**Central Marine Fisheries Research Institute, Kochi-682 018**

**Socio-Economic Evaluation and Technology Transfer Division**

**Questionnaire for Mariculture Farmers–Cage farming**

### Date of Survey: ……………………….

1. Survey location:
2. Name and address of the respondent: Mob:
3. Age:
4. Family size:
5. Native place:
6. If migrated, give details (i) temporary on-job (ii) permanent settlement (iii) migrated from…………
7. Whether father’s occupation fishing/coastal aquaculture: Yes/No
8. Education: (i) No formal education (ii) Primary (1-4) (iii) Secondary (5-12) (iv) Above secondary
9. Where did you acquire the skills required for mariculture?

(i) Family/traditional (ii) Apprenticeship (ii) Vocational training (iv) Other

1. If you have attended any training programmes on cage culture, give details:

(i) Number of trainings:………….(ii) Main aspects covered………………………………………..

1. Years of experience in mariculture/coastal aquaculture: ……….(Years)
2. Types of fish culture activity/ies followed by you (tick **multiple option/s** if applies)

(i) Open sea cage farming (ii) Backwater cage farming (iii) Fin fish farming in RAS (iv) Coastal pond farming (v) Seaweed culture (vi) Other………………………………………………

1. Are you a member of any fisheries cooperative society /FPO/SHG/other organization? Yes/No
2. If yes, please provide details (Name of the group/no of members/other)

………………………………………………………………………………………………………

1. What is the source of capital for your farming ventures ((tick appropriate option/s)

(i) Own funds (iii) Credit from institutional sources (iii) credit from non-institutional sources

1. If availed credit, please indicate the amount in Rs. and interest rate applicable

(i) Institutional (specify)…………………Rs.…………..interest……………year……………

(ii) Non-institutional (specify)………………….Rs…………. interest………year…………….

1. Do you engage family labour in farming operations? If yes, indicate number of family man days (of 8 hours each) employed per season/crop.....................and women labour (man days)………………
2. What is the contract arrangement involved for the water body used for culture (i) Lease from LSGs (Amount:………..) (ii) Rented from private owner (Amount:…………..) (iii) No authorization taken/granted (iv) other…………….
3. What is the source of culture technology used / technical support in your farm

(i) Research institute………………………(ii) State Fisheries Department ………………………..

(iii) KVK/Other extension organizations ………………(iv) Local agent ………………………….

(v) Other fellow farmers (vi) YouTube/other media….……(vii) Private companies…………………

1. Please provide the following technical details with regard to your **immediate previous crop**:

|  |  |
| --- | --- |
| **Major indicators** | **Particulars** |
| Size of the unit (LxBxD)/(DiaxD) |  |
| Distance from the shore (m) |  |
| Year of first establishment  |  |
| Depth of water (m) |  |
| Major species commonly farmed (specify 5) |  |
| Average stocking density (Number/m3) | Species 1: |  |
| Species 2: |  |
| Type of seed (Wild/SPF/Other) | Species 1: |  |
| Species 2: |  |
| Crop duration (months) | Species 1: |  |
| Species 2: |  |
| Crop calendar followed  |  |
| Feed type (raw fish/locally formulated/concentrate/pellet) | Species 1: |  |
| Species 2: |  |
| Feeding rate (specify feed type) | Species 1: |  |
| Species 2: |  |
| Feed conversion ratio (FCR) | Species 1: |  |
| Species 2: |  |
| Aeration (None/Partial/Permanent) |  |
| Antifouling/other treatments (specify) |  |
| Disease management (approach followed) |  |
| Available measures for crew safety |  |
| Available measures for security/surveillance |  |
| Insurance coverage (crew/crop/equipment) |  |
| Schedule of crop holidays, if followed |  |
| Average number of harvests / crop | Species 1: |  |
| Species 2: |  |
| Yield (quintal/crop/unit) | Species 1: |  |
| Species 2: |  |
| Farm gate price (Rs/quintal) | Species 1: |  |
| Species 2: |  |

1. Please indicate the input use **per crop** in cage farming as below:

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Quantity (Qtl/crop) | Price (Rs/kg) | Value (Rs/crop) |
| **Fixed cost** |
| Cage fabrication |  |
| Cage net |  |
| Cage mooring and other cost (floats/accessories) |  |
| Any other capital cost incurred: |  |
| **Operational cost** |  |
| Seed |  |  |  |
| Feed |  |  |  |
| Labour (man days)-Men |  |  |  |
| Labour (man days)- women |  |  |  |
| Boat hiring and other cost |  |  |  |
| Miscellaneous cost |  |  |  |

1. What is the source of your seeds/ fish fingerlings? (i) Private hatchery (ii) ICAR-CMFRI (iii) Other public seed units (iv) Wild (v) Own (vi) Other……………………………….
2. What is the source of your fish feed? (i) Private feed outlets (ii) ICAR-CMFRI (iii) Other public agencies (iv) own preparation (vi) Other……………………………….
3. Do you follow any mechanization in culture related activities? If yes, please specify………………………………………………………………………………………………
4. What is the type/source of energy used in the farm (electricity/solar/natural gas/biogas/petroleum)
	1. Type……………………………..source:……………………………………………..
	2. Type……………………………..source:……………………………………………..
	3. Type……………………………..source:……………………………………………..
5. Please indicate the presence of any pollutants in the water body you are aware of (organic/chemicals/

heavy metals/antibiotics/silt, etc.), and any measures to minimize impact of pollution

.………………………………………………………………………………………………………..

1. Are you aware of any invasive/exotic species being cultured in the region? If yes, please provide details……………………………………………………………………………………………………
2. Please indicate your choices/details regarding sale of fish as below (tick **multiple options** if applies):

**(a) Point of first sale:** (i) farm gate (ii) local market (ii) local agent/auctioneer (iii) wholesale market (iii) export agent (iv) processor agent (v) online sales agent (v) other

(b) Commission paid for first sale, if applicable: …………..% of value of fish

(c ) Is there any prior agreement/contract for sale of fish (Yes/No), If yes, specify the party and type of agreement…………............................................................................................................................

1. Have you experienced any unfair trade practices any of the following types:

(i) Under-pricing (ii) Manipulating weight (iii) Additional commission (iv) Other……………………

1. Do you have business linkage with any of the following post-harvest value chain agents apart from farm gate sale of fish:

|  |  |  |
| --- | --- | --- |
| Value chain player | Type of linkage | Details |
| Fish processing plant (Pickle/fillet/other secondary products) |  |  |
| Fish drying plant |  |  |
| Fish meal plant |  |  |
| Export unit |  |  |
| Any other……………………………. |  |  |

1. Please indicate your order of preference on the following enabling factors for **sustainable intensification** of your farming activities **in future** (tick your choice)

| **No.** | **Sustainable intensification indicator** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Willingness to adopt and invest on new technology (+) |  |  |  |  |  |
| 2 | Readiness to follow scientific farming practices through regular follow-up (+) |  |  |  |  |  |
| 3 | Readiness to attend technical training /seminar/workshops (+) |  |  |  |  |  |
| 4 | Willingness to pay for certified farm inputs (seed/feed) (+) |  |  |  |  |  |
| 5 | Willingness to farm genetically improved species supplied by recognized agencies (+) |  |  |  |  |  |
| 6 | Preference to use of antibiotics (-) |  |  |  |  |  |
| 7 | Willingness to perform water quality tests before each crop (+) |  |  |  |  |  |
| 8 | Readiness to switch to green energy (+) (solar/wind/other energy efficient means) |  |  |  |  |  |
| 9 | Readiness to follow crop holidays (+) |  |  |  |  |  |
| 10 | Willingness to install waste management solutions (+) |  |  |  |  |  |
| 11 | Level of adoption of Good Management Practices (GMPs) (+) |  |  |  |  |  |
| 12 | Level of adoption of farm hygiene /product safety measures (+) |  |  |  |  |  |
| 13 | Level of linkage with farmer societies/SHGs/FPOs/Other (+) |  |  |  |  |  |
| 14 | Linkage with local government bodies (+) |  |  |  |  |  |
| 15 | Linkage with community organizations (+) |  |  |  |  |  |
| 16 | Willing to act as a master trainer to promote or transfer successful technologies (+) |  |  |  |  |  |
| 17 | Willingness for periodic farm auditing by third-party agency (+) |  |  |  |  |  |
| 18 | Likelihood to **diversify** farm activities in near future (+) |  |  |  |  |  |
| 19 | Likelihood to increase scale of farm production in near future (+) |  |  |  |  |  |
| 20 | Willingness for vertical integration including marketing/processing/other business ventures (+) |  |  |  |  |  |

1. Please indicate your order of preference on the following **risk proofing options** **in future** if not adopting presently (tick your choice)

| **No.** | **Risk proofing mechanism** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Adoption of labour safety measures in farm (fire safety /gloves/floatation devices/first aid kit/ vessel safety, etc.) (+) |  |  |  |  |  |
| 2 | Use of security/surveillance tools (CC camera/fencing/guard, etc.) (+) |  |  |  |  |  |
| 3 | Willingness to pay for aquaculture insurance (+) |  |  |  |  |  |
| 4 | Willingness to pay for farm equipment / vessel insurance (+) |  |  |  |  |  |
| 5 | Willingness to pay for group insurance cover for farm crew/labourers (+) |  |  |  |  |  |
| 6 | Social security /welfare registration for farm crew / labourers (+) |  |  |  |  |  |
| 7 | Registration of migrant labourers (+) |  |  |  |  |  |
| 8 | Access to / Awareness on weather alert platforms (+) |  |  |  |  |  |
| 9 | Awareness on Harmful Algal Blooms (+) |  |  |  |  |  |
| 10 | Access to disease surveillance platforms (+) |  |  |  |  |  |
| 11 | Ensuring check on invasive bio-foulers in cages |  |  |  |  |  |

1. Please indicate any constraints faced with regard to access to access to resources (water body) , raw materials/inputs, market etc………………………………………………………………………………………………………………………………………………………………………………………………………………….

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**Central Marine Fisheries Research Institute, Kochi-682 018**

**Socio Economic Evaluation and Technology Transfer Division**

**Questionnaire for Mariculture Farmers–IMTA**

### Date of Survey: ……………………….

1. Survey location:
2. Name and address of the respondent: Mob:
3. Age:
4. Family size:
5. Native place:
6. If migrated, give details (i) temporary on-job (ii) permanent settlement (iii) migrated from…………
7. Whether father’s occupation fishing/coastal aquaculture: Yes/No
8. Education: (i) No formal education (ii) Primary (1-4) (iii) Secondary (5-12) (iv) Above secondary
9. Where did you acquire the skills required for mariculture?

(i) Family/traditional (ii) Apprenticeship (ii) Vocational training (iv) Other……………

1. If you have attended any training programmes on cage culture, give details:

(i) Number of trainings:………….(ii) Main aspects covered………………………………………..

1. Years of experience in mariculture/coastal aquaculture: ……….(Years)
2. Types of fish culture activity/ies followed by you (tick **multiple option/s** if applies)

(i) Open sea cage farming (ii) Backwater cage farming (iii) Fin fish farming in RAS (iv) Coastal pond farming (v) Seaweed culture (vi) Other………………………………………………

1. Are you a member of any fisheries cooperative society /FPO/SHG/other organization? Yes/No
2. If yes, please provide details (Name of the group/no of members/other)

………………………………………………………………………………………………………

1. What is the source of capital for your farming ventures ((tick appropriate option/s)

(i) Own funds (iii) Credit from institutional sources (iii) credit from non-institutional sources

1. If availed credit, please indicate the amount in Rs. and interest rate applicable

(i) Institutional (specify)…………………Rs.…………..interest……………year……………

(ii) Non-institutional (specify)………………….Rs…………. interest………year…………….

1. Do you engage family labour in farming operations? If yes, indicate number of family man days (of 8 hours each) employed per season/crop.....................and women labour (man days)………………
2. What is the contract arrangement involved for the water body used for culture (i) Lease from LSGs (Amount:………..) (ii) Rented from private owner (Amount:…………..) (iii) No authorization taken/granted (iv) other…………….
3. What is the source of culture technology used / technical support in your farm

(i) Research institute………………………(ii) State Fisheries Department ………………………..

(iii) KVK/Other extension organizations ………………(iv) Local agent ………………………….

(v) Other fellow farmers (vi) YouTube/other media….……(vii) Private companies…………………

1. Please provide the following technical details with regard to your **immediate previous crop**:

|  |  |
| --- | --- |
| **Major indicators** | **Particulars** |
| Size of the cage (LxBxD)/(DiaxD) |  |
| Distance from the shore (m) |  |
| Year of first establishment  |  |
| Depth of water (m) |  |
| Major species commonly farmed (specify 5) |  |
| Average stocking density (Number/m3) | Species 1: |  |
| Species 2: |  |
| Type of seed (Wild/SPF/Other) | Species 1: |  |
| Species 2: |  |
| Crop duration (months) | Species 1: |  |
| Species 2: |  |
| Crop calendar followed  |  |
| Feed type (raw fish/locally formulated/concentrate/pellet) | Species 1: |  |
| Species 2: |  |
| Feeding rate (specify feed type) | Species 1: |  |
| Species 2: |  |
| Feed conversion ratio (FCR) | Species 1: |  |
| Species 2: |  |
| Aeration (None/Partial/Permanent) |  |
| Antifouling/other treatments (specify) |  |
| Disease management (approach followed) |  |
| Average number of harvests / crop | Species 1: |
| Species 2: |
| Yield (quintal/crop/unit) | Species 1: |
| Species 2: |
| Farm gate price (Rs/quintal) | Species 1: |
| Species 2: |
| Dimension of the seaweed/mussel raft (LXB) |  |
| Number of rafts in the unit |  |
| Seaweed/Mussel species commonly farmed  |  |
| Average stocking density (Number/m3) |  |
| Type of planting material/seed (Wild/Cultured/Other) |  |
| Number of crops/cycles taken per year |  |
| Crop duration (months) |  |
| Schedule of crop holidays, if followed |  |
| Average number of seaweed /mussel harvests/cycle | Species 1: |  |
| Species 2: |  |
| Yield (quintal wet weight/cycle/raft) | Species 1: |  |
| Species 2: |  |
| Total yield (quintal wet weight/year/unit) | Species 1: |  |
| Species 2: |  |
| Farm gate price (Rs./quintal) | Species 1: |  |
|  | Species 2: |  |
| Available measures for crew safety |  |  |
| Insurance coverage (crew/crop/equipment) |  |  |

1. Please indicate the input use **per crop** in cage farming as below:

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Quantity (Qtl/crop) | Price (Rs/kg) | Value (Rs/crop) |
| **Fixed cost** |
| Cage fabrication |  |
| Cage net |  |
| Cage mooring and other cost (floats/accessories) |  |
| Any other capital cost incurred: |  |
| **Operational cost** |  |
| Seed |  |  |  |
| Feed |  |  |  |
| Labour (man days)-Men |  |  |  |
| Labour (man days)- women |  |  |  |
| Boat hiring and other cost |  |  |  |
| Miscellaneous cost |  |  |  |

1. Please indicate the input use **per unit per cycle** in seaweed/mussel farming as below:

|  |  |
| --- | --- |
| Particulars | Value (Rs/raft/year) |
| **Fixed cost** |
| Seaweed /mussel rafts |  |
| Other accessories |  |
| Any other capital cost incurred: |  |
| Input | Quantity (Qtl/raft/year) | Price (Rs/kg) | Value (Rs/raft/year) |
| **Operational cost** |  |
| Seed material |  |  |  |
| Labour (man days)-Men |  |  |  |
| Labour (man days)- women |  |  |  |
| Boat hiring and other cost |  |  |  |
| Miscellaneous cost |  |  |  |

1. What is the source of your seeds/ fish fingerlings? (i) Private hatchery (ii) ICAR-CMFRI (iii) Other public seed units (iv) Wild (v) Own (vi) Other……………………………….
2. What is the source of your fish feed? (i) Private feed outlets (ii) ICAR-CMFRI (iii) Other public agencies (iv) own preparation (vi) Other……………………………….
3. Do you follow any mechanization in culture related activities? If yes, please specify………………………………………………………………………………………………
4. What is the type/source of energy used in the farm (electricity/solar/natural gas/biogas/petroleum)
	1. Type……………………………..source:……………………………………………..
	2. Type……………………………..source:……………………………………………..
	3. Type……………………………..source:……………………………………………..
5. Please indicate the presence of any pollutants in the water body you are aware of (organic/chemicals/

heavy metals/antibiotics/silt, etc.), and any measures to minimize impact of pollution

.………………………………………………………………………………………………………..

1. Are you aware of any invasive/exotic species being cultured in the region? If yes, please provide details……………………………………………………………………………………………………
2. Please indicate your choices/details regarding sale of fish as below (tick **multiple options** if applies):

**(a) Point of first sale:** (i) farm gate (ii) local market (ii) local agent/auctioneer (iii) wholesale market (iii) export agent (iv) processor agent (v) online sales agent (v) other

(b) Commission paid for first sale, if applicable: …………..% of value of fish

(c ) Is there any prior agreement/contract for sale of fish (Yes/No), If yes, specify the party and type of agreement…………............................................................................................................................

1. Have you experienced any unfair trade practices any of the following types:

(i) Under-pricing (ii) Manipulating weight (iii) Additional commission (iv) Other……………………

1. Do you have business linkage with any of the following post-harvest value chain agents apart from farm gate sale of fish/seaweed/mussel:

|  |  |  |
| --- | --- | --- |
| Value chain player | Type of linkage | Details |
| Fish processing plant (Pickle/fillet/other secondary products) |  |  |
| Fish drying plant / Fish meal plant |  |  |
| Seaweed fertilizer/ Other seaweed products |  |  |
| Export unit |  |  |
| Any other……………………………. |  |  |

1. Please indicate your order of preference on the following enabling factors for **sustainable intensification** of your farming activities **in future** (tick your choice)

| **No.** | **Sustainable intensification indicator** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Willingness to adopt and invest on new technology (+) |  |  |  |  |  |
| 2 | Readiness to follow scientific farming practices through regular follow-up (+) |  |  |  |  |  |
| 3 | Readiness to attend technical training /seminar/workshops (+) |  |  |  |  |  |
| 4 | Willingness to pay for certified farm inputs (seed/feed) (+) |  |  |  |  |  |
| 5 | Willingness to farm genetically improved species supplied by recognized agencies (+) |  |  |  |  |  |
| 6 | Preference to use of antibiotics (-) |  |  |  |  |  |
| 7 | Willingness to perform water quality tests before each crop (+) |  |  |  |  |  |
| 8 | Readiness to switch to green energy (+) (solar/wind/other energy efficient means) |  |  |  |  |  |
| 9 | Readiness to follow crop holidays (+) |  |  |  |  |  |
| 10 | Willingness to install waste management solutions (+) |  |  |  |  |  |
| 11 | Level of adoption of Good Management Practices (GMPs) (+) |  |  |  |  |  |
| 12 | Level of adoption of farm hygiene /product safety measures (+) |  |  |  |  |  |
| 13 | Level of linkage with farmer societies/SHGs/FPOs/Other (+) |  |  |  |  |  |
| 14 | Linkage with local government bodies (+) |  |  |  |  |  |
| 15 | Linkage with community organizations (+) |  |  |  |  |  |
| 16 | Willing to act as a master trainer to promote or transfer successful technologies (+) |  |  |  |  |  |
| 17 | Willingness for periodic farm auditing by third-party agency (+) |  |  |  |  |  |
| 18 | Likelihood to **diversify** farm activities in near future (+) |  |  |  |  |  |
| 19 | Likelihood to increase scale of farm production in near future (+) |  |  |  |  |  |
| 20 | Willingness for vertical integration including marketing/processing/other business ventures (+) |  |  |  |  |  |

1. Please indicate your order of preference on the following **risk proofing options** **in future** if not adopting presently (tick your choice)

| **No.** | **Risk proofing mechanism** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Adoption of labour safety measures in farm (fire safety /gloves/floatation devices/first aid kit/ vessel safety, etc.) (+) |  |  |  |  |  |
| 2 | Use of security/surveillance tools (CC camera/fencing/guard, etc.) (+) |  |  |  |  |  |
| 3 | Willingness to pay for aquaculture insurance (+) |  |  |  |  |  |
| 4 | Willingness to pay for farm equipment / vessel insurance (+) |  |  |  |  |  |
| 5 | Willingness to pay for group insurance cover for farm crew/labourers (+) |  |  |  |  |  |
| 6 | Social security /welfare registration for farm crew / labourers (+) |  |  |  |  |  |
| 7 | Registration of migrant labourers (+) |  |  |  |  |  |
| 8 | Access to / Awareness on weather alert platforms (+) |  |  |  |  |  |
| 9 | Awareness on Harmful Algal Blooms (+) |  |  |  |  |  |
| 10 | Access to disease surveillance platforms (+) |  |  |  |  |  |
| 11 | Ensuring check on invasive bio-foulers in cages |  |  |  |  |  |

1. Please indicate any constraints faced with regard to access to access to resources (water body) , raw materials/inputs, market etc………………………………………………………………………………………………………………………………………………………………………………………………………………….

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**Central Marine Fisheries Research Institute, Kochi-682 018**

**Socio Economic Evaluation and Technology Transfer Division**

**Questionnaire for Mariculture Farmers–Seaweed farming**

### Date of Survey: ……………………….

1. Survey location:
2. Name and address of the respondent: Mob:
3. Age:
4. Family size:
5. Native place:
6. If migrated, give details (i) temporary on-job (ii) permanent settlement (iii) migrated from…………
7. Whether father’s occupation fishing/coastal aquaculture: Yes/No
8. Education: (i) No formal education (ii) Primary (1-4) (iii) Secondary (5-12) (iv) Above secondary
9. Where did you acquire the skills required for mariculture?

(i) Family/traditional (ii) Apprenticeship (ii) Vocational training (iv) Other

1. If you have attended any training programmes on seaweed culture, give details:

(i) Number of trainings:………….(ii) Main aspects covered………………………………………..

1. Years of experience in seaweed culture/mariculture/coastal aquaculture: ……….(Years)
2. Types of fish culture activity/ies followed by you (tick **multiple option/s** if applies)

(i) Seaweed culture (ii) Open sea cage farming (iii) Fin fish farming in RAS (iv) IMTA (v) Other…………………………………………………………………..

1. Are you a member of any fisheries cooperative society /FPO/SHG/other organization? Yes/No
2. If yes, please provide details (Name of the group/no of members/other)

………………………………………………………………………………………………………

1. What is the source of capital for your farming ventures (tick appropriate option/s)

(i) Own funds (iii) Credit from institutional sources (iii) credit from non-institutional sources

1. If availed credit, please indicate the amount in Rs. and interest rate applicable

(i) Institutional (specify)…………………Rs.…………..interest……………year……………

(ii) Non-institutional (specify)………………….Rs…………. interest………year…………….

1. Do you engage family labour in farming operations? If yes, indicate number of family man days (of 8 hours each) employed per season/crop.....................and women labour (man days)………………
2. What is the contract arrangement involved for the water body used for culture (i) Lease from LSGs (Amount:………..) (ii) Rented from private owner (Amount:…………..) (iii) No authorization taken/granted (iv) other…………….
3. What is the source of culture technology used / technical support in your farm

(i) Research institute………………………(ii) State Fisheries Department ………………………..

(iii) KVK/Other extension organizations ………………(iv) Local agent ………………………….

(v) Other fellow farmers……………………(vi) YouTube/other media….……………………

1. Please provide the technical details with regard to your **immediate previous seaweed crop**:

|  |  |
| --- | --- |
| **Major indicators** | **Particulars** |
| Area of the unit (ha) |  |
| Dimension of the raft (LXB) |  |
| Number of rafts in the unit |  |
| Distance from the shore (m) |  |
| Depth of water (m) |  |
| Year of first establishment |  |
| Major species commonly farmed  |  |
| Number of crops/cycles taken per year |  |
| Crop calendar followed  |  |
| Aeration (None/Partial/Permanent) |  |
| Antifouling/other treatments (specify) |  |
| Disease management (approach followed) |  |
| Available measures for crew safety |  |
| Available measures for security/surveillance |  |
| Insurance coverage (crew/crop/equipment) |  |
| Schedule of crop holidays, if followed |  |
| Average number of harvests/cycle | Species 1: |  |
| Species 2: |  |
| Yield (quintal wet weight/cycle/raft) | Species 1: |  |
| Species 2: |  |
| Total yield (quintal wet weight/year/unit) | Species 1: |  |
| Species 2: |  |
| Farm gate price (Rs./quintal) | Species 1: |  |
| Species 2: |  |

1. Please indicate the input use **per unit per cycle** in seaweed farming as below:

|  |  |
| --- | --- |
| Particulars | Value (Rs/raft/year) |
| **Fixed cost** |
| Seaweed rafts |  |
| Other accessories |  |
| Any other capital cost incurred: |  |
| Input | Quantity (Qtl/raft/year) | Price (Rs/kg) | Value (Rs/raft/year) |
| **Operational cost** |  |
| Seed material |  |  |  |
| Labour (man days)-Men |  |  |  |
| Labour (man days)- women |  |  |  |
| Boat hiring and other cost |  |  |  |
| Miscellaneous cost |  |  |  |

1. What is the source of your seed material? (i) Private unit (ii) ICAR-CMFRI (iii) Other public seed units (iv) Wild (v) Own (vi) Other……………………………….
2. Do you follow any mechanization in culture related activities? If yes, please specify………………………………………………………………………………………………
3. What is the type/source of energy used in the farm (electricity/solar/natural gas/biogas/petroleum)
	1. Type……………………………..source:……………………………………………..
	2. Type……………………………..source:……………………………………………..
	3. Type……………………………..source:……………………………………………..
4. Please indicate the presence of any pollutants in the water body you are aware of (organic/chemicals/

heavy metals/antibiotics/silt, etc.), and any measures to minimize impact of pollution

.………………………………………………………………………………………………………..

1. Are you aware of any invasive/exotic species being cultured in the region? If yes, please provide details……………………………………………………………………………………………………
2. Please indicate your choices/details regarding sale of seaweed as below (tick **multiple options** if applies):

**(a) Point of first sale:** (i) farm gate (ii) local market (ii) local agent/auctioneer (iii) wholesale market (iii) export agent (iv) processor agent (v) online sales agent (v) other

(b) Commission paid for first sale, if applicable: …………..% of value of fish

(c ) Is there any prior agreement/contract for sale of fish (Yes/No), If yes, specify the party and type of agreement…………..........................................................................................................................

1. Have you experienced any unfair trade practices any of the following types:

(i) Under-pricing (ii) Manipulating weight (iii) Additional commission (iv) Other……………………

1. Do you have business linkage with any of the following post-harvest value chain agents apart from farm gate sale of fish:

|  |  |  |
| --- | --- | --- |
| Value chain player | Type of linkage | Details |
| Seaweed processing plant (specify) (Carageenan/agar/fertilizer/other) |  |  |
| Nutraceutical /Pharmaceutical industry |  |  |
| Export unit |  |  |
| Any other……………………………. |  |  |

1. Please indicate your order of preference on the following enabling factors for **sustainable intensification** of your farming activities **in future** (tick your choice)

| **No.** | **Sustainable intensification indicator** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Willingness to adopt and invest on new technology (+) |  |  |  |  |  |
| 2 | Readiness to follow scientific farming practices through regular follow-up (+) |  |  |  |  |  |
| 3 | Readiness to attend technical training /seminar/workshops (+) |  |  |  |  |  |
| 4 | Willingness to pay for certified farm inputs (seed/other) (+) |  |  |  |  |  |
| 5 | Willingness to farm genetically improved seaweed species supplied by recognized agencies (+) |  |  |  |  |  |
| 6 | Willingness to use synthetic raft material (?) (HDPE/other) |  |  |  |  |  |
| 7 | Readiness to switch to green energy (+) (solar/wind/other energy efficient means) |  |  |  |  |  |
| 8 | Readiness to follow crop holidays (+) |  |  |  |  |  |
| 9 | Willingness to install waste management solutions (+) |  |  |  |  |  |
| 10 | Level of adoption of Good Management Practices (GMPs) (+) |  |  |  |  |  |
| 11 | Level of linkage with farmer societies/SHGs/FPOs/Other (+) |  |  |  |  |  |
| 12 | Linkage with local government bodies (+) |  |  |  |  |  |
| 13 | Linkage with community organizations (+) |  |  |  |  |  |
| 14 | Willing to act as a master trainer to promote or transfer successful technologies (+) |  |  |  |  |  |
| 15 | Willingness for periodic farm auditing by third-party agency (+) |  |  |  |  |  |
| 16 | Likelihood to **diversify** farm activities in near future (+) |  |  |  |  |  |
| 17 | Likelihood to increase scale of farm production in near future (+) |  |  |  |  |  |
| 18 | Willingness for vertical integration (marketing/processing/other business ventures) (+) |  |  |  |  |  |

1. Please indicate your order of preference on the following **risk proofing options** **in future** if not adopting presently (tick your choice)

| **No.** | **Risk proofing mechanism** | **Very high** | **High** | **Moderate** | **Low** | **Very low** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Adoption of labour safety measures in farm (fire safety /gloves/floatation devices/first aid kit/ vessel safety, etc.) (+) |  |  |  |  |  |
| 2 | Use of security/surveillance tools (CC camera/fencing/guard, etc.) (+) |  |  |  |  |  |
| 3 | Willingness to pay for crop insurance (+) |  |  |  |  |  |
| 4 | Willingness to pay for farm equipment (+) |  |  |  |  |  |
| 5 | Willingness to pay for group insurance cover for farm crew/labourers (+) |  |  |  |  |  |
| 6 | Social security /welfare registration for farm crew / labourers (+) |  |  |  |  |  |
| 7 | Registration of migrant labourers (+) |  |  |  |  |  |
| 8 | Access to / Awareness on weather alert platforms (+) |  |  |  |  |  |
| 9 | Awareness on Harmful Algal Blooms (+) |  |  |  |  |  |
| 10 | Access to disease surveillance platforms (+) |  |  |  |  |  |

1. Please indicate any constraints faced with regard to access to access to resources (water body) , raw materials/inputs, market etc………………………………………………………………………………………………………………………………………………………………………………………………………………….

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