
Pre-Feasibility Study

SHRIMP FARMING AND PROCESSING



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before taking any decision to act upon the information.

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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. |
|--------------------------------|-------------------|
| Capital Cost | |
| 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 |
| Total Capital Cost | 18,950,014 |
| 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 |
| Total Working Capital | 8,928,468 |
| Total Project Cost | 27,878,482 |

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 |
| Total Cost | | | 10,964,814 |

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 |
| Total | | | 4,057,200 |

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 |
| Total | | | 299,500 |

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 |
| Total | | | 2,500,000 |

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 |
| Total | | | 56,000 |

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 |
| Total | 30 | |

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. | atlascopeco.pakistan@pk.atlascopeco.com +92 42 3547 3777 |

11 USEFUL WEB LINKS

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

Livestock & Fisheries Department Sindh

www.livestock.sindh.gov.pk

Ministry of Maritime Affairs Pakistan

www.moma.gov.pk

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 & 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 | - | - | - | - | 1,622,880 | - | - | - | - | - |
| Gain / (loss) on sale of machinery & equipment | - | - | - | - | - | - | - | - | - | - |
| 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 |
| Assets | | | | | | | | | | | |
| <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 | - |
| Total Current Assets | 8,928,468 | 15,666,926 | 23,347,160 | 32,031,220 | 41,948,634 | 45,578,631 | 58,065,902 | 72,262,590 | 88,295,325 | 106,311,231 | 126,674,574 |
| <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 | 2,026,730 | 1,623,197 | 1,219,664 | 816,131 | 412,598 | 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 | - |
| Total Fixed Assets | 17,902,514 | 16,395,468 | 14,888,422 | 13,444,467 | 11,934,042 | 19,668,828 | 17,405,862 | 15,065,949 | 12,726,666 | 10,471,931 | 8,128,118 |
| <i>Intangible assets</i> | | | | | | | | | | | |
| Pre-operation costs | 1,047,500 | 838,000 | 628,500 | 419,000 | 209,500 | - | - | - | - | - | - |
| Total Intangible Assets | 1,047,500 | 838,000 | 628,500 | 419,000 | 209,500 | - | - | - | - | - | - |
| TOTAL ASSETS | 27,878,482 | 32,900,394 | 38,864,082 | 45,894,687 | 54,092,176 | 65,247,459 | 75,471,765 | 87,328,539 | 101,021,991 | 116,783,162 | 134,802,693 |
| <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 |
| Total Equity | 27,878,482 | 32,900,394 | 38,864,082 | 45,894,687 | 54,092,176 | 65,247,459 | 75,471,765 | 87,328,539 | 101,021,991 | 116,783,162 | 134,802,693 |
| TOTAL CAPITAL AND LIABILITIES | 27,878,482 | 32,900,394 | 38,864,082 | 45,894,687 | 54,092,176 | 65,247,459 | 75,471,765 | 87,328,539 | 101,021,991 | 116,783,162 | 134,802,693 |

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 |
| <i>Financing activities</i> | | | | | | | | | | | |
| 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% |