**Baseline study for Fisheries Development in Telangana State**

**Case Study Questionnaire for State Owned Hatchery**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Geo code** |  | **Latitude** |  | **Longitude** |  |

* **Field survey team**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Name** | **Signature** | **Place** | **Date\*** |
| * **Enumerator** |  |  |  |  |
| * **Team Leader** |  |  |  |  |
| * **Expert** |  |  |  |  |

**\*Enumerator to record the date of collection of the data and team leader / expert to indicate the date of checking / validation of the questionnaire**

**⯀ Respondent**

|  |  |
| --- | --- |
|  |  |
| * **Name** |  |
| * **Designation** |  |
| * **Contact details** |  |

|  |  |  |
| --- | --- | --- |
| **A1** | **Hatchery Profile** | **1.0** |
| **A2** | **Infrastructure and Investments** | **2.0** |
| **A3** | **Operational aspects** | **3.0** |
| **A4** | **Cost of production and economics** | **4.0** |
| **A5** | **Demand, Supply and Offtake** | **5.0** |
| **A6** | **Constraints and suggestions** | **6.0** |
| **A7** | **Perceptions and feedback** | **7.0** |
| **A8** | **SWOT Analysis** | **8.0** |

**A1: Hatchery Profile (1.0)**

* 1. **Locational aspects** 
     1. Name of the hatchery unit: ………………………………..

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Village |  | GP Village |  | Mandal |  | District |  |

* 1. **Locational suitability** (Scoring 1. Excellent 2. Satisfactory 3.Unstisfactory)
     1. **Amenities**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Scoring (✓)** | | |
| **1** | **2** | **3.** |
| * Road Access |  |  |  |
| * Water source |  |  |  |
| * Power Supply |  |  |  |
| * Labour Availability |  |  |  |
| * Transportation facilities |  |  |  |
|  |  |  |  |

* + 1. **Nearness/access to :**

|  |  |  |
| --- | --- | --- |
|  | **Distance kms** | **Remarks on nearness/access** |
| * Brood stock farm |  |  |
| * Feed supply |  |  |
| * Medication |  |  |
| * Seed rearing farms |  |  |
| * Commercial fish farms |  |  |
| * Aquaculture unit |  |  |
| * District DOF office |  |  |
| * Mandal DOF office |  |  |
|  |  |  |

* + 1. **Problems/deficiencies if any in locational suitability**

|  |  |
| --- | --- |
|  |  |
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|  |  |

* 1. **Establishment and track record**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.3.1 | | Year of Establishment |  | | | | | |
| 1.3.2 | | Total area (Ha) |  | | | | | |
| 1.3.3 | | Water spread area(Ha) |  | | | | | |
| 1.3.4 | | Water source | River ( ), Channel ( ), Tube well ( ), Open well ( ) , rain water ( ) | | | | | |
| 1.3.5 | | Production in the last five years | Year I | Year II | Year III | Year IV | | Year V |
|  | |  |  |  |  |  | |  |
|  | |  |  |  |  |  | |  |
|  | |  |  |  |  |  | |  |
|  | |  |  |  |  |  | |  |
|  | |  |  |  |  |  | |  |
| **1.3.6** | **Type of operations (✓)** | | | | | | | |
|  | * Spawn production | | | | | |  | |
|  | * Spawn production cum fry | | | | | |  | |
|  | * Fingering rearing | | | | | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1.3.7** | **Source of brood stock** | **On farm** |  | **Outsourced** |  |
| * state farm |  |
| * Private farm |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1.3.8** | **Species covered** | **Year I** | **Year II** | **Year III** |
|  | * Indian Major carps |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | * Exotic species |  |  |  |
|  | a. |  |  |  |
|  | b. |  |  |  |
|  | c. |  |  |  |
|  | ⮚ Indigenous species |  |  |  |
|  | a. |  |  |  |
|  | b |  |  |  |
|  | c |  |  |  |

* 1. **Type of Hatchery**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Type** | **(✓)** | **capacity per cycle** |
| 1.4.1 | Concrete circular (Chinese) | ( ) |  |
| 1.4.2 | FRP tank | ( ) |  |
| 1.4.3 | Jar hatchery | ( ) |  |
| 1.4.4 | Traditional hapa hatching | ( ) |  |

* 1. **Capacity utilization**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Year I** | **Year II** | **Year III** |
|  | Designed capacity |  |  |  |
|  | Utilized capacity |  |  |  |
|  | Utilization (%) |  |  |  |

**1.5.1 Reasons for low capacity utilization**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |
| e. |  |

**1.6 Managerial aspects**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Name of the staff member** | **Designation** | **In charge since** | **Role/Responsibilities** |
|  | **Technical staff** |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | **Non Technical staff** |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**1.5.1 Is there staff inadequacy and lack of support affecting the operations and how is it being addressed**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* + 1. **Trainings and capacity building programmes provided to staff members in hatchery operations.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name of the program** | **Duration** | **Conducted by** |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |

* + 1. **Have you identified any unfulfilled training needs if so details?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**A2: Infrastructure and Investments (2.0)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **2.1** | **Investment item** | **At start** | **Later investment** | | | **As at present year \_\_\_** | **Original inv. Amount** |
| **Year ----** | **Year I--** | **Year II --** | **Year III --** |
| **2.1.1** | **Basic Infrastructure** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.2** | **Brood stock farm** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.3** | **Hatchery /breeding ponds** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.4** | **Nursery ponds** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.5** | **Rearing ponds** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.6** | **Machinery & equipments** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.7** | **Laboratories** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.8** | **Holding and packing area** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **2.1.4** | **Any other relevant information** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

* 1. **Furnish investment details like number of ponds, dimensions, size, volume and specifications and usage for above investments**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

* 1. **Indicate if any investments are defunct, not in use, under repair etc.,**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

**A3: Operational apects (3.0)**

**3.1 Target vs. Achievement**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Year I** | **Year II** | **Year III** | **Year IV** | **Year V** |
| 3.1.1 | Target |  |  |  |  |  |
| 3.1.2 | Achievement |  |  |  |  |  |
| 3.1.3 | Short fall |  |  |  |  |  |

**3.2 Reasons for shortfall and corrective measures taken**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**3.3 What are the steps in your production schedules to meet the seasonal demand?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **Operational details** 
     1. **Brood stock and breeding**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Brood stock species** | **Numbers** | **Age** | **Weight (kg)** |
|  | * **Indian Major carps** |  |  |  |
|  | 1. Male |  |  |  |
|  | 1. Female |  |  |  |
|  | * **Exotic species** |  |  |  |
|  | 1. Male |  |  |  |
|  | 1. Female |  |  |  |
|  | **⮚ Indigenous species** |  |  |  |
|  | 1. Male |  |  |  |
|  | 1. Female |  |  |  |

* + - 1. Is there any marking/tagging followed to identify pedigree of breeders- yes/No if yes, technique used - -----------------------
      2. Source of brood stock for breeding purposes - on farm ( ) out sourced ( )

if out sourced,

3.4.1.3 Place of sourcing ………………………. Tanks ……………………………. Reservior…………………………….Others (specify)………………………..

3.4.1.4 Distance of the source from hatchery……………………..(km)

3.4.1.5 Brood stock choice : Farm bred ( ) Natural collection ( )

3.4.1.6 Mode of collection and transport ………………….………….

3.4.1.7 Brood fish collected and directly used for breeding Yes/No

if no

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

3.4.1.8 Prospective breeders collected and raised for short period-if so duration

Is it done on annual basis?

* + - 1. Percentage of spawning success ………………………………….
      2. How often you replace your brood stock- if so what is the % of replenishment/replacement

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* + - 1. How do you replenish/replace your brood stock- from within the farm or outside

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* + - 1. Do you find any difference in the performance of between farm raised breeders and breeder collected from outside? If so indicate in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | **Raised breeders** | **Collected breeders** | **Remarks** |
| * Per cent success |  |  |  |
| * Fecundity |  |  |  |
| * Fertilization % |  |  |  |
| * Hatching rate |  |  |  |
| * Survival of spawn/fry |  |  |  |

3.4.1.13 On the whole which one you feel is better in terms of operation and success

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

3.4.1.14 **Ornamental fish breeding -** Species normally bred, Purpose, Breeding protocols, Scope and prospects

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* + 1. **Pre stocking**
* Pre stocking preparations- Drying/disinfection- liming(kg/ha);
* Manuring- Type of manure-cow dung/poultry Kg/ha
  + 1. **Stocking and post stocking**
* Stocking- stocking density/ ratio/ha
* Sex wise stocking or mixed stocking
* Type of feed, feeding rate and feed management,
* water quality etc.,
  + 1. **Spawning**
* Type of spawning - species wise or mixed spawning(all the species bred together)
* Is it mass spawning or individual mating
* Any inducing agent used-name and dosage – male/female
  + 1. **Duration of rearing period**

|  |
| --- |
|  |

* + 1. **Number of crops taken in a year**

|  |
| --- |
|  |

* + 1. **Survival per crop (%)**

|  |
| --- |
|  |

* + 1. **Record keeping ( day wise breeding to spawn lifting)**

|  |
| --- |
|  |

* + 1. **Technical problems encountered during production- Diseases, water quality and others.**

|  |
| --- |
|  |

**3.4.10 Measures adopted to overcome the problems**

|  |
| --- |
|  |

* 1. **Production parameters**
* **D**esigned spawn production capacity per cycle – (off season breeding – common carp and others (specify).
* Number of cycles per season -
* Is it fulfilled -if not to what extent it is achieved in terms of %
* Annual gross spawn production (in lakhs)
* Hatching success, potential and survival(%) species wise

**A4: Cost of production and economics (4.0)**

**4.1 Economics – targeted spawn production ------------------ (lakh nos.)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cost of production costs** | **Unit** | **Qty** | | **Rate** | **Cost (Rs.)** |
| 4.1.1 | Brood fish |  |  | |  |  |
| 4.1.2 | Feed |  |  | |  |  |
| 4.1.3 | Inducing agents |  |  | |  |  |
| 4.1.4 | Consumable items |  |  | |  |  |
| 4.1.5 | Others (specify) |  |  | |  |  |
|  |  |  |  | |  |  |
|  |  |  |  | |  |  |
|  |  |  |  | |  |  |
|  |  |  |  | |  |  |
| **4.1.6** | **Survival (%)** | | |  | | |
| **4.1.7** | **Net saleable (qty in lakh nos.)** | | |  | | |
| **4.1.8** | **Cost of production (Rs. per unit)** | | |  | | |
| **4.1.9** | **Sale price (Rs. per unit)** | | |  | | |
| **4.1.10** | **Margin (Rs. per unit)** | | |  | | |
| **4.1.11** | **Total Income (Rs.)** | | |  | | |

**A5: Demand, Supply and Offtake (5.0)**

**5.1 What is your service area- same districts/neighbouring districts**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.2 Have you estimated the total demand for your area of operation?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.3 How much of the demand (%) you are able to meet**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.4 In your opinion how is the short fall being met and from which sources**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.5 How do you sell your spawn- on prior indent /demand or first come first served basis**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.6 Who are your clients-other state farms/ private parties/agents/farmers**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.7 How do you fix your sale price-based on cost of production or as fixed by the govt?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.8 How do you think you can meet at least your cost of production by adopting better management?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**5.9 What are your suggestions on most appropriate fixing of sale price and what are the modalities?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**A6: Constraints and suggestions (6.0)**

|  |  |  |
| --- | --- | --- |
| **Constraint related to** | **Diagnosis of the problem** | **Your suggestion/solution** |
| * Water supply |  |  |
| * Power supply |  |  |
| * Input supply |  |  |
| * Man power |  |  |
| * Technical guidance |  |  |
| * Infrastructure inadequacy |  |  |
| * Lack of proper facilities |  |  |
| * Climatic/Natural calamities |  |  |
| * Any others (specify) |  |  |

**A7: Perceptions and feedback (7.0)**

* 1. **Problems/Constraints faced in the hatchery farm activities:**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **What are causes for the above problems?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **Suggestions for improvement:**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **Expectations from the Government/ other institutions**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **What is your opinion and suggestions on involvement of private sector in seed production?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

**A8: SWOT Analysis (8.0)**

* 1. **List the major strengths of your hatchery unit on which you can consolidate your operations?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **Mention the weakness that needs to be addressed?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **What are the opportunities that exist for betterment in hatchery business?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |

* 1. **What are the threats that need mitigation?**

|  |  |
| --- | --- |
| a. |  |
| b. |  |
| c. |  |
| d. |  |