish catch storage capacity
- Bait storage capacity etc.

3.7.2. Pricing

The pricing shall be in line with the requirement / specifications of the client. As indicated earlier, for the purpose of this study the project has considered a realisation of RO 2,300 for a boat of 8 meters length without any additional features / frills.

3.7.3. Promotion

Sample boats will be displayed and made available for trial by the potential buyers. Selling boats at lower margins to gain market share in the initial stages shall be another effective promotion tool employed by the project.

3.7.4. Distribution

The company proposes to sell its product directly to the buyers. In respect of small boats, the buyers are mainly individuals.

3.8. MARKET SHARE AND SALES PROJECTIONS

The following table provides the illustration of the projected demand, the expected market share and the projected sales volume for the project.

Year	2023	2024	2025	2026	2027
Estimated demand (Nos.)	3,208	3,272	3,337	3,404	3,472
Market share (%)	3%	5%	6%	6%	6%
Projected sales (Nos.)	96	164	200	204	208

4. TECHNICAL ANALYSIS

4.1. LOCATION

The Boat Building unit is proposed to be located in the Wilayat of Duqm in the Sultanate of Oman

4.2. PROCESS AND TECHNOLOGY

Basically manufacture of FRP articles involves casting using a mould. The correctness and surface finish of the mould determines the quality of final product. Due to the shape, casting hull of boats in FRP is a proven method. In addition to the hull, other parts such as decks, cabin, etc. are also made in FRP. The process of manufacture of FRP boats includes the following stages:

- 1ST STAGE: Casting in moulds.
- 2ND STAGE: Preparation and fixing of fuel tanks, fish holds, installation of engines, generators, compressors, fishing gears, etc.
- 3RD STAGE: Final finishing of decks, electrical, guardrails, interior decoration, exterior painting and finishing and finally testing and launching.
- For small boats 2nd stage is absent as it does not have these fittings.

4.3. LAND

A total land area of 3,000 m² is required for the Project. The cost of development and related works comes to RO 27,000. Site development includes, soil testing, fencing, parking lot, sewage, provisions for roads, gas connection, etc.

4.4. BUILDING & CIVIL WORKS

A total built up space of 995 M² is required for the proposed activities. The total cost works out to RO 94,000. Details are in Annexure- 1.2

S.No.	Particulars	Area (Sq. M)
A	MAIN PLANT BUILDINGS	
1	Factory Building	500
2	Raw Material Store Area	60
3	Area for finished boats	100
	<i>Sub Total</i>	660
B	UTILITIES & MAINTENANCE	
1	Electrical Room	20
2	Workshop	200
	<i>Sub Total</i>	220
C	ADMINISTRATIVE BUILDINGS	
1	Office	50
	<i>Sub Total</i>	50
D	NON FACTORY BUILDINGS	
1	Canteen	25
2	Change Room	25
3	Security Room	15
	<i>Sub Total</i>	65
	TOTAL BUILDING AREA	995

4.5. PLANT CAPACITY & MACHINERY

The plant and machinery include moulds, boat trolleys and Chain Pulley Block. The total cost of Plant and machinery is RO 76,000. The capacity depends on the number of moulds and the manpower. The project t has considered 4 sets of moulds and the manpower required to manufacture over 200 boats in a year. Details are given in Annexure -1.3.

4.6. VEHICLES

One pickup and a forklift is considered for the project. The estimated cost of vehicles is RO 19,000. Details are provided in Annexure 1.4.

4.7. FURNITURE

Furniture has been considered for the office as well as the accommodation of the workers. The total estimated cost of furniture, furnishing etc., is RO 17,000. The details and the break-up of the estimates are given in Annexure - 1.5.

4.8. RAW MATERIALS AND CONSUMABLES

The major raw materials required are given below along with sources of supply.

- Gelcoat
- Chopped Standard Mat (CSM) - Fiber Glass Rolls
- Resin / Accelerators
- Paints and other general items are available in Oman.

For most of these items, there is more than one source.

4.9. UTILITIES

The utilities required are: -

- Water: The requirement of water is estimated at 876 cubic meters per annum for general usage.
- Electricity: The unit consumes 54,000 KWH of electricity per annum at installed capacity.

Total cost of utilities is estimated at RO 2,295 per year.

4.10. MANPOWER

The total manpower required for the operation is 24. The annual wages and salaries work out to be RO 120,876.

4.11. PROJECT IMPLEMENTATION

The critical activity is civil construction, acquisition. Construction of building will take about 6 months. The Company can start production after 9 months from the start of preliminary activity.

5. FINANCIAL ANALYSIS

5.1. COST OF PROJECT

The total cost of the project is estimated at RO 380,000. Details are given in Annexure - I. The break-up is given below:

PROJECT COST	TOTAL COST (RO)
Land for Plant Site	27,000
Building & Civil Works	94,000
Plant & Machinery	76,000
Vehicles and Internal Transport	19,000
Furniture & Office Equipment	17,000
Pre- Operative Expenses	44,000
Contingency & Escalation	14,000
Sub Total	291,000
Working Capital	89,000
TOTAL CAPITAL	380,000

5.1.1. Land

A total extent of 3,000 Sq. M of land is required. The land is to be taken on lease. Land development cost is estimated at RO 27,000. Details in Annexure 1.1.

5.1.2. Building & Civil Works

The total cost of building and civil works is estimated at R.O. 94,000 for a built up area of 995 sq m. Details are given in Annexure- 1.2.

5.1.3. Plant & Machinery

The main Plant and Machinery is proposed to be imported. The total cost of plant and machinery is estimated at RO 76,000. Details are given in Annexure- 1.3.

5.1.4. Vehicles & Internal Transport

The total cost of vehicles and internal transport is estimated at RO 19,000. Details are given in Annexure- 1.4.

5.1.5. Furniture & Office Equipments

The total cost of furniture and office equipment is estimated at R.O 17,000. Details are given in annexure- 1.5.

5.1.6. Pre Operative Expenses

The pre-operative expenses include expenses for feasibility study, interest during project implementation, salaries and wages of project staff, travel and communication, legal fees, audit fees and other miscellaneous expenses. The total pre-operative expenses are estimated at R.O. 44,000. Details are given in Annexure- 1.6.

5.1.7. Contingency & Escalation

A provision of 5 % of the estimated cost of items including building, plant & machinery, vehicles, technical know-how fee etc., is provided in the Project cost towards price escalation and any unforeseen expenses. This works out to RO 14,000. Details are given in Annexure- 1.6.

5.1.8. Working Capital

The following assumptions are made in the computation of working capital.

<i>Particulars</i>	<i>Period</i>
Accounts Receivable	3 Months
Raw Materials	2 Month
Consumables & packing	1 Month
Utilities	1 Month
Factory Wages	1 Month
Administration Expenses	1 Month
Sales Expenses	1 Month
Work in Progress	10 Day
Finished Goods	15 Day
Finance Cost	1 Month

The working capital requirements for the first 4 years are given below. The working capital requirement in the first year comes to RO 89,000. Details are given in Annexure 1.8.

Particulars	Year 1	Year 2	Year 3	Year 4
Working Capital Requirement (RO '000)	89	132	154	157

5.2. MEANS OF FINANCE

It is proposed to finance the Project as indicated in the following table.

Details	Total Cost (In RO)
Equity Capital	152,000
Bank Term Loan	175,000
Commercial Loan for Working Capital	53,000
TOTAL CAPITAL	380,000

It is proposed that the project cost of RO 380,000 will be financed by owner's fund [equity] to the tune of RO 152,000; Term Loan of RO 175,000 and commercial borrowings for working capital at R.O. 53,000. Interest for the loan is considered at 6%. Details are given in Annexure- 1.

5.3. COST OF SALES

The estimated cost of sale for first ten years of operation is given in Annexure- 2 and those of first five years are summarized as below:

Years of Operation	1	2	3	4	5
Details	<i>Figures in RO '000</i>				
Raw Material	94	161	196	200	204
Utilities	2	2	2	2	2
Factory Wages	59	101	115	118	122
Prime Cost	155	264	313	321	328
Rent for Land	3	3	3	3	3
Factory Overheads	2	2	2	2	2
Misc. Factory Exp.	2	4	5	5	5
Factory Cost	162	273	323	331	338
Admin. Salaries	23	23	24	24	25

Years of Operation	1	2	3	4	5
Admin. Expenses	5	5	5	5	5
Sales Salaries	0	0	0	0	0
Sales Expenses	1	1	1	1	1
Adv. & Business Promotion	2	4	5	5	5
Operating Cost	194	307	358	366	374
Finance Cost					
Int. on Institutional Finance	11	11	10	8	7
Int. on Working Capital	3	6	6	6	6
Finance Cost	14	16	15	14	13
Non-Cash Expenses					
Depreciation	22	22	22	22	22
Prelim-Exp Written Off	44	0	0	0	0
Total Cost	273	345	395	402	409

5.3.1. Raw Materials

The cost of raw materials works out to RO 981 per boat. Please refer Annexure 2.1 for details.

5.3.2. Utilities

The total cost of utilities is RO 2,295. The basis of estimate and the break up are given in Annexure - 2.2.

5.3.3. Salaries & Wages

The cost of salaries and wages in the normal year of operation is RO 120,680. Details are given in Annexure 2.3.

5.3.4. Factory Overheads

The annual expenses include repairs and maintenance, civil repairs, cost of spares, spare parts, insurance and vehicle expense and the same is estimated at RO 1,503 for the first year, RO 2,150 for the second year and RO 2,378 for the third year. Details are given in Annexure- 2.4.

5.3.5. Administrative Expenses

The basis of estimates of administrative expenses inclusive of salaries & wages is given in Annexure 2.5 and it works out to RO 28,000. Administrative

expense include salaries and benefits, rents and rates, vehicle expenses, communication related expenses, rents/ rates, stationery, postage, etc.

5.3.6. Sales Expenses

Total sales expenses excluding salaries are estimated at RO 1,260. Details given in Annexure- 2.6

5.3.7. Depreciation

Depreciation works out to RO 21,850 each for first ten years. In addition, a preliminary expense amount of RO 44,000 is written off in the first year of operation. Depreciation calculation is given in annexure- 2.7. The following are the rates considered for the calculation of depreciation.

<i>Assets</i>	<i>Life (years)</i>	<i>% of Depreciation</i>
Buildings	25	5
Plant & Machinery	10	10
Vehicles and Internal	4	25
Furniture & Office Equipment	5	20
Contingency & Escalation		10

5.3.8. Loan & Interest Calculation

Interest rate for Bank term loan and working capital loan is taken at 6%. Details of interest calculations are given in Annexure- 2.8

5.4. INCOME TAX

Income tax @ 15% is provided from sixth year of operation.

5.5. SALES REALIZATION

The annual sales realization at installed capacity is given as annexure 3.1. The annual sales realization for the first five years of operation is provided below:

Details	Year 1	Year 2	Year 3	Year 4	Year 5
Sales - RO '000	221	377	460	469	478

5.6. COST RATIOS

The major cost indicators as a percentage of sales realization are given in Annexure- 3.

Years of Operation	1	2	3	4	5
Raw Material / Total Sales	42.6%	42.6%	42.6%	42.6%	42.6%
Utilities / Total Sales	1.0%	0.6%	0.5%	0.5%	0.5%
Factory wages / Total Sales	26.7%	26.8%	24.9%	25.2%	25.4%
Prime Cost / Total Sales	70.4%	70.1%	68.1%	68.3%	68.6%
Factory exp. / Total Sales	1.8%	1.6%	1.6%	1.5%	1.5%
Factory Cost / Total Sales	73.5%	72.5%	70.3%	70.5%	70.7%
Admin exp. / Total Sales	12.7%	7.5%	6.3%	6.3%	6.2%
Selling exp. / Total Sales	1.6%	1.3%	1.3%	1.3%	1.3%
Finance Cost / Total Sales	6.2%	4.3%	3.3%	2.9%	2.6%
Non-Cash exp. / Total Sales	29.8%	5.8%	4.8%	4.7%	4.6%
Total Cost / Sales	123.8%	91.4%	85.9%	85.6%	85.4%

5.7. NET PROFIT AND PROFITABILITY ANALYSIS

As per the financial projection in Annexure - 3, the venture is financially viable. The summary of the analysis is given under:

Details	Year 1	Year 2	Year 3	Year 4	Year 5
	<i>Figures in RO '000</i>				
Revenue	221	377	460	469	478
Operating Cost	194	307	358	366	374
Profit before Interest & depreciation	27	70	102	103	104
Depreciation	22	22	22	22	22
Finance Cost	14	16	15	14	13
Operating profit	-8	32	65	67	70
Preliminary Expenses	44	-	-	-	-
Profit After Tax	-52	32	65	67	70
Net Cash Accruals	13	54	87	89	92

5.8. APPRAISAL CRITERIA

The viability of the project based on major appraisal criteria is given below.

Detail	Value
IRR on total investment	18.25%
IRR on Equity	26.7%
Payback period of Total Investment	5 years 10 month
Pay back period on equity	4 years 8 months
Break Even Point	78.0
Cash Break Even Point	69.9
DSCR	2.82
Total debt equity ratio	1.5 : 1

5.9. SENSITIVITY ANALYSIS

A sensitivity analysis has been carried out to determine the susceptibility of the project to changes in main variables as given below:

Effect on the IRR on equity investment, based on 10 years of operation due to change in various variables is as follows:

Particulars	Original	Volume Down by 10%	RM Cost up by 10%	Sales Realization Down by 10%
IRR on Investment	18.3	15.8	16.4	13.9
IRR on equity	26.7	22.36	23.43	19.13

6. KEY SUCCESS AND PUSHBACK FACTORS

The following aspects are highlighted as the key success / pushback factors.

6.1. KEY SUCCESS FACTOR

- The focus of the government to support modern fishing will open a definite market for the project
- The project shall be able to effectively leverage on the government incentives including low cost well developed industrial land, utilities etc.
- Ensuring quality and successful sale through emphasis on improved performance against competing products (EPS sheets) and overall reduction in the life cycle cost etc., are key to the success of the project.

6.2. KEY PUSHBACK FACTOR

The market is highly competitive with multiple payers located in different locations in the Sultanate.

The project should have a strong technical team that is capable of effectively designing, manufacturing and delivering products at competitive prices as per the end user requirement.

7. CONCLUSION

The IRR on Total investment for the project is 18.25% and IRR on Equity Investment is 26.7%. Based on the various analyses done on the project it is found to be technically feasible and financially viable.

ANNEXURE- 1					
BOAT BUILDING PROJECT					
ESTIMATED PROJECT COST					
S.No	Item	Refer		Amount	Remarks
		App.		(R.O)	
A1	PROJECT COST				
1	Land for Plant Site	1.1	27,000		Estimates
2	Building etc.	1.2	94,000		Estimates
3	Plant & Machinery	1.3	76,000		Estimates
4	Vehicles and Int. Transport	1.4	19,000		Estimates
5	Furniture & Office Equip.	1.5	17,000		Estimates
6	Pre- Operative Expenses	1.6	44,000		Estimates
7	Contingency & Escalation	1.7	14,000		Estimates
	Sub Total		291,000	291,000	
A2	WORKING CAPITAL		89,000	89,000	
A3	TOTAL			380,000	
	Say			380,000	
B	MODE OF FINANCE				
1	Equity			152,000	40%
2	Bank Term loan			175,000	60%
3	Sub Total			327,000	
4	Commercial Borrwings for Working Capital (@ 6%)			53,000	60%
	TOTAL CAPITAL			380,000	

ANNEXURE- 1.1						
BOAT BUILDING PROJECT						
ESTIMATED COST OF LAND & SITE DEVELOPMENT						
S.No.	Item	Unit	Q'ty	Rate (R.O)	Amount (R.O)	Remarks
A	LAND					
1	Land for Plant	Sq. M	3,000	-		On lease
B	SITE DEVELOPMENT					
1	Soil Testing				3,000	Lumpsum
2	Fencing	M	219	20	4,382	Concrete / Chain link
3	Parking lot	Sq. M	200	10	2,000	
4	Sewerage/Drainage				3,000	Lumpsum
5	Gate ,Gate House & Misc.				5,000	Lumpsum
6	Prov for Roads	Sq. M	150	10	1,500	
7	Prov for Electric line				5,000	
8	Prov for Water line from ring main				3,000	
	Sub Total				26,882	
C	TOTAL				26,882	
	Say				27,000	

ANNEXURE- 1.2					
BOAT BUILDING PROJECT					
ESTIMATED COST OF BUILDING & CIVIL WORKS					
S.No.	Item	Area (SqM)	Rate (R.O)	Amount (R.O)	Remarks
A	MAIN PLANT BUILDINGS				
1	Factory Building	500	90	59,400	
2	Raw Material Store Area	60			
3	Area for finished boats	100			
	Sub Total	660		59,400	
B	UTILITIES & MAINTENANCE				
1	Electrical Room	20	90	19,800	Masonry wall & steel roof
2	Workshop	200			Masonry wall & steel roof
	Sub Total	220		19,800	
C	ADMINISTRATIVE BUILDINGS				
1	Office	50	120	6,000	RCC
	Sub Total	50		6,000	
D	NON FACTORY BUILDINGS				
1	Canteen	25	100	6,500	Masonry wall & steel roof
2	Change Room	25			Masonry wall & steel roof
3	Security Room	15			
	Sub Total	65		6,500	
E	OTHER CIVIL WORKS				
1	Water Tank			5,000	
2	Electo Mechanical	995	20	19,900	
3	Sub Total			24,900	
	Total Building Cost	995		91,700	
F	ENGINEERING FEES				
1	Design			1,376	At 1.5% on built up area cost
2	Supervision			1,376	At 1.5% on built up area cost
	Sub Total			2,751	
G	TOTAL	995		94,451	
	Say			94,000	

ANNEXURE- 1.3					
ALUMINIUM COMPOSITE PANEL					
ESTIMATED COST OF PLANT & MACHINERY					
S.No.	Item	Qty	Amount (RO)	Amount (RO)	Remarks
A	MAIN PLANT & MACHINERY				
1	Moulds	4	7,500	30,000	
2	Boat Trolleys	2	1,000	2,000	
3	Chain Pulley block			500	
4	Laboratory Equipments			1,000	Lumpsum
	Sub total			33,500	
B	LOCAL EQUIPMNTS				
1	Workshop Equipments			5,000	Lumpsum
C	AT SITE COST				
1	Total Plant			38,500	
2	Spares - Import			963	@2.5% of machinery cost
3	Packing,Insurance,Forwarding & Freight - Imp			1,184	@3% of cost machinery & spares
4	CIF Cost			40,646	
5	Clearing & Transport to site			5,000	
	At Site Cost			45,646	
D	ERECTED COST				
1	At Site Cost			45,646	
2	Electrification			10,000	
3	Cost of erection - local			10,000	
4	Technical Supervision - Import			5,000	
5	Accomodation, Transportation, Food etc			5,000	
	TOTAL			75,646	
	GRAND TOTAL			76,000	

ANNEXURE- 1.4					
BOAT BUILDING PROJECT					
ESTIMATED COST OF VEHICLES & INTERNAL TRANSPORT					
S.No.	Item	Q'ty (Nos.)	Rate	Amount (R.O)	Remarks
A	VEHICLES				
1	Pick ups	1	9,000	9,000	For Sales
	Sub Total	1		9,000	
A	TRANSP. EQUIPMENT/Vehicle				-
1	Fork lift truck 3 T	1	10,000	10,000	
	Sub Total			10,000	
B	TOTAL			19,000	
	Say			19,000	

ANNEXURE- 1.5					
BOAT BUILDING PROJECT					
ESTIMATED COST OF FURNITURE & OFFICE EQUIPMENT					
S.No.	Item	Q'ty	Rate	Amount	Remarks
A	Office Equipment				
1	Office Furniture			2,500	
2	Computers & Printers	2	400	800	
3	Fax, telephone etc			500	
4	Other Office equipmt			1,000	
5	Air Conditioner	2	250	500	
	Sub total			5,300	
B	Furniture & Fixtures				
1	Accommodation			10,000	
2	Factory & Canteen Furniture			2,000	
	Sub total			12,000	
	TOTAL			17,300	
				17,000	

ANNEXURE- 1.6				
BOAT BUILDING PROJECT				
ESTIMATED COST OF PRE-OPERATIVE EXPENSES				
S.No	Item		Amount	Remarks
		(R.O)	(R.O)	
1	Preliminary Expenses		5,000	Upto formation of Co.
3	Company Employees			
a	Salary & benefits - Production Engineer	4,500		3 months
b	Salary & benefits - Production Staff	3,717		1 Month @ 50% staff
c	Salary & benefits - Admin. Staff	945		1 Month @ 50% staff
d	Salary & benefits - Sales Staff	0		1 Month @ 50% staff
e	Visa, Passage etc.			
i	Senior Level Employees	-		For Expatriates at R.O 2,500/
ii	Middle Level Employees	5,500		For Expatriates at R.O 1,100/
iii	Junioe Level Employees	8,100		For Expatriates at R.O 900/
	Sub Total		22,762	
4	Financing Cost			
a	Institutional Loan Interest	5,250		for 6months
b	Mortgage & Gurantee Expenses	438		At 0.5% on Institu: Loan
c	Other Bank Charges	1,000		Lumpsum
	Sub Total		6,688	
5	Communication		1,200	R.O 200/M for 6 Months
6	Travel & Recruitment expenses		3,000	Lumpsum
8	Audit Fees, Legal Fees		1,000	Lumpsum
9	Insurance		340	At 0.2 % of Plant & Bldg.
10	Product Launching, Advt. etc.		2,000	Provision
11	Miscellaneous		2,000	Provision
	Total		43,989	
	Say..		44,000	

ANNEXURE- 1.7					
BOAT BUILDING PROJECT					
ESTIMATES OF CONTINGENCY AND ESCALATION					
S.No.	Item	Cost (R.O)	Rate (%)	Provision (R.O)	Remarks
A	FIXED ASSETS				
1	Land for Plant Site	27000	5.0	1,350	
2	Building etc.	94000	5.0	4,700	
3	Plant & Machinery	76000	5.0	3,800	
4	Technical Know-How	0	5.0	-	
5	Vehicles and Int. Transport	19000	5.0	950	
6	Furniture & Office Equip.	17000	5.0	850	
7	Pre- Operative Expenses	44000	5.0	2,200	
	TOTAL			13,850	
				14,000	say

ANNEXURE-1.8								
BOAT BUILDING PROJECT								
ESTIMATES OF WORKING CAPITAL REQUIREMENTS								
S.No.	Item	Req.		1	2	3	4	Remarks
				In R.O '000				
1	Acct. Receivable	3	Months	52	81	93	95	Cost of sales - Non C Ex.
2	Raw Materials	2	Months	16	27	33	33	
3	Utilities	1	Month	0	0	0	0	
4	Factory Wages	1	Month	5	8	10	10	
5	Admn. Expenses	1	Month	2	2	2	2	
6	Sales Expenses	1	Month	0	0	0	0	
7	Work in Progress	10	Day	4	7	9	9	At Factory Cost
8	Finished Goods	15	Day	8	6	7	7	At total Cost-Non cash-Selling and Distrbn
9	Finance Cost	1	Month	1	1	1	1	At Finance Cost
10	Total			89	134	156	159	
11	Payables		Months					
12	Raw Materials	3	Months	0	0	0	0	
	Sub-total			0	0	0	0	
	Say			89	134	156	159	

ANNEXURE- 2
BOAT BUILDING PROJECT
COST OF SALE

	Year of Operation	1	2	3	4	5	6	7	8	9	10	
		In RO ('000)										
1	Raw Materials	94	161	196	200	204	204	204	204	204	204	Ref. Annexure 2.1
2	Utilities	2	2	2	2	2	2	2	2	2	2	Ref. Annexure 2.2
3	Factory Wages	59	101	115	118	122	125	129	133	137	141	Ref Annexure 2.3
4	PRIME COST	155	264	313	321	328	332	335	339	343	347	Sub total of 1 to 4
5	Rent for land	3	3	3	3	3	3	3	3	3	3	@ RO 1/Sqm/ year with 5% increase from Y6
6	Factory Overheads	2	2	2	2	2	2	2	2	2	2	Ref Annexure 2.4
7	Misc. Factory Exp.	2	4	5	5	5	5	5	5	5	5	
8	FACTORY COST	162	273	323	331	338	343	346	350	354	358	Sub total of 5 to 7
9	Admin. Salaries	23	23	24	24	25	25	26	26	27	27	Ref Annexure 2.3&2.5
10	Admin. Expenses	5	5	5	5	5	5	5	5	5	5	Ref Annexure 2.5
12	Sales Salaries	0	0	0	0	0	0	0	0	0	0	Ref Annexure 2.3&2.6
13	Sales Expenses	1	1	1	1	1	1	1	1	1	1	Ref Annexure 2.6
14	Advert.& Business Promotion	2	4	5	5	5	5	5	5	5	5	At 1% of Sales
17	OPERATING COST	194	307	358	366	374	379	383	388	392	397	Sum(8)+(12)+(17)
	Finance cost											
18	Int on Institutional finance	11	11	10	8	7	6	4	3	2	0	Ref Annexure 2.8
19	Int on working capital	3	6	6	6	6	6	6	6	6	6	Ref Annexure 2.8
20	Total finance cost	14	16	15	14	13	11	10	9	7	6	Sum(19)+(20)
	Non cash expenses											
22	Depreciation	22	22	22	22	22	22	22	22	22	22	Ref Annexure 2.7
23	Prelim Expenses written off	44	0	0	0	0	0	0	0	0	0	Ref Annexure 2.7
	COST OF SALE	273	345	395	402	409	412	415	418	421	425	Sum18+21+22+23

ANNEXURE- 2.2						
BOAT BUILDING PROJECT						
ESTIMATED COST OF UTILITIES						
S.No.	Item	Unit	Qty	Rate	Amount	Remarks
A	Utilities					
1	Electricity	KWH	54,000	0.03	1,620	
2	Water	CuM	876	0.77	675	
	TOTAL				2,295	

ANNEXURE- 2.3							
BOAT BUILDING PROJECT							
ESTIMATES OF ANNUAL SALARIES AND WAGES							
S.No.	Item	No of		Salary		Amount	Remarks
		Personnel		(R.O)			
		Omanis	Expat				
A	PRODUCTION						
1	Works Manager (Engineer)		1		1000	12,000	
2	Maintenance Supervisor				500	-	
3	Foreman		1	500	400	4,800	
4	Skilled Technicians		3		250	9,000	
5	Semiskilled	5	7	325	150	32,100	
6	Electricians/Mechanic		1		220	2,640	
7	QC Technician		1		250	3,000	
8	Lab Supervisor		1		200	2,400	
9	Storekeepers	1		350		4,200	
	Sub Total	6	15			70,140	
	Other Benefits				40%	28,056	
	TOTAL PRODUCTION					98,196	
B	ADMINISTRATION & ACCOUNTS						
a	Administration						
1	PRO	1		500		6,000	
2	Finance and purchase Executive	1		500		6,000	
3	HR Executive	1		350		4,200	
	Sub Total	3	0			16,200	
	Other Benefits				40%	6,480	
	Total Cost					22,680	
C	SALES						
a	Sales						
1	Sales Executives			400		-	
	Sub Total	0	0			-	
	Other Benefits				40%	-	
	Total Cost					-	
D	GRAND TOTAL	9	15			120,876	
	Omanisation	38%					

ANNEXURE- 2.4					
BOAT BUILDING PROJECT					
ESTIMATES OF ANNUAL FACTORY EXPENSES					
S.No.	Item	Year	Year	Year	Remarks
		1	2	3	
1	Repairs & Maintenance	190	380	380	At 0.5 % of erected cost of Plant and Machinery
2	Civil Repairs	235	235	235	At .25 % of cost of Building and Civil Works
3	Spare Parts	228	685	913	At 0.5%, 1.5% and 2% of 'at-site' cost of Plant and Machinery
4	Insurance	850	850	850	At 0.5 % of cost Building, Plant and Machinery
	TOTAL	1,503	2,150	2,378	

ANNEXURE- 2.5				
BOAT BUILDING PROJECT				
ESTIMATES OF ANNUAL ADMINISTRATIVE EXPENSES				
S.No.	Item	(R.O)	Amount (R.O)	Remarks
	ADMINISTRATION			
1	Salaries & Benefits		22,680	
2	Rents and Rates			
3	Vehicle Expenses & Petrol			
a	Car (2Nos)	-		At R.O 60/Month
b	Sub Total		-	
4	Telephone, Fax etc.		1,200	At R.O 200 /Month
5	Stationery, Postage etc.		1,200	At R.O 100/Month
6	Medical Expenses		-	Incl. in Staff Benefits
7	Passage		-	Incl. in Staff Benefits
8	Travel & Recruitment			Lumpsum
9	Legal, Audit Fees		1,500	Lumpsum
10	Insurance		500	Lumpsum
11	Miscellaneous		1,000	Lumpsum
	Total		28,000	

ANNEXURE- 2.6				
BOAT BUILDING PROJECT				
ESTIMATES OF ANNUAL SALES EXPENSES				
S.No.	Item		Amount	Remarks
		(R.O)	(R.O)	
	SALES			
1	Salaries		-	See Annexure 2.3
2	Advertisement		-	Provided separately
3	Business Promotion		-	Provided separately
4	Export Travel		-	
5	Vehicle Expenses & Petrol			
a	Pick up van (1no)	1,200		At R.O 100/Month
b	Sub Total		1,200	
6	Miscellaneous Expenses		60	Lumpsum
	Total		1,260	

ANNEXURE- 2.7						
BOAT BUILDING PROJECT						
ESTIMATION OF DEPRECIATION						
	Item	Cost	Rate	S.V.	Amount	Renewals
			(%)	(R.O)	(R.O)	
A	FIXED ASSETS					
1	Land for Plant Site	27,000	0	-	-	Nil
2	Building etc.	94,000	5	47,000	4,700	Nil
3	Plant & Machinery	76,000	10	-	7,600	Year 11
4	Technical Know-How	-	10	-	-	Nil
5	Vehicles and Int. Transp.	19,000	25	9,500	4,750	Years 5, 9
6	Furniture & Office Equip.	17,000	20	-	3,400	Years 6, 11
7	Contingency & Escalation	14,000	10	-	1,400	Nil
8	Sub Total	247,000		56,500	21,850	
B	PRELIM & PRE OPE: EXP	44,000	100	-	44,000	Nil
C	WORKING CAPITAL					
1	Working Capital	159,000	-	159,000	-	
D	TOTAL			215,500	65,850	
	Less Balance Loan			93,500		
E	SALVAGE VALUE			122,000		
	Note: S.V. = Salvage Value at the end of 10th year.					

ANNEXURE- 2.8								
BOAT BUILDING PROJECT								
LOAN & INTEREST CALCULATIOIS								
No	Year	WC Loan		TERM LOAN			Annual	
		Prn	Int	Prn	Int	Rep	Int	Rep
			6%		6%			
1		53	2	175	5	-		
2	1	53	2	175	5	-	14	-
3		94	3	175	5	-		
4	2	94	3	175	5	11	16	11
5		94	3	164	5	11		
6	3	94	3	153	5	11	15	22
7		94	3	142	4	11		
8	4	94	3	131	4	11	14	22
9		94	3	120	4	11		
10	5	94	3	109	3	11	13	22
11		94	3	98	3	11		
12	6	94	3	88	3	11	11	22
13		94	3	77	2	11		
14	7	94	3	66	2	11	10	22
15		94	3	55	2	11		
16	8	94	3	44	1	11	9	22
17		94	3	33	1	11		
18	9	94	3	22	1	11	7	22
19		94	3	11	0	11		
20	10	94	3	-	-		6	11

ANNEXURE- 3

BOAT BUILDING PROJECT

ESTIMATED WORKING RESULTS

	Year of Operation	1	2	3	4	5	6	7	8	9	10	
No	Item	In R.O'000										Remarks
1	Operating Cost	194	307	358	366	374	379	383	388	392	397	
a	Expected Sales Income	221	377	460	469	478	478	478	478	478	478	
b	Sub Total	221	377	460	469	478	478	478	478	478	478	
2	Profit before Int & dep	27	70	102	103	104	99	95	91	86	81	
3	Depreciation	22	22	22	22	22	22	22	22	22	22	
4	Finance Cost	14	16	15	14	13	11	10	9	7	6	
5	Operating profit	-8	32	65	67	70	66	63	60	57	53	
6	Other income if any							0				
7	Prelim Expenses written off	44	-	-	-	-	-	-	-	-	-	
8	Profit/Loss before tax	-52	32	65	67	70	66	63	60	57	53	
9	Income Tax						10	10	9	9	8	
10	Profit after tax	-52	32	65	67	70	56	54	51	48	45	
11	Statutory reserve	0	3	6	7	7	6	5	5	5	5	
12	Profit for appropriation	-52	29	58	61	63	51	49	46	44	41	
13	Dividend	0	0	0	0	0	0	0	0	0	0	
14	General reserve	-52	29	58	61	63	51	49	46	44	41	
15	Net cash accruals	13	54	87	89	92	78	76	73	70	67	

ANNEXURE- 4													
BOAT BUILDING PROJECT													
PROJECTED CASH FLOW STATEMENT													
	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
No	Item	In R.O'000											Remarks
A	CASH INFLOW												
1	Equity	152	-	-	-	-	-	-	-	-	-	-	Ref Annexure 1
2	Profit bef tax & int		(39)	48	80	81	82	78	73	69	64	60	Ref Annexure 3
3	Depreciation	-	22	22	22	22	22	22	22	22	22	22	Ref Annexure 2.7
4	Prel exp written off		44					-	-	-	-	-	Ref Annexure 2.7
5	Increase in Other term loan	175	-	-	-	-	-	-	-	-	-	-	Ref Annexure 1
6	Increase in Istitu: Loan	-	-	-	-	-	-	-	-	-	-	-	Ref Annexure 1
7	Increase in W C loan	53	41	-	-	-	-	-	-	-	-	-	Ref Annexure 1
8	Other income	-											Ref Annexure 3
9	Sub Total	380	68	70	102	103	104	99	95	91	86	81	Sum of A1 to A8
B	CASH OUTFLOW												
1	Capital Project expenditure	247	-	-	-	-	19	17	-	-	19	-	Ref Annexure 1& 2.7
2	Other normal cap exp	44	-	-	-	-	-						Ref Annexure 1& 2.7
3	Increase in Working Cap:	89	45	22	3	-	-	-	-	-	-	-	Ref Annexure 1.7
4	Decrease in Institu:Loan	-	-	-	-	-	-	-	-	-	-	-	Ref Annexure 2.8
5	Decrease in Other term loan		-	11	22	22	22	22	22	22	22	11	
7	Interest on term loans		11	11	10	8	7	6	4	3	2	0	Ref Annexure 2.8
8	Interest on work cap loan		3	6	6	6	6	6	6	6	6	6	Ref Annexure 2.8
9	Income Tax	-	-	-	-	-	-	10	10	9	9	8	Ref Annexure 3.2
10	Dividend	-	-	-	-	-	-	-	-	-	-	-	Provision
11	Sub Total	380	59	49	40	36	53	60	41	39	57	25	Sum of B1 to B10
C	OPENING BALANCE	-	-	9	30	92	159	210	250	303	355	384	
D	SURPLUS	-	9	21	62	67	51	39	54	51	29	56	Difference(A9)-(B11)
E	CLOSING BALANCE	-	9	30	92	159	210	250	303	355	384	441	

ANNEXURE- 5

BOAT BUILDING PROJECT

INTERNAL RATE OF RETURN ON TOTAL CAPITAL

	Year of Operation		1	2	3	4	5	6	7	8	9	10	
No	Item		In R.O'000										Remarks
A	CASH INFLOW												
1	Net Profit bef. Tax		(52)	32	65	67	70	66	63	60	57	53	Refer Annexure - 3
2	Depreciation	-	22	22	22	22	22	22	22	22	22	22	Ref Annexure 2.7
3	Prelim Exp written off		44	-	-	-	-	-	-	-	-	-	Ref Annexure 2.7
4	Finance Cost	-	14	16	15	14	13	11	10	9	7	6	Ref Annexure 2.8
5	Salvage Value	-	-	-	-	-	-	-	-	-	-	590	Ref Annexure 2.7
6	Sub Total	-	27	70	102	103	104	99	95	91	86	671	Sum of A1 to A5
B	CASH OUTFLOW												
1	Capital Project expenditure	247	-	-	-	-	19	17	-	-	19	-	Refer Annexure - 1
2	Other normal cap exp	44	-	-	-	-	-	-	-	-	-	-	Refer Annexure - 1
3	Working Capital	89	45	22	3	-	-	-	-	-	-	-	Refer Annexure - 1
4	Income Tax		-	-	-	-	-	10	10	9	9	8	Refer Annexure - 3.2
5	Sub Total	380	45	22	3	-	19	27	10	9	28	8	Sum of B1 to B4
C	NET CASHFLOW (AT)	(380)	(18)	48	99	103	85	73	86	82	59	663	
E	INTERNAL RATE OF RETURN ON TOTAL INVESTMENT							18.25%					

ANNEXURE- 6													
BOAT BUILDING PROJECT													
INTERNAL RATE OF RETURN ON EQUITY CAPITAL (AFTER TAX)													
	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
No	Item	In R.O'000											Remarks
A	CASH INFLOW												
1	Net Profit before Tax	-	(52)	32	65	67	70	66	63	60	57	53	Refer Annexure- 3
2	Depreciation	-	22	22	22	22	22	22	22	22	22	22	Refer Annexure - 2.7
3	Prelim Exp written off	-	44	-	-	-	-	-	-	-	-	-	Refer Annexure - 2.7
4	Salvage Value	-	-	-	-	-	-	-	-	-	-	590	Refer Annexure - 2.7
5	Sub Total	-	13	54	87	89	92	88	85	82	79	665	Sum of A1 to A4
B	CASH OUTFLOW												
1	Equity	152	-	-	-	-	-	-	-	-	-	-	Refer Annexure - 1
2	Fixed Assets	-	-	-	-	-	19	17	-	-	19	-	Refer Annexure - 1
3	Working Capital	-	45	22	3	-	-	-	-	-	-	-	Refer Annexure - 1
4	Loan Instalment	-	-	11	22	22	22	22	22	22	22	11	Refer Annexure - 2.8
5	Income Tax	-	-	-	-	-	-	10	10	9	9	8	Refer Annexure - 3.1
6	Sub Total	152	45	33	25	22	41	49	31	31	49	19	Sum of A1 to A5
C	NET CASHFLOW	(152)	(32)	21	62	67	51	39	54	51	29	646	
D	INTERNAL RATE OF RETURN ON EQUITY INVESTMENT								26.7	%			

ANNEXURE- 7

BOAT BUILDING PROJECT

PROJECTED BALANCE SHEET

	Year of Operation	0	1	2	3	4	5	6	7	8	9	10	
No	Item	In R.O'000											Remarks
A	ASSETS EMPLOYED												
1	Fixed Assets												
a	Gross Fixed Assets	247	247	247	247	247	266	283	283	283	302	302	Refer Annexure - 2.7
b	Preliminary expenses	44	-	-	-	-	-	-	-	-	-	-	Refer Annexure- 2.7
c	Acc. Depreciation	-	22	44	66	87	109	131	153	175	197	219	Refer Annexure - 2.7
d	Net Fixed Assets	291	225	203	181	160	157	152	130	108	105	84	
2	Current Assets												
a	Cash	-	9	30	92	159	210	250	303	355	384	441	Refer Annexure - 4
b	Other Cur. Assets	89	134	156	159	159	159	159	159	159	159	159	Refer Annexure - 1.7
c	Total Cur. Assets	89	143	186	251	318	369	409	462	514	543	600	
3	Less: Cur. Liabilities	-	-	-	-	-	-	-	-	-	-	-	
	TOTAL	380	368	389	432	478	526	560	592	622	648	683	
B	FINANCED BY												
1	Equity	152	152	152	152	152	152	152	152	152	152	152	Refer Annexure - 1
2	Subordinated Loan	-	-	-	-	-	-	-	-	-	-	-	
2	Statutory reserve		-	3	10	16	23	29	34	40	44	49	
3	General reserves	-	(52)	(23)	35	96	158	209	258	304	348	389	Cu.NP-Cu.Divident
4	Other term loan	175	175	164	142	120	98	77	55	33	11	-	Refer Annexure - 2.8
5	Institutional Finance	-	-	-	-	-	-	-	-	-	-	-	Refer Annexure - 2.8
6	Bank Borrowings	53	94	94	94	94	94	94	94	94	94	94	Refer Annexure - 2.8
	TOTAL	380	368	389	432	478	526	560	592	622	648	683	

ANNEXURE- 8											
BOAT BUILDING PROJECT											
RATIO ANALYSIS											
	Years of Operation	1	2	3	4	5	6	7	8	9	10
A	COST RATIOS										
1	Raw Material / Total Sales	42.6%	42.6%	42.6%	42.6%	42.6%	42.6%	42.6%	42.6%	42.6%	42.6%
2	Utilities / Total Sales	1.0%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
3	Factory wages / Total Sales	26.7%	26.8%	24.9%	25.2%	25.4%	26.2%	27.0%	27.8%	28.6%	29.5%
4	Prime Cost / Total Sales	70.4%	70.1%	68.1%	68.3%	68.6%	69.3%	70.1%	70.9%	71.7%	72.6%
5	Factory exp. / Total Sales	1.8%	1.6%	1.6%	1.5%	1.5%	1.6%	1.6%	1.6%	1.6%	1.6%
6	Factory Cost / Total Sales	73.5%	72.5%	70.3%	70.5%	70.7%	71.6%	72.4%	73.2%	74.1%	74.9%
7	Administrative exp. / Total Sales	12.7%	7.5%	6.3%	6.3%	6.2%	6.3%	6.5%	6.6%	6.7%	6.8%
8	Selling exp. / Total Sales	1.6%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
9	Finanace Cost / Total Sales	6.2%	4.3%	3.3%	2.9%	2.6%	2.3%	2.1%	1.8%	1.5%	1.3%
10	Non-Cash exp. / Total Sales	29.8%	5.8%	4.8%	4.7%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
11	Total Cost / Sales	123.8%	91.4%	85.9%	85.6%	85.4%	86.1%	86.7%	87.4%	88.1%	88.8%
B	PROFITABILITY RATIOS			c							
1	PBDIT / Sales	12.3%	18.6%	22.2%	22.0%	21.8%	20.8%	19.9%	19.0%	18.0%	17.0%
2	Operating profit / Sales	-3.8%	8.6%	14.1%	14.4%	14.6%	13.9%	13.3%	12.6%	11.9%	11.2%
3	PAT / Sales	-23.8%	8.6%	14.1%	14.4%	14.6%	11.8%	11.3%	10.7%	10.1%	9.5%
4	PAT / Investment	-16.0%	9.9%	19.9%	20.6%	21.3%	17.3%	16.5%	15.7%	14.8%	13.9%
5	Payout Ratio	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6	EPS	-0.345	0.212	0.427	0.444	0.459	0.372	0.355	0.337	0.319	0.299

ANNEXURE- 9				
BOAT BUILDING PROJECT				
BREAK EVEN ANALYSIS				
S.No.	Item	Year 1	Year 6	Remarks
		In R.O '000		
A	FIXED COST			
1	Production Wages	59	125	Refer Annexure - 2
2	Factory Overhads	2	2	Refer Annexure - 2
3	Misc. Factory Exp.	2	5	Refer Annexure - 2
4	Admin. Expenses	28	30	Refer Annexure - 2
5	Sales Expenses	3	6	Refer Annexure - 2
6	Depreciation	44	22	Refer Annexure - 2
7	Prelim. Expenses written off	44	0	Refer Annexure - 2
8	Financing Cost	14	11	Refer Annexure - 2
9	Income Tax	0	10	Refer Annexure - 2
10	Sub Total	196	212	
B	VARIABLE COST			
1	Raw materials	94	204	Refer Annexure - 2
2	Utilities	2	2	Refer Annexure - 2
3	Misc. Expenses	0	0	
4	Sub Total	96	206	
C	SALES	221	478	Refer Annexure - 3
D	CONTRIBUTION	124	272	Difference C - B
E	BREAK EVEN POINT	158%	78.0	As % of Production
F	CASH BEP	86.8	69.9	As % of Production

ANNEXURE- 10						
BOAT BUILDING PROJECT						
SENSITIVITY ANALYSIS (IRR FOR 10 YEARS)						
S.No.	Item	Projection	Change in One			Combined
		No Change	Variable at a Time			
		Original	Reduction in Volume	Increase in RM Cost	Reduction in Sales Realization	Combined
			Nos	Cost	Value	All three
A	VARIABLE					
	Value- Original		167	94	221	
B	PESSIMISTIC					
	Change		-5%	-5%	-5%	All three
	- New Value		159	104	199	
C	OPTIMISTIC					
	Change		5%	-5%	5%	All three
	- New Value		175	85	243	
D	I R R - PESSIMISTIC PROJECTION					
1	I R R on Investment	18.3	15.8	16.4	13.9	6.9
2	I R R on Equity	26.7	22.36	23.43	19.13	12.38
E	I R R - OPTIMISTIC PROJECTION					
1	I R R on Investment	18.3	20.7	20.1	26.2	37.4
2	I R R on Equity	26.7	31.12	30.01	34.53	54.01

