



**Pre-feasibility Study**

# **SHRIMP FARMING AND PROCESSING**

**February 2021**

*“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”*

**Small and Medium Enterprises Development Authority**  
Ministry of Industries and Production  
Government of Pakistan

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## 1 DISCLAIMER

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### Document Control

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## **2 EXECUTIVE SUMMARY**

Shrimp is marine animals that is widely used as sea food due it's nutrition and dietary value. Shrimp occur in all oceans, both in shallow and deep water as well as in freshwater lakes and streams. There has been an increasing trend of establishing shrimp farms in the country during the last decade.

This particular pre-feasibility study is for setting up a 'Shrimp Farming and Processing Unit'. The focus of the business would be to farm quality shrimp for supply to local as well as export markets. The unit is proposed to be located at the coastal areas of Sindh and Baluchistan or saline water land in Punjab and Khyber Pakhtunkhwa.

The proposed venture has a capacity to house and process 25,600 kgs. of shrimp annually. The proposed shrimp farm will operate at 100% capacity from the first year of its operations. This production capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. Complete adherence to food compliance practices and efficient supply chain management is critical to the success of this project. Therefore, entrepreneurs knowledge and experience in fisheries sector, especially shrimp farming is absolutely necessary.

Total project cost is estimated as Rs. 27.878 million with capital investment of Rs. 18.950 million and working capital Rs. 8.928 million. Based on an equity finance model, the project NPV is around Rs. 17.888 million, with an IRR of 30% and Payback Period of 3.61 years. The project will provide employment opportunities to 30 people including the Owner. The legal business status of this project is assumed to be 'Sole Proprietorship'.

## **3 INTRODUCTION TO SMEDA**

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification

of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

## 4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in '**Shrimp Farming and Processing**' by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later, which form basis of any Investment Decision.

## 5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Shrimp has an impressive nutrition profile. The market for shrimp farming and processing in Pakistan has been developing steadily over the last decade and a significant growth of shrimp farms are being observed in all areas of Pakistan. But still a good potential exists for quality shrimp farming because Pakistan is emerging as an extensive user and exporter of shrimps.

The farm will be established on a leased land having a covered area of 195 kanal and should be centrally located within area containing high water salinity levels. The proposed farm will have 20 ponds. Each pond will have a shrimp seed (larvae) capacity of 40,000 seeds, which will grow into 1,280 Kg of shrimps. The proposed farm will be equipped with necessary inland shrimp farming equipment along with bored water facility. Solar driven tube well and aerators are proposed for cost optimization and process efficiency.

The final product i.e. processed shrimps, initially will be supplied to local food markets of major cities across Pakistan. Besides that, restaurant chains and 5-star hotels across the country will also be potential consumers of the produced sea food. The unit will also explore the possibility of targeting the export market through local traders.

The proposed farm should be located at the coastal areas of Sindh and Baluchistan or saline water land in Punjab and Khyber Pakhtunkhwa, especially near to a fish market. Financial analysis shows the unit shall be profitable from the very first year of operation. The legal status is proposed to be 'Sole Proprietorship'.

### **5.1 Installed and Operational Capacity**

Total installed capacity of the project is assumed at farming and processing of 25,600 kilogram of shrimps per year. The proposed shrimp farm will operate at 100% capacity from the first year of its operations.

## **6 CRITICAL FACTORS**

Following are the factors critical for the success of this business venture;

- ⇒ Background knowledge and related experience of the entrepreneur in inland fish and shrimp farming or sea food processing.
- ⇒ Complete adherence to food compliance practices and efficient supply chain management.
- ⇒ Availability of quality shrimps that meets international and national quality standards.
- ⇒ Exceed customer expectations by offering high quality products at reasonable prices with quick turnaround times.
- ⇒ Appropriate arrangement for transportation of product to the markets.
- ⇒ Business location is the key to success, near to coastal area or salinity land and easy accessibility to target customers.
- ⇒ Effective marketing and distribution of the product.
- ⇒ Employ careful financial and accounting analysis to ensure efficiency and proper controls.

## **7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT**

The proposed location for the establishment of such a facility could be the areas within the proximity of Balochistan and Sindh coastal belt or saline water land in Punjab and Khyber Pakhtunkhwa. If the project is closer to a fish market it will have an added advantage of being nearer to the distributor. Therefore, areas around Karachi, Ormara, Pasni, Gawadar, Muzaffargarh and Multan can be suitable locations for setting up this unit. Subsequently, availability of skilled labor, raw material and close customer proximity is extremely important for the success of this business.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential target market for the processed sea food will be the general public of middle and upper middle income group as well as restaurants, food chains and cafes. Considering to that, major cities for instance Karachi, Lahore, Peshawar, Quetta, Rawalpindi, Islamabad, Multan, Sialkot, Faisalabad, Hyderabad and etc. with large urban population base would be the potential target markets for the proposed business.

The bulk buyers, especially big retail chains and food restaurants will be targeted through direct ordering basis whereas small retail shops may be approached through designated wholesaler and traders. Additionally, unit will also explore the possibility of targeting the export market through local traders.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyse the commercial viability of Shrimp Farming and Process. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are attached as annexures.

### 9.1 Project Economics

All the figures in this financial model have been calculated for the estimated sales of Rs. 26.880 million in the year one. The capacity utilization during year one is worked out at 100%.

The following table shows the internal rate of return, payback period and net present value of the proposed venture.

**Table 1: Project Economics**

Description	Details
Internal Rate of Return (IRR)	30%
Payback Period (Yrs.)	3.61
Net Present Value (Rs.)	17,887,963

Calculation of break-even analysis is as follows:

**Table 2: Breakeven (100% Equity-Based)**

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	14,680,713	15,166,735	15,737,862	16,404,653	17,158,602	19,755,182	20,603,357	21,563,107	22,652,246	23,887,066
Break-Even Units	13,982	13,131	12,387	11,738	11,161	11,682	11,076	10,538	10,064	9,648
Margin of Safety	45%	49%	52%	54%	56%	54%	57%	59%	61%	62%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. Based on Debt:Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

**Table 3: Project Economics Based on Debt (50%):Equity (50%)**

Description	Details
Internal Rate of Return (IRR)	30%
Payback Period (Yrs.)	3.66
Net Present Value (Rs.)	28,790,563

The financial assumptions for Debt: Equity are as follows:

**Table 4: Financial Assumptions for Debt:Equity Model**

Description	Details
Debt (50%)	13,939,241
Equity (50%)	13,939,241
Interest Rate on Debt	12%
Debt Tenure (Years)	5
Debt Payment / Year	2

The projected Income Statement, Cash Flow Statement and Balance Sheet enclosed as annexures are based on 100% Equity Based Business Model



## 9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 5: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Machinery & Equipment	4,057,200
Building / Infrastructure	10,964,814
Office Equipment	56,000
Pre-operating Costs	1,047,500
Farm Vehicles	2,525,000
Furniture & Fixtures	299,500
<b>Total Capital Cost</b>	<b>18,950,014</b>
Cash	7,993,742
Raw Material Inventory	85,333
Upfront Land Lease Rental	503,617
Upfront Insurance Payment	329,110
Equipment Spare Part Inventory	16,667
<b>Total Working Capital</b>	<b>8,928,468</b>
<b>Total Project Cost</b>	<b>27,878,482</b>

## 9.3 Land and Infrastructure Requirement

Approximately 24.38 acres of land would be required for establishment of proposed shrimp farm. To reduce the initial capital investment, it is recommended to start the project on leased land with annual lease assumed to be Rs. 20,6610 per acre payable in advance. The infrastructural requirements of the project mainly comprise the construction of various facilities including pond excavation, hut construction, store rooms and management office, etc. Details of infrastructure requirement and cost related to land and civil works are given in the below table.

**Table 6: Infrastructure Requirement**

Description	Estimated Area (Sq. ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Pond Excavation	871,203	4	3,484,814
Huts Construction	4,500	800	3,600,000
Wash Rooms	450	1,400	630,000
Office	450	2,500	1,125,000
Store Rooms	450	2,500	1,125,000
Designing & Consultancy			1,000,000
<b>Total Cost</b>			<b>10,964,814</b>

#### 9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

**Table 7: Machinery & Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Water Cooler	1	33,000	33,000
Security Equipment	1	80,000	80,000
Tube well	1	1,200,000	1,200,000
Aerator	20	39,000	780,000
Generator	2	980,000	1,960,000
Weight Scale	1	4,200	4,200
<b>Total</b>			<b>4,057,200</b>

#### 9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

**Table 8: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
-------------	----------	-----------------	------------------

Furniture	1	84,500	84,500
Ceiling Fans	20	3,800	76,000
LED Bulb	35	1,000	35,000
Water Dispenser	1	20,000	20,000
Air conditioners (1.5 ton Split)	1	84,000	84,000
<b>Total</b>			<b>299,500</b>

## 9.6 Farm Vehicles Requirement

Details of the farm vehicles required for the project are given below.

**Table 9: Office Vehicles**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Mini Truck	1	2,500,000	2,500,000
<b>Total</b>			<b>2,500,000</b>

## 9.7 Office Equipment

Following office equipment will be required for the project are given below.

**Table 10: Office and Computer Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	1	25,000	25,000
Computer Printer (s)	1	29,500	29,500
Telephones	1	1,500	1,500
<b>Total</b>			<b>56,000</b>

## 9.8 Human Resource Requirement

In order to run operations of shrimp farming smoothly, details of human resources required along with the number of employees and monthly salary are recommended as under.

**Table 11: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner /Manager	1	60,000
Accounts Officer	1	25,000
Pond Caretaker	2	22,500
Aerator Operator	6	17,500
Helper	8	17,500
Sweepers	1	17,500
Security Guards	8	17,500
Office Boys	1	17,500
Gardener	1	17,500
Driver	1	22,500
<b>Total</b>	<b>30</b>	

### 9.9 Utilities and Other Cost

An essential cost to be borne by the project is the cost of electricity. The electricity expenses are estimated to be around Rs.45,750 (Direct and In-direct) per month. Furthermore, promotional expense being essential for marketing of Shrimp Farming Process is estimated as 0.5% of administration expense.

### 9.10 Revenue Generation

Based on the capacity utilization of 100%, sales revenue during the first year of operations is provided in the table below.

**Table 12: Revenue Generation – Year 1**

Description	Sales During The Year (Kgs.)	Sale Price / Kg (Rs.)	Sales Revenue (Rs.)
Shrimps	25,600	1,050	26,880,000

## 10 CONTACT DETAILS

In order to facilitate potential investors, contact details of machinery supplier relevant to the proposed project is given below.

**Table 13: Machinery Suppliers**

Name of Supplier	Address	Email / Phone
Atlas Copco Pakistan	588, Block H3, Abdul Haque Road, opposite Emporium Mall, Johar Town, Lahore.	<a href="mailto:atlascopeco.pakistan@pk.atlascopeco.com">atlascopeco.pakistan@pk.atlascopeco.com</a> +92 42 3547 3777

**11 USEFUL WEB LINKS**

Small & Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries & Production	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Baluchistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jammu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
Punjab Small Industries Corporation	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
Sindh Small Industries Corporation	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
Ministry of National Food Security & Research	<a href="http://www.mnfsr.gov.pk">www.mnfsr.gov.pk</a>
Punjab Food Authority	<a href="http://www.pfa.gop.pk">www.pfa.gop.pk</a>
Sindh Food Authority	<a href="http://www.sfa.gos.pk">www.sfa.gos.pk</a>
Fisheries Development Board	<a href="http://www.fdb.org.pk">www.fdb.org.pk</a>

Livestock & Fisheries Department Sindh	<a href="http://www.livestock.sindh.gov.pk">www.livestock.sindh.gov.pk</a>
Ministry of Maritime Affairs Pakistan	<a href="http://www.moma.gov.pk">www.moma.gov.pk</a>

## 12 ANNEXURES

### 12.1 Income Statement

Calculations	SMEDA									
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	26,880,000	29,568,000	32,524,800	35,777,280	39,355,008	43,290,509	47,619,560	52,381,516	57,619,667	63,381,634
<i>Cost of sales</i>										
Cost of goods sold 1	2,048,000	2,252,800	2,478,080	2,725,888	2,998,477	3,298,324	3,628,157	3,990,973	4,390,070	4,829,077
Direct labor	3,480,000	3,828,000	4,210,800	4,631,880	5,095,068	5,604,575	6,165,032	6,781,536	7,459,689	8,205,658
Fertilizer Organic Inorganic	400,000	420,000	441,000	463,050	486,203	510,513	536,038	562,840	590,982	620,531
Direct electricity	471,859	519,045	570,950	628,045	690,849	759,934	835,927	919,520	1,011,472	1,112,619
Feed Cost	6,128,000	6,434,400	6,756,120	7,093,926	7,448,622	7,821,053	8,212,106	8,622,711	9,053,847	9,506,539
Transportation Cost of Shrimp	768,000	806,400	846,720	889,056	933,509	980,184	1,029,193	1,080,653	1,134,686	1,191,420
Seed Transportation	140,000	147,000	154,350	162,068	170,171	178,679	187,613	196,994	206,844	217,186
Total cost of sales	13,435,859	14,407,645	15,458,020	16,593,912	17,822,898	19,153,263	20,594,068	22,155,227	23,847,590	25,683,031
Gross Profit	13,444,141	15,160,355	17,066,780	19,183,368	21,532,110	24,137,246	27,025,492	30,226,289	33,772,077	37,698,603
<i>General administration &amp; selling expenses</i>										
Administration expense	3,600,000	3,960,000	4,356,000	4,791,600	5,270,760	5,797,836	6,377,620	7,015,382	7,716,920	8,488,612
Land lease rental expense	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617
Electricity expense	77,146	84,860	93,346	102,681	112,949	124,244	136,668	150,335	165,368	181,905
Travelling expense	90,000	99,000	108,900	119,790	131,769	144,946	159,440	175,385	192,923	212,215
Communications expense (phone, fax, mail, internet, etc.)	108,000	118,800	130,680	143,748	158,123	173,935	191,329	210,461	231,508	254,658
Office vehicles running expense	101,000	111,100	122,210	134,431	147,874	162,662	178,928	196,820	216,502	238,153
Office expenses (stationary, entertainment, janitorial services, etc)	144,000	158,400	174,240	191,664	210,830	231,913	255,105	280,615	308,677	339,544
Promotional expense Year 1-5	134,400	147,840	162,624	178,886	196,775	-	-	-	-	-
Insurance expense	329,110	283,574	238,038	192,502	146,966	563,663	476,821	389,979	303,137	216,295
Professional fees (legal, audit, consultants, etc.)	134,400	147,840	162,624	178,886	196,775	216,453	238,098	261,908	288,098	316,908
Depreciation expense	1,507,046	1,507,046	1,507,046	1,510,426	1,509,881	2,336,001	2,339,914	2,339,283	2,339,283	2,343,812
Amortization of pre-operating costs	209,500	209,500	209,500	209,500	209,500	-	-	-	-	-
Bad debt expense	134,400	147,840	162,624	178,886	196,775	216,453	238,098	261,908	288,098	316,908
Miscellaneous expense 1	270,000	297,000	326,700	359,370	395,307	434,838	478,321	526,154	578,769	636,646
Subtotal	7,342,618	7,776,417	8,258,149	8,795,987	9,387,901	11,014,786	11,693,007	12,442,800	13,276,950	14,207,728
Operating Income	6,101,523	7,383,938	8,808,632	10,387,381	12,144,209	13,122,460	15,332,485	17,783,489	20,495,128	23,490,875
Other income (interest on cash)	270,649	437,121	640,212	870,294	1,031,039	1,223,997	1,554,859	1,929,514	2,351,324	2,839,588
Other income 2										
Gain / (loss) on sale of machinery & equipment	-	-	-	-	1,622,880	-	-	-	-	-
Gain / (loss) on sale of computer equipment	-	-	13,625	-	-	29,398	-	-	47,656	38,046
Gain / (loss) on sale of office vehicles	-	-	-	-	1,010,000	-	-	-	-	-
Earnings Before Interest & Taxes	6,372,171	7,821,059	9,462,468	11,257,674	15,808,128	14,375,854	16,887,344	19,713,003	22,894,108	26,368,509
Earnings Before Tax	6,372,171	7,821,059	9,462,468	11,257,674	15,808,128	14,375,854	16,887,344	19,713,003	22,894,108	26,368,509
Tax	1,350,260	1,857,370	2,431,864	3,060,186	4,652,844	4,151,549	5,030,570	6,019,551	7,132,937	8,348,978
NET PROFIT/(LOSS) AFTER TAX	5,021,912	5,963,689	7,030,605	8,197,489	11,155,283	10,224,306	11,856,774	13,693,452	15,761,170	18,019,531

## 12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	7,993,742	13,658,142	21,311,520	29,905,405	39,718,099	42,764,989	55,154,751	69,233,993	85,127,118	102,978,765	124,188,246
Accounts receivable		1,104,658	1,159,890	1,275,879	1,403,467	1,543,814	1,698,196	1,868,015	2,054,817	2,260,298	2,486,328
Equipment spare part inventory	16,667	18,375	20,258	22,335	24,624	27,148	29,931	32,999	36,381	40,110	-
Raw material inventory	85,333	98,560	113,837	131,482	151,861	175,400	202,587	233,987	270,256	312,145	-
Pre-paid annual land lease	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	-
Pre-paid insurance	329,110	283,574	238,038	192,502	146,966	563,663	476,821	389,979	303,137	216,295	-
<b>Total Current Assets</b>	<b>8,928,468</b>	<b>15,666,926</b>	<b>23,347,160</b>	<b>32,031,220</b>	<b>41,948,634</b>	<b>45,578,631</b>	<b>58,065,902</b>	<b>72,262,590</b>	<b>88,295,325</b>	<b>106,311,231</b>	<b>126,674,574</b>
<i>Fixed assets</i>											
Building/Infrastructure	10,964,814	10,416,573	9,868,332	9,320,092	8,771,851	8,223,610	7,675,370	7,127,129	6,578,888	6,030,647	5,482,407
Machinery & equipment	4,057,200	3,651,480	3,245,760	2,840,040	2,434,320	2,206,730	6,283,197	5,359,664	4,436,131	3,512,598	2,589,065
Furniture & fixtures	299,500	269,550	239,600	209,650	179,700	149,750	119,800	89,850	59,900	29,950	-
Office vehicles	2,525,000	2,020,000	1,515,000	1,010,000	505,000	4,066,538	3,253,230	2,439,923	1,626,615	813,308	-
Computer equipment	54,500	36,515	18,530	63,636	42,271	21,451	73,666	48,934	24,832	85,278	56,647
Office equipment	1,500	1,350	1,200	1,050	900	750	600	450	300	150	-
<b>Total Fixed Assets</b>	<b>17,902,514</b>	<b>16,395,468</b>	<b>14,888,422</b>	<b>13,444,467</b>	<b>11,934,042</b>	<b>19,668,828</b>	<b>17,405,862</b>	<b>15,065,949</b>	<b>12,726,666</b>	<b>10,471,931</b>	<b>8,128,118</b>
<i>Intangible assets</i>											
Pre-operation costs	1,047,500	838,000	628,500	419,000	209,500	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>1,047,500</b>	<b>838,000</b>	<b>628,500</b>	<b>419,000</b>	<b>209,500</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>27,878,482</b>	<b>32,900,394</b>	<b>38,864,082</b>	<b>45,894,687</b>	<b>54,092,176</b>	<b>65,247,459</b>	<b>75,471,765</b>	<b>87,328,539</b>	<b>101,021,991</b>	<b>116,783,162</b>	<b>134,802,693</b>
<i>Shareholders' equity</i>											
Paid-up capital	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482	27,878,482
Retained earnings		5,021,912	10,985,600	18,016,205	26,213,694	37,368,977	47,593,283	59,450,057	73,143,509	88,904,680	106,924,211
<b>Total Equity</b>	<b>27,878,482</b>	<b>32,900,394</b>	<b>38,864,082</b>	<b>45,894,687</b>	<b>54,092,176</b>	<b>65,247,459</b>	<b>75,471,765</b>	<b>87,328,539</b>	<b>101,021,991</b>	<b>116,783,162</b>	<b>134,802,693</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>27,878,482</b>	<b>32,900,394</b>	<b>38,864,082</b>	<b>45,894,687</b>	<b>54,092,176</b>	<b>65,247,459</b>	<b>75,471,765</b>	<b>87,328,539</b>	<b>101,021,991</b>	<b>116,783,162</b>	<b>134,802,693</b>



## 12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		5,021,912	5,963,689	7,030,605	8,197,489	11,155,283	10,224,306	11,856,774	13,693,452	15,761,170	18,019,531
Add: depreciation expense		1,507,046	1,507,046	1,507,046	1,510,426	1,509,881	2,336,001	2,339,914	2,339,283	2,339,283	2,343,812
amortization of pre-operating costs		209,500	209,500	209,500	209,500	209,500	-	-	-	-	-
Accounts receivable		(1,104,658)	(55,233)	(115,989)	(127,588)	(140,347)	(154,381)	(169,820)	(186,802)	(205,482)	(226,030)
Equipment inventory	(16,667)	(1,708)	(1,883)	(2,076)	(2,289)	(2,524)	(2,783)	(3,068)	(3,382)	(3,729)	40,110
Raw material inventory	(85,333)	(13,227)	(15,277)	(17,645)	(20,380)	(23,538)	(27,187)	(31,401)	(36,268)	(41,890)	312,145
Advance insurance premium	(329,110)	45,536	45,536	45,536	45,536	(416,697)	86,842	86,842	86,842	86,842	216,295
Cash provided by operations	(431,110)	5,664,401	7,653,377	8,656,976	9,812,693	12,291,557	12,462,798	14,079,241	15,893,125	17,936,195	20,705,864
Add: land lease expense		503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617	503,617
Land lease payment	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	(503,617)	-
Issuance of shares	27,878,482	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	27,374,865	-	-	-	-	-	-	-	-	-	503,617
<i>Investing activities</i>											
Capital expenditure	(18,950,014)	-	-	(63,091)	-	(9,244,667)	(73,035)	-	-	(84,547)	-
Cash (used for) / provided by investing activities	(18,950,014)	-	-	(63,091)	-	(9,244,667)	(73,035)	-	-	(84,547)	-
NET CASH	7,993,742	5,664,401	7,653,377	8,593,886	9,812,693	3,046,890	12,389,762	14,079,241	15,893,125	17,851,648	21,209,481

## 13 KEY ASSUMPTIONS

### 13.1 Operating Cost Assumptions

Description	Details
Travelling expense	2.5% of Administration Expense
Communication Expenses	3 % of Administration Expense
Promotional Expenses	0.5 % of Administration Expense
Depreciation Method	Straight Line Depreciation
Depreciation Rate	10% on Machinery 33% on Office Equipment 10% on Furniture & Fixture 20% on Vehicles
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%
Water Price Growth Rate	5%
Gas Price Growth Rate	5%
Wage Growth Rate	10%

### 13.2 Production Cost Assumptions

Description	Details
Maximum Operational Capacity in kgs.	25,600
Cost per Seed (Larvae)	Rs.2.5
No of Seeds Required to Produce 1 Kg of Shrimp	32
Costing per kg. of Shrimp	Rs.80

### 13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	10%
Sale Price Per Kg. Of Shrimp	Rs.1,050
Hours Operational / Day	12
Days Operational / Year	360
Capacity Utilization	100%

# Small and Medium Enterprises Development Authority

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