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Department of Agriculture & Cooperation
Ministry of Agriculture
Government of India

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NeGP AGRICULTURE
EMPOWERING FARMERS

Information on Fishery Inputs
Software Requirement Specifications

Agricultural Informatics Division
National Informatics Centre
Department of Information Technology
Ministry of Communications & Information Technology
Government of India

Version 1.0

NAVAYUGA

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India

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1. INTRODUCTION

The purpose of this document is to describe the software requirement specifications for Service-09, Information on Fishery Inputs in NeGP-A.

This SRS consists of the collection of the requirements and detailed information on how the fisheries service is managed currently at Centre level and the 7 pilot states, Assam, Jharkhand, Himachal Pradesh, Madhya Pradesh, Karnataka, Kerala and Maharashtra.

The documents details the processes involved in providing information on good practices for fish farming, efficient use of feed material, dealers network, quality control, fisherman safety, fish diseases, scheme for fisherman and fish production statistics, automation of fish seed grower registration, vessel registration, expert advice and mechanism for grievance management.

The requirements have been analyzed, so as to study on how the current processes can be reengineered to frame a system, which will meet the objective of this service in NeGP-A.

1.1 Purpose

The purpose of this document is:

- To identify the user requirements.
- To list department functions and entities.
- To provide details of Software requirements.
- To describe data requirements.
- To identify software acceptance criteria along with various assumptions/ dependencies, and design & general constraints.
- To describe the functional requirements in full details.

The intended audiences of this document are:

1. ***NIC Coordinators:***

   NIC Coordinators are the point of contact in between the ministry and the hired agency for this job NIT. NIC Coordinators will analyze the document prepared by NIT and will provide feedback on the work delivered by NIT.

   They also facilitate the interaction of hired agency to gather information from different states and their districts/ blocks/ villages for the projects.

2. **Central and state level employees of Ministry of Agriculture (DAC):**

   The final usage of system will be done by Department users from Ministry and they will be responsible to provide final feedback on

work completed by NIT and the authenticity and relevancy of analysis done during requirement gathering, which will further be used to create the software.

The users can read the document to understand on what is being delivered to them and can suggest features, which can make the system better and more users friendly.

3. Technical / Programming Team

The Technical team will comprise of Senior Project Manager, Project Manager, and Module leads, Developers, Testers for the project, who would all be referring this document to design and develop the software based on the specifications laid out.

- Developers will be using the document to ensure they are developing the right product, as per the specifications given in the document.
- Testers can use this document to prepare their test cases for module testing and complete product testing.
- Project Manager and Senor Project Managers can refer the document to ensure right product is being developed.

1.2 Scope

The scope of this document is to identify the software requirement specifications(SRS) relating to e-enablement of fishery related services their delivery through Citizen Service Center, and the internet at Central Ministry (Department of Agriculture & Cooperation, GOI), State Department and Agencies, District and Block level offices. Since this is a standard one, it can be used for other states also.

Table: States to be covered

SNO.	STATES	DISTRICTS	BLOCKS
1	Assam	23	219
2	Himachal Pradesh	12	75
3	Maharashtra	35	358
4	Madhya Pradesh	50	313
5	Jharkhand	24	212
6	Karnataka	29	176
7	Kerala	14	152
Total State Locations		**187**	**1505**

This document would cover the software requirements specifications for the following services

1. Good practices for fish farming
2. Efficient use of feed material
3. Networking of dealers
4. QC&A certificate to hatcheries, farms
5. Fishermen safety ,Fish diseases,
6. Schemes for fishermen ,Fish production statistics
7. Automation of fish seed grower & Vessel registration
8. Expert advice
9. Market Information System
10. ICT based Grievance Redressal Management System
11. E-payment
12. E-alert
13. Sms (pull/push), e-mail, e-post,
14. GIS for Dealers
15. Thematic Maps of availability
16. Location Maps of Testing Infrastructure for fish seeds
17. Availability of product with GIS

- **All the above services are categorized under 3 components**

1. **Transaction based**

- Master data management
- Market Information system - Arrivals & Market price, details of transaction
- Market Intelligence system to predict the price details of species
- Fisherman-wise details of daily catch of reservoir fishermen at the fish landing centers.
- Insurance details, Distribution of fish seeds to the farmers (PVT)
- Training Modules, Statistics (inland, marine)
- Collection of Samples for testing & publishing results
- Stock position of fish seed grower's agency

- Fish disease management system (includes Aquatic Animal Disease and trans – boundary disease)
- Survey of fish fauna in inland fisheries
- Fishermen safety system - Early warning, it may be linked with incois)

2. **Work flow based**

- Networking of dealers -fish seed growers, labs, processing, units , fishing vessel manufacturing and repairing units etc
- Issuing Registration & License certificate to the registered dealers / agencies /labs etc
- Distribution of fish seeds to the beneficiaries
- Networking of all insurance agencies for Online Insurance claim
- Networking of fishermen, fish farmer, traders etc
- Online scheme monitoring system at beneficiary level through networking of all fisheries cooperatives (linked with service8)
- Information on QC&A
- Collection of samples from the hatcheries, nurseries
- Analytical results, recommendations based on analytical result
- Issuance of QC&A certificate
- Vessel registration of marine fisheries (http:// fishcraft.nic.in)
- Fisherman safety system
- Recording movements of crew by issuing boarding pass
- Online insurance claims
- Implementation details of welfare schemes at beneficiary level
- Early warning system
- Operationalization of safety mechanism
- Weather forecasting

3. **Content based**

- Fish Diseases, treatment & preventive measures
- Fish production , export, Import statistics
- Welfare schemes and implementation details
- Analytical Result of samples collected from hatcheries
- Institution wise Training calendar
- Contact details of stakeholders

- List of water resources , cultivable species
- Download – forms
- Utilization of fish caught (location, fish type, processing Methods, utilization (export/import etc)
- List of banned medicines, Antibiotics & other pharmacologically Active Substances, Gears
- List of license cancelled feed growers, seed growers etc
- The Guidelines on Good Management Practices (GMPs)
- Financial institutions - procedure, subsidies, conditions and ceiling in getting loans,
- Insurance Agencies - importance of insurance & its details
- Market arrivals , price and traders details
- Ponds allotment -
  After the constitution of Panchayati Raj Institutions (PRI), the ponds for fisheries are allotted by PRI to the eligible candidates. At district, the Panchayati Raj Institutions are divided into three tier- 1. District level, called Zila Panchayat, 2- block level, called Zanpad Panchayat, 3- Village level called Gram Panchayat. These PRIs are entitled to allot the ponds as under:

S. No.	Capacity of Ponds of Water	Entitled PRI
1	0-10 Hect.	Gram Panchayat
2	10-100 Hect.	Janpad Panchayat
3	100-1000 Hect.	Zila Panchayat
4	More than1000 Hect.	State Fish Co-operative Society

- Categorization of Ponds-

  The ponds have been divided into three categories based on the duration of availability of water-
  1. Seasonal Ponds
  2. All Season (Barah Masi) Ponds.
  3. Irrigation Ponds.

  Note: First two i.e. numbered 1, 2 are also called Village ponds.

- Priority for allotment of Ponds:

  The priority for allotment of the ponds is Fisherman, ST, SC, and BPL, Others respectively.

- Per Person Criteria for allotment of Ponds:

S. NO.	Water Area Category of Pond	Per person allotment of Water Area (Average)
1	All Season (Barah Masi) Ponds	1 Hect.
2	Seasonal Ponds	2 Hect.
3	Irrigation ponds up to 1000 Hect. Water Area	4 Hect.
4	All ponds having water area > 1000 Hect.	10 Hect.

- Rate of Allotment of Ponds:

S. NO.	Category of Ponds	Lease Amount
1	Seasonal Ponds having water area 0-10 Hect	Rs. 300.00 per hect. Per year.
2	All season ponds having water area 0-10 Hect.	Rs. 500.00 per Hect per year
3	All ponds but not irrigation ponds and having water area > 10 Hect.	Rs. 300.00 per hect. Per year.
4	Irrigation ponds having water area 10-50 Hect.	Rs. 200.00 Per hect. Per year
5	Irrigation ponds having water area > 50 Hect and <= 200 Hect.	Rs. 150.00 per hect. Per year.
6	Irrigation ponds having water area > 200 Hect.	Rs. 75.00 per hect. Per year

- Fish Seed Species, Size and their Price details:

S. NO	Species	Spawn	Fry	Semi-Fingerling	Fingerling
1	Size in MM	8-12	20-25	25-50	50 Above
2	Rate	Per Thousand	Per Thousand	Per Thousand	Per Thousand
3	Indian Major Carp mixed/Mirgal/Cyprinus	12.50	75.00	200.00	400.00
4	Rohu	15.00	100.00	225.00	500.00
6	Catla/Grass Carp/Silver Carp	20.00	125.00	250.00	600.00
7	Number per bag	2000	2000	500	250
8	Packing Cost per bag	10.00	10.00	10.00	10.00

- Success Stories

Best Practices

1. Technology for better yield - Production
2. Technology for handling harvesting, post harvesting & processing,
3. Technology used for fishing operation, export, import
4. About disease & treatment, Sea safety mechanism
5. Fish culturing techniques and Hazard Analysis at critical control points
6. Aquaculture pollution control
7. Hygiene on fishing vessel, crews, its equipments
8. Vessel architecture, Bio technology (tissue culture, gene transplantation)
9. Hatcheries/ farms management (nutrient, weed, soil, water)
10. Information on Regulatory Acts, Rules , Guidelines
11. Pollution in fish farming
12. Man missing details, Trawl Ban
13. Various schemes for fishermen – details, contact offices, Phone No.
14. Schedule of Schemes.
15. Safety measures for fishermen and technologies to communicate easily
16. If they are in danger.
17. Education facilities for the children of fishermen.
18. New technologies in fishing.
19. Banned fishing and its penalties if violating rules.
20. Factors to be considered while registration of Chinese dip net, stake net, boat etc
21. To teach fishermen about the steps to be taken if any terrorist related activities are noticed in the sea.
22. Hatcheries & nurseries management needs – How to do?
23. Brood stocking?
24. Produce seeds?
25. Seed rearing?
26. Packing of seeds for distributing to farmers?
27. What type of training? How to do?
28. Farm management - Farmer needs

- How to do?

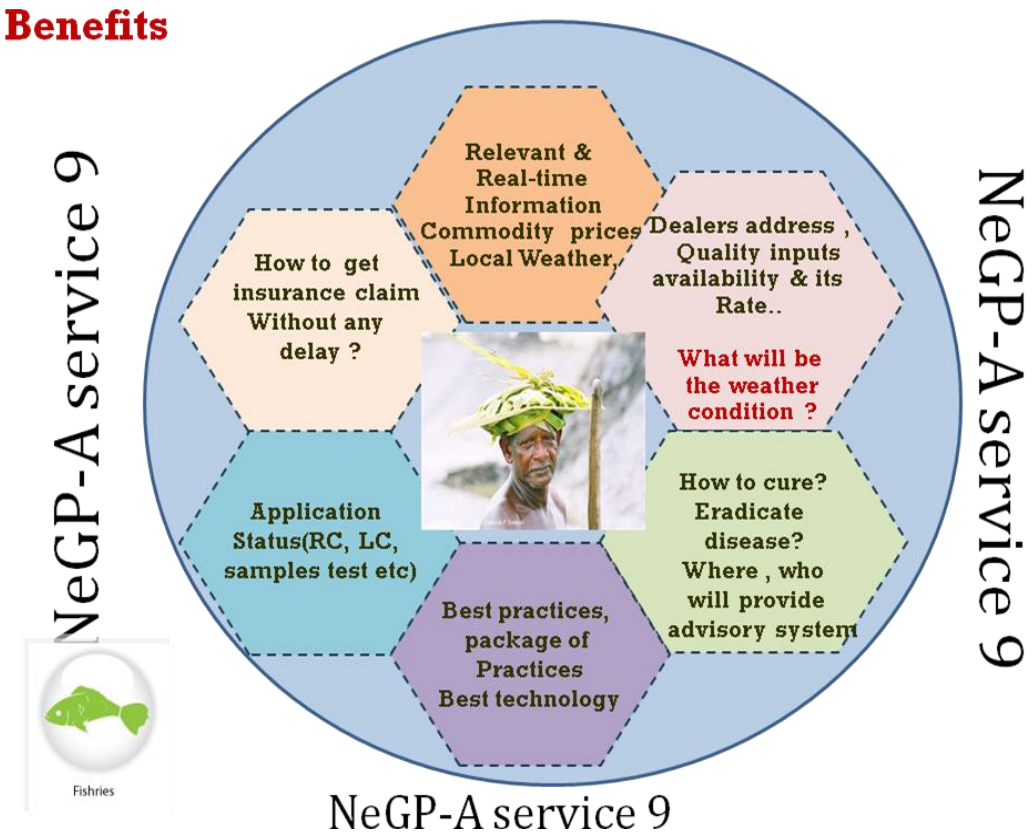
- Site selection, Prepare pond (water bodies) for fish farming
- Seed stocking (after receiving from hatcheries and before
- release into the water bodies)
- Feed fingerlings, fishes
- Water treatment , disease treatment
- Harvesting , post harvesting
- Marketing ->How, where , when
- Local case study
- Aquaculture - Farmer needs
- Critical issues in shrimp farming, mussel farming etc - How to do and improve?
- production loss due to disease
- Potential conflicts with other users of aquatic resources
- Food safety & aquatic animal health
- Environmental impact due to aquaculture farm waste water
- Conversion of other land categories for aquaculture
- Introduction of alien & genetically altered organisms
- Code of practises for fish culture, shrimp farming etc.
- Guidelines for regulating coastal aquaculture (list)
- Aquaculture - Farmer needs
- Guidelines for regulating coastal aquaculture
- environment maintaining & management plan
- Cluster management
- Record maintenance
- Protecting the livelihood of coastal communities

GIS Based

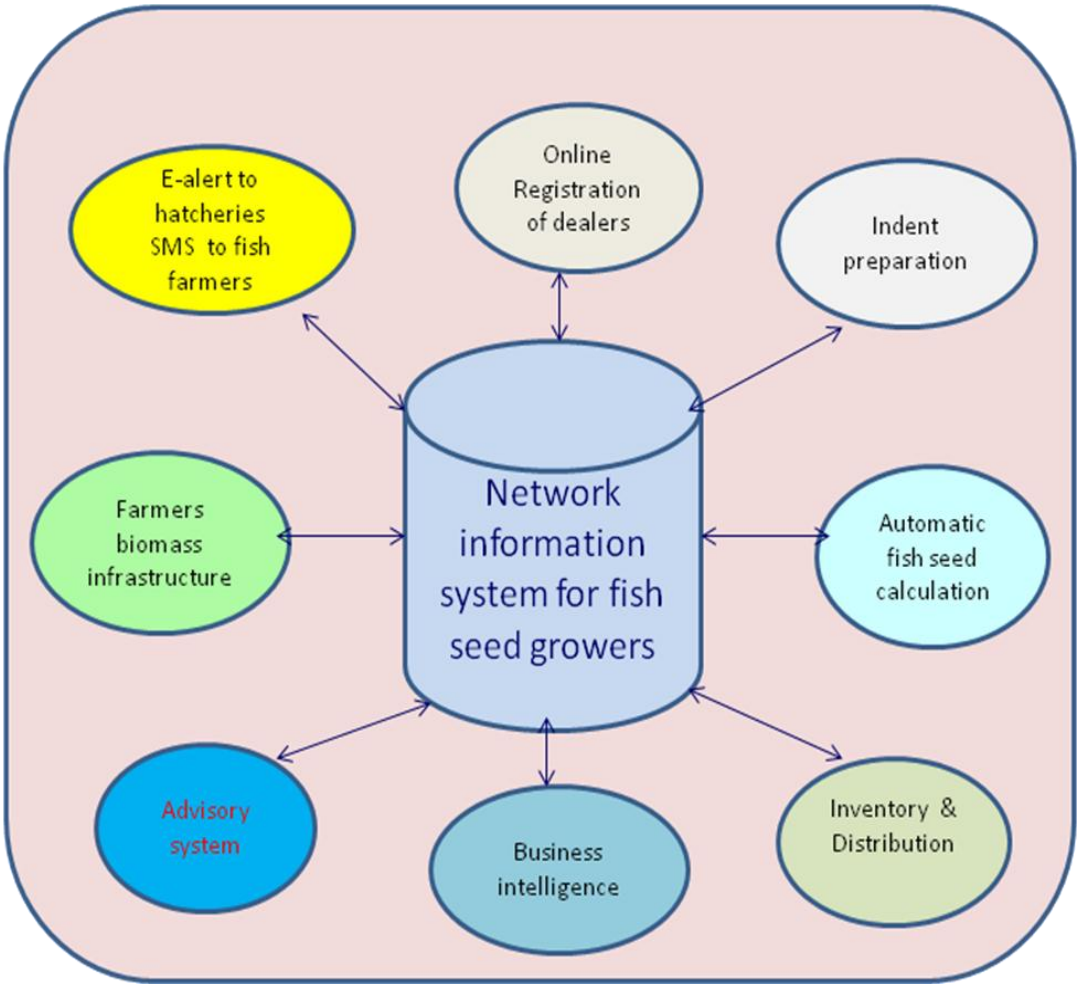
- Database of Water Bodies Fish Landing Centers, Fish Markets, Farms, hatcheries
- Thematic map of infrastructure, availability of dealers, seeds

1.3 Summarize of Service-9

- To Provide Fishermen a single platform for obtaining

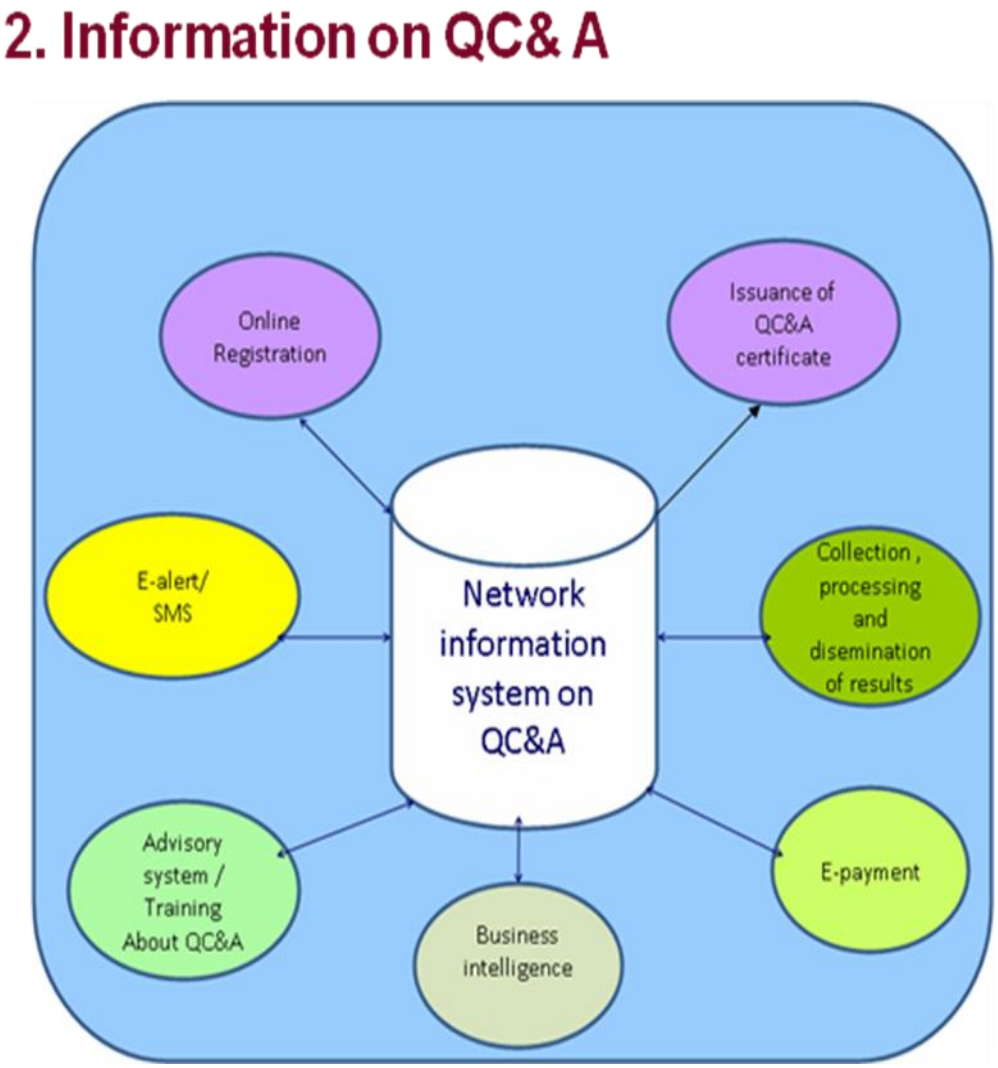
- 

1. Networking of dealers



Provide the information about:

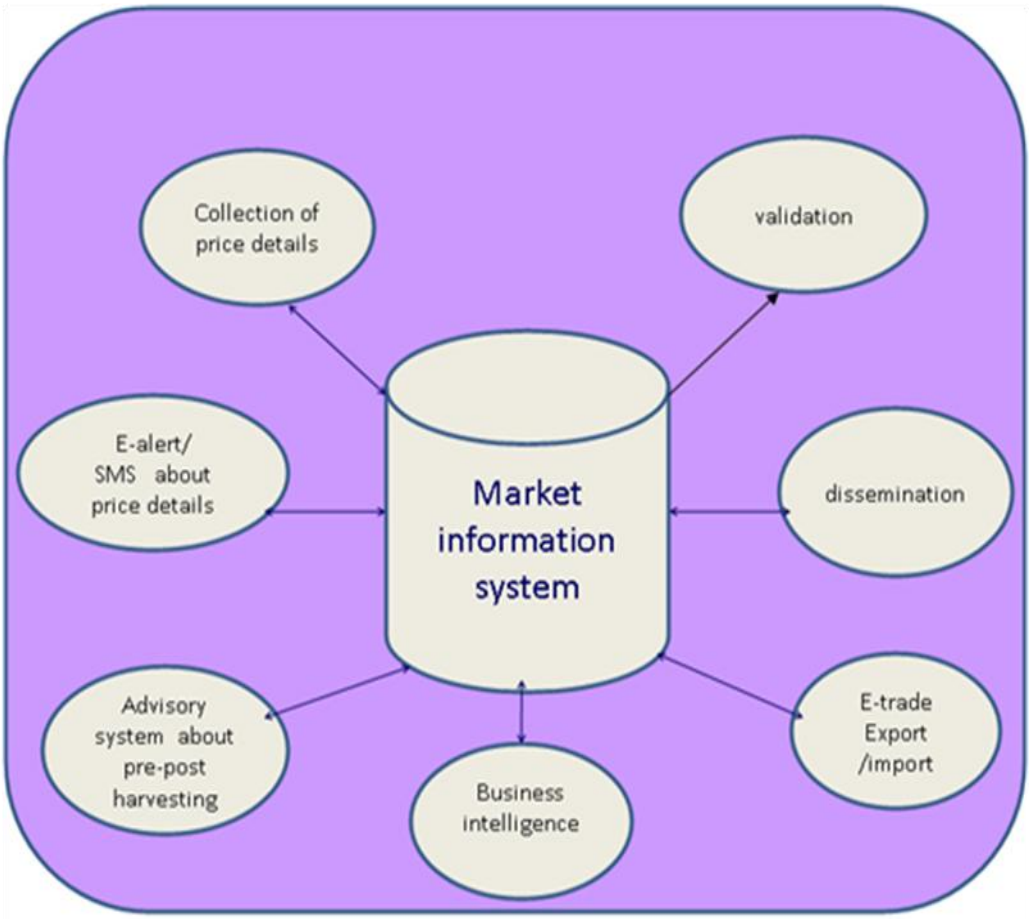
- Networking of all the Department& private Agencies who are selling/purchasing fish seeds
- Streamlining the registration and license activities
- Making effective system for distributing inputs to the beneficiaries
- Disseminating the information on market price and availability of inputs
- Provide Advisory system
- Hatcheries information



Facilitate to get information as:

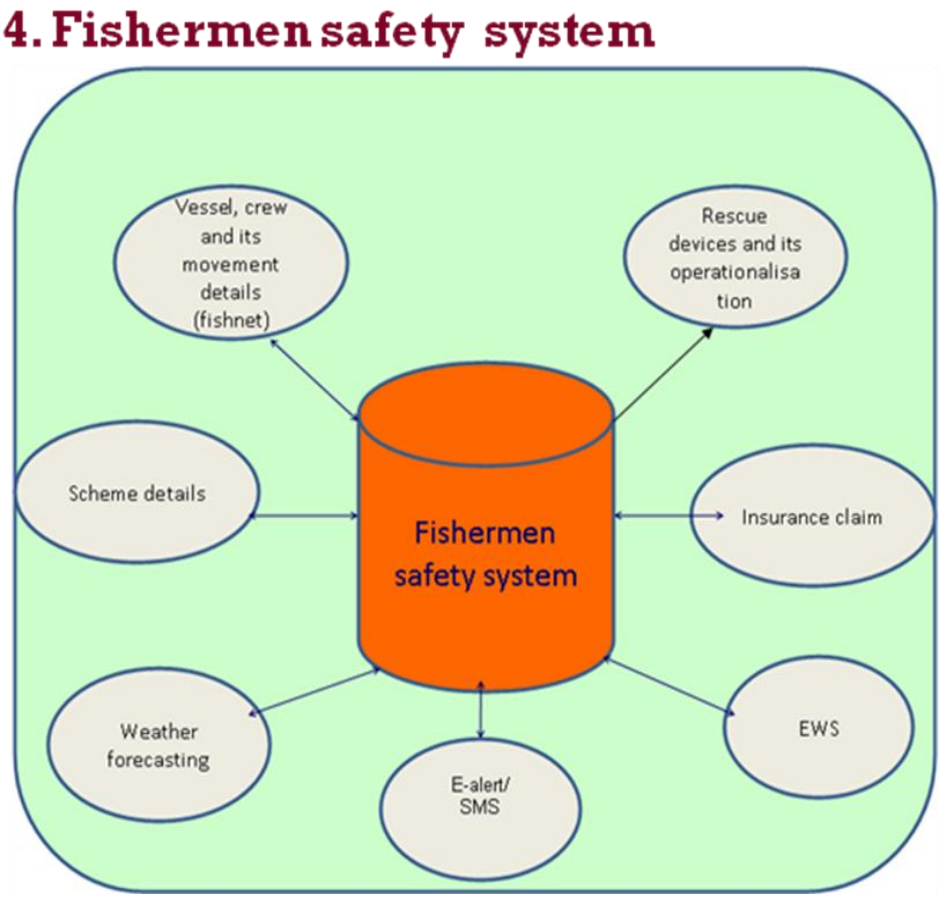
- Networking of the Testing Labs
- Issuing uniform QC&A certificate by Agencies(ADAK,MPEDA) to fish seed growers based on the analytical results from the quality testing labs
- Provide analytical test result and recommendation to the beneficiaries at the figure tip
- Collection processing and dissemination the result
- Training about QC&A

3. Market Information system



Facilitate to get information as:

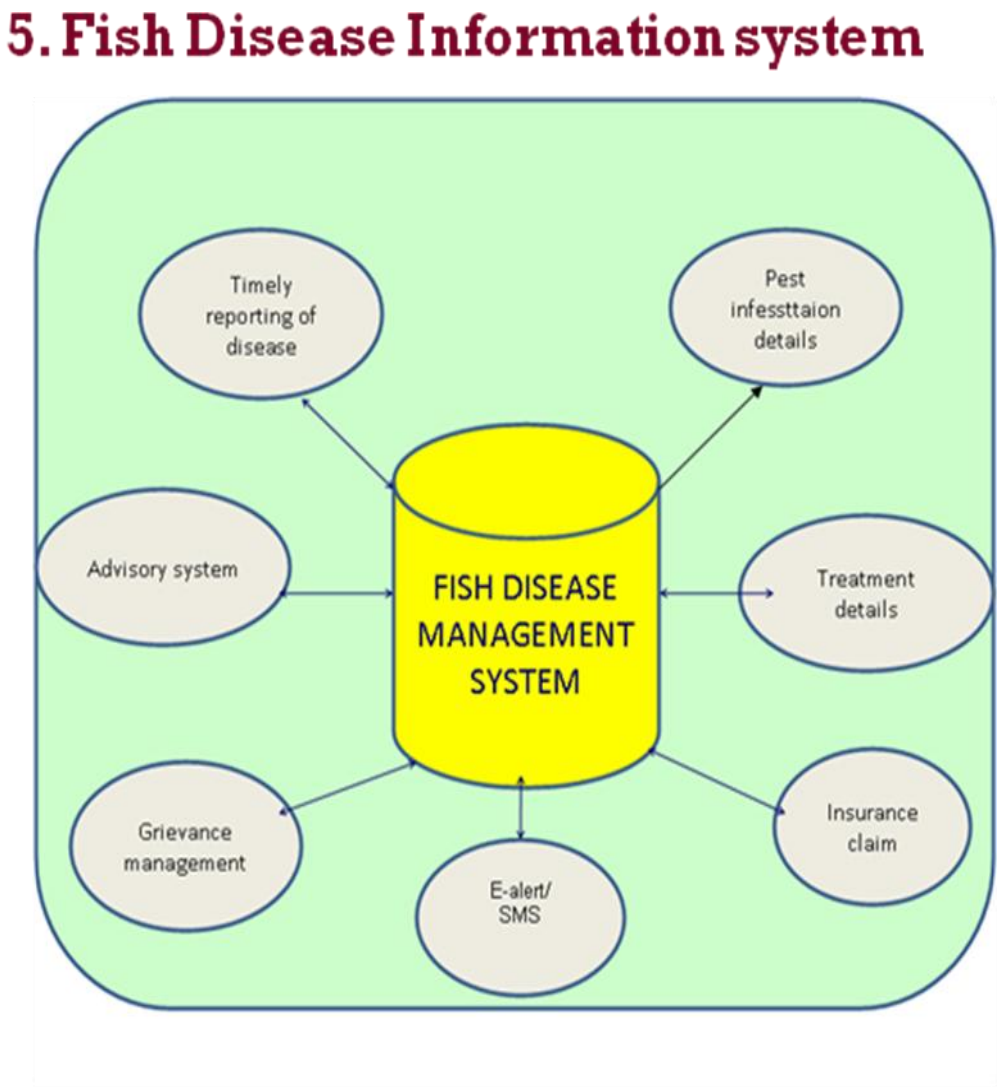
- Networking of all the registered and non-registered FLC
- Collection and dissemination of all the catch price and arrival details
- To bring the farmer in a better bargaining position and to promote a culture of good agriculture marketing practices
- The vertical linkages in export fish catch markets that connects multinational traders to domestic traders
- Daily update about market
- Daily update about market price etc.



Facilitate to get information as:

- Surveillance System for ensuring coastal security and safety to fisherman and fish farmers
- Monitoring of welfare schemes at beneficiary level
- Monitoring of vessel and crew movements
- Online insurance claims,weather forecast e-alerts, meteorology & Tsunami warnings
- Will be linked to EWS(Early Warning System)
- EWS is a people centered disaster early warning system that will function for the fishing community
- Facility to offer mobile access to fishermen

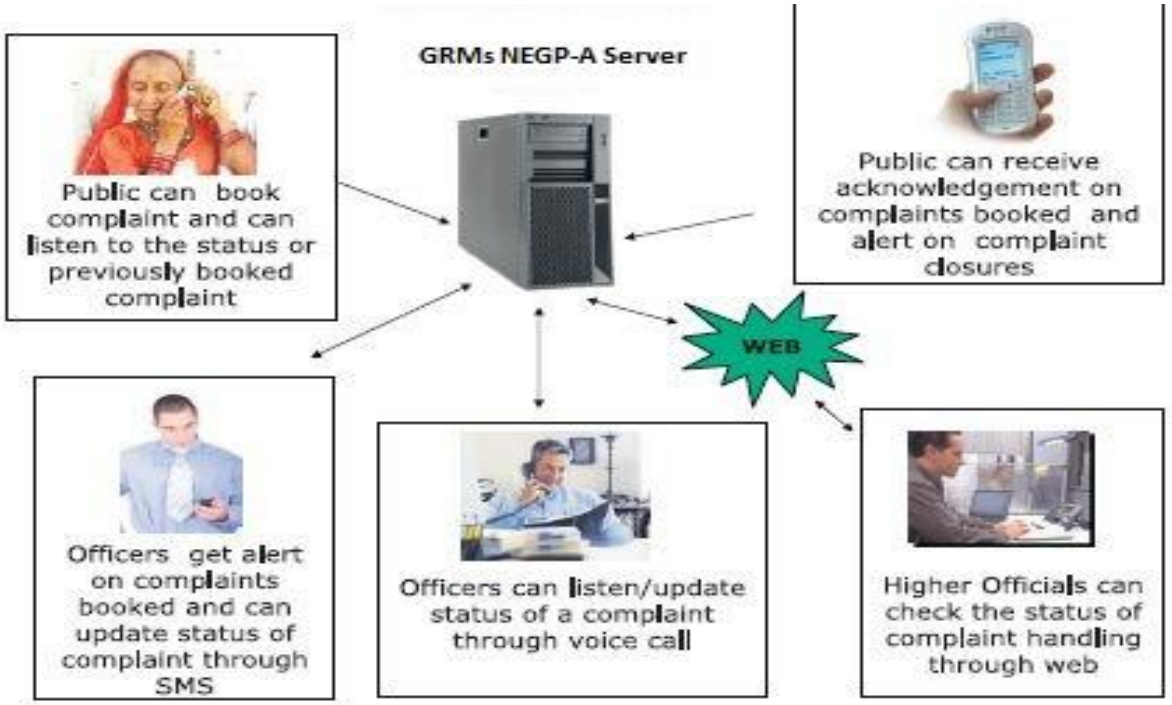
- Provides day to day possible disaster information to fishermen through SMS-voice message in their local language



Facilitate to get information as:

- Effective disease reporting system to develop disease forecasting models
- Develop disease presentation strategies covering pest infestation (pathogen, pest/parasites) treatment reporting of disease
- Aquatic animal disease and trans-boundary disease
- Online insurance claims
- This is one of the components of NADRS projects

6. Grievance Management



Grievance details

Enter Personal Details

* Name of Complainant : Mr

Is the Complainant and Subscriber, the same Person ? Yes No

Do you want to have password? Yes No

(A Password may be opted for maintaining confidentiality of your grievance)

(password must be at least 6 characters and must contain at least one lower case letter, one upper case letter,one digit & one of the following special char-#,@,$,% e.g. Fyfjk3$)

* Address of Complainant

Pincode

Country India * State --SELECT--

Phone Number 91

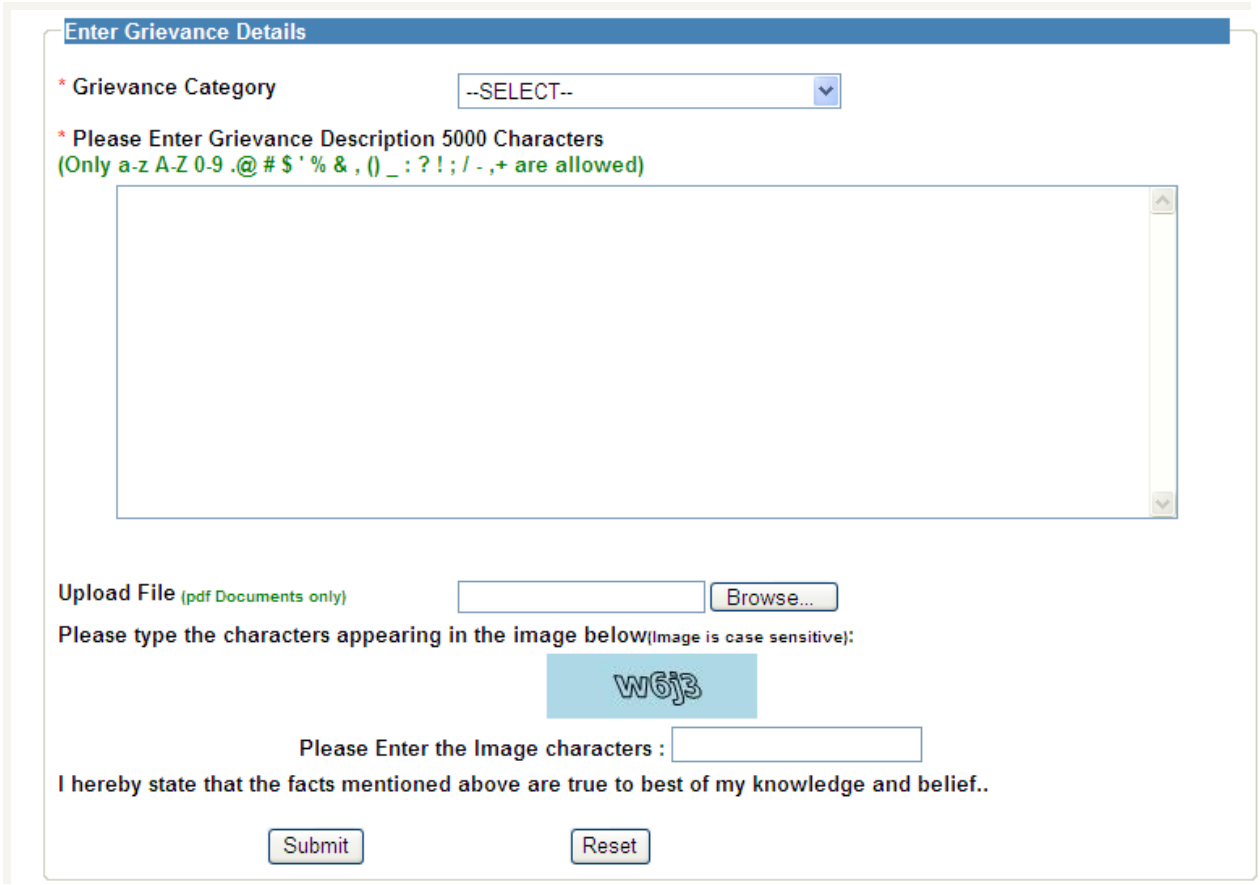
(Please Enter Country Code+STD Code-without '0' prefix+Tel.No) eg : 911123367560

Mobile Number 91

(Please Enter Country Code & Mobile Number) eg : 919890000000

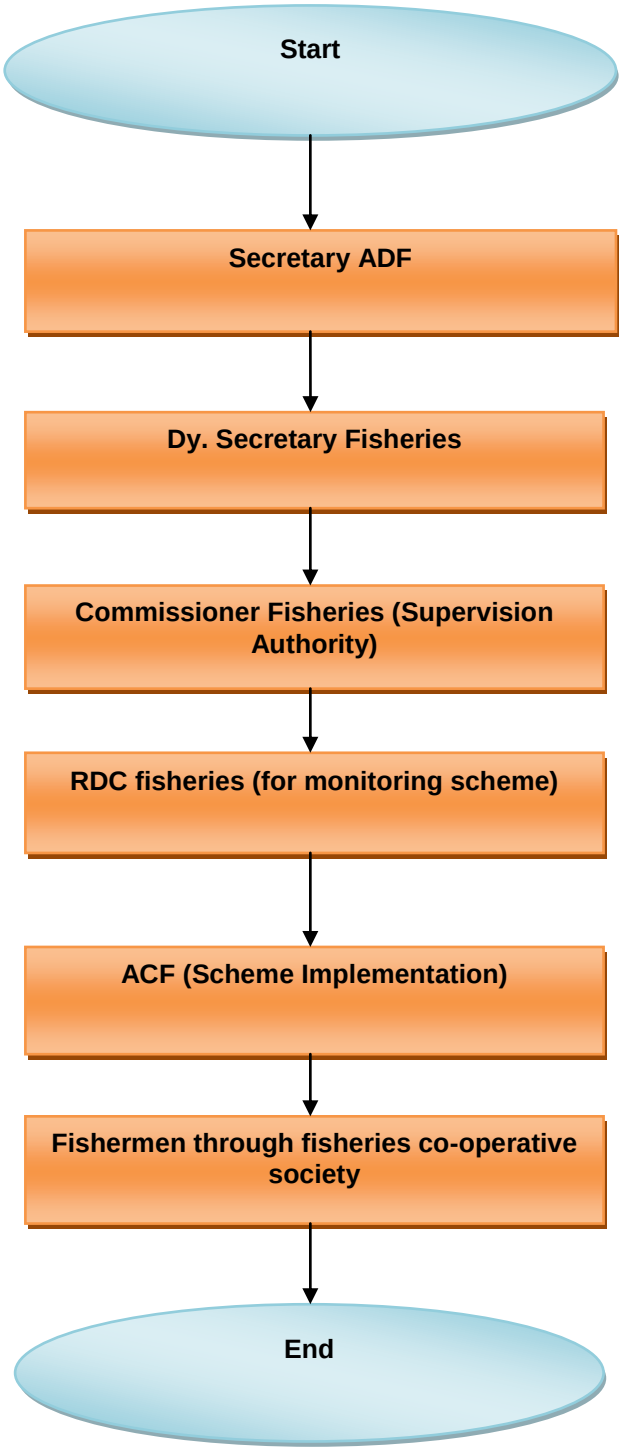
Email Id

-



Sending reminder

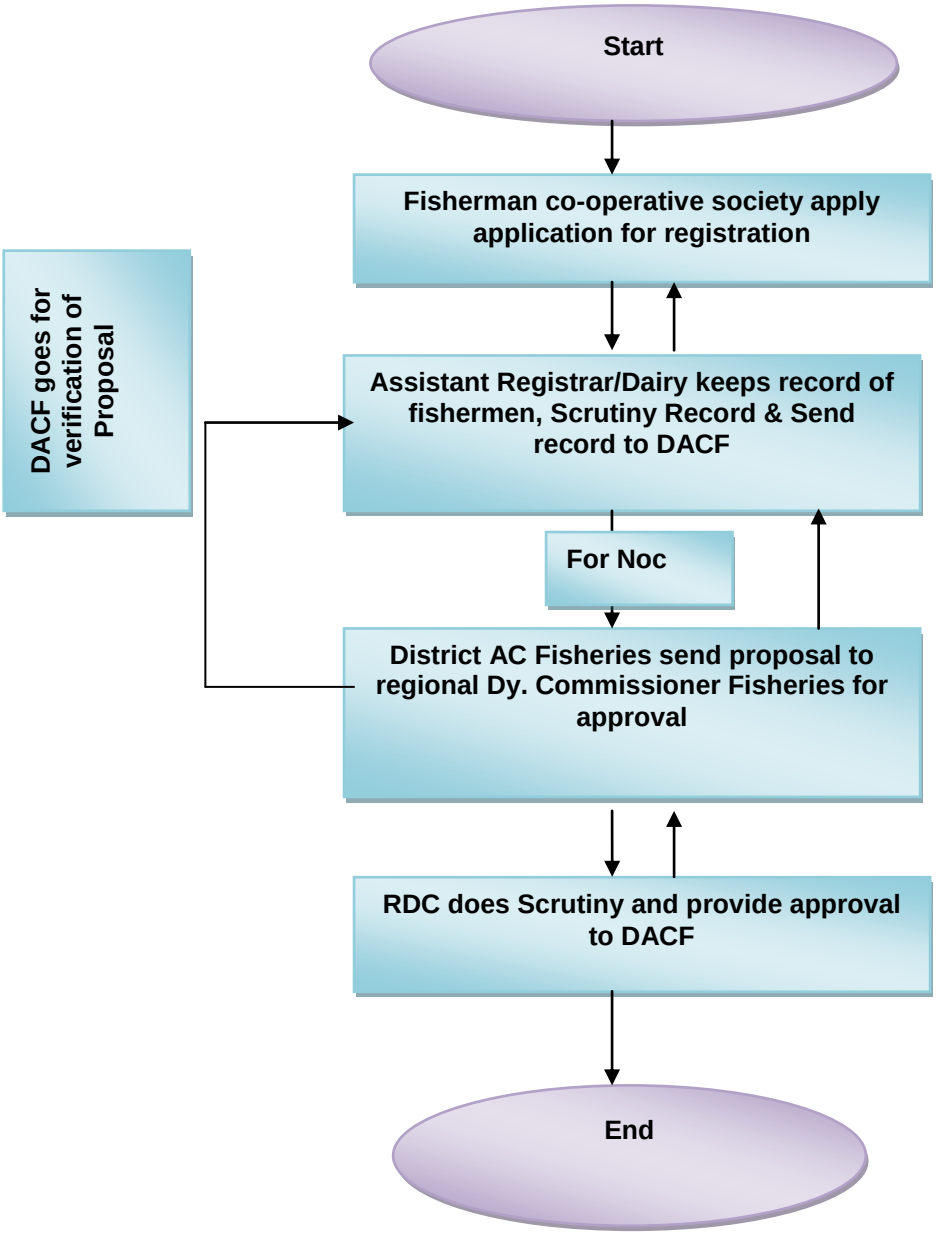
- **Schemes For Fisherman**



Description: Schemes are basically implemented by central as-well- as state government also. The central level scheme is implemented by secretary ADF (Animal husbandry Dairy & Fisheries).from secretary office it passes to Dy. Secretary of fisheries, form here scheme is passes to all states commissioner office (He is the supervision authority for scheme).from commissioner office scheme passes to the Regional Fisheries officer (Monitoring Authority), Regional fisheries officer forwards the scheme to District fisheries development officer (Implementation authority),he implement the scheme

for fishermen co-operative society/fishermen. In this way scheme benefits are implemented for fishermen.

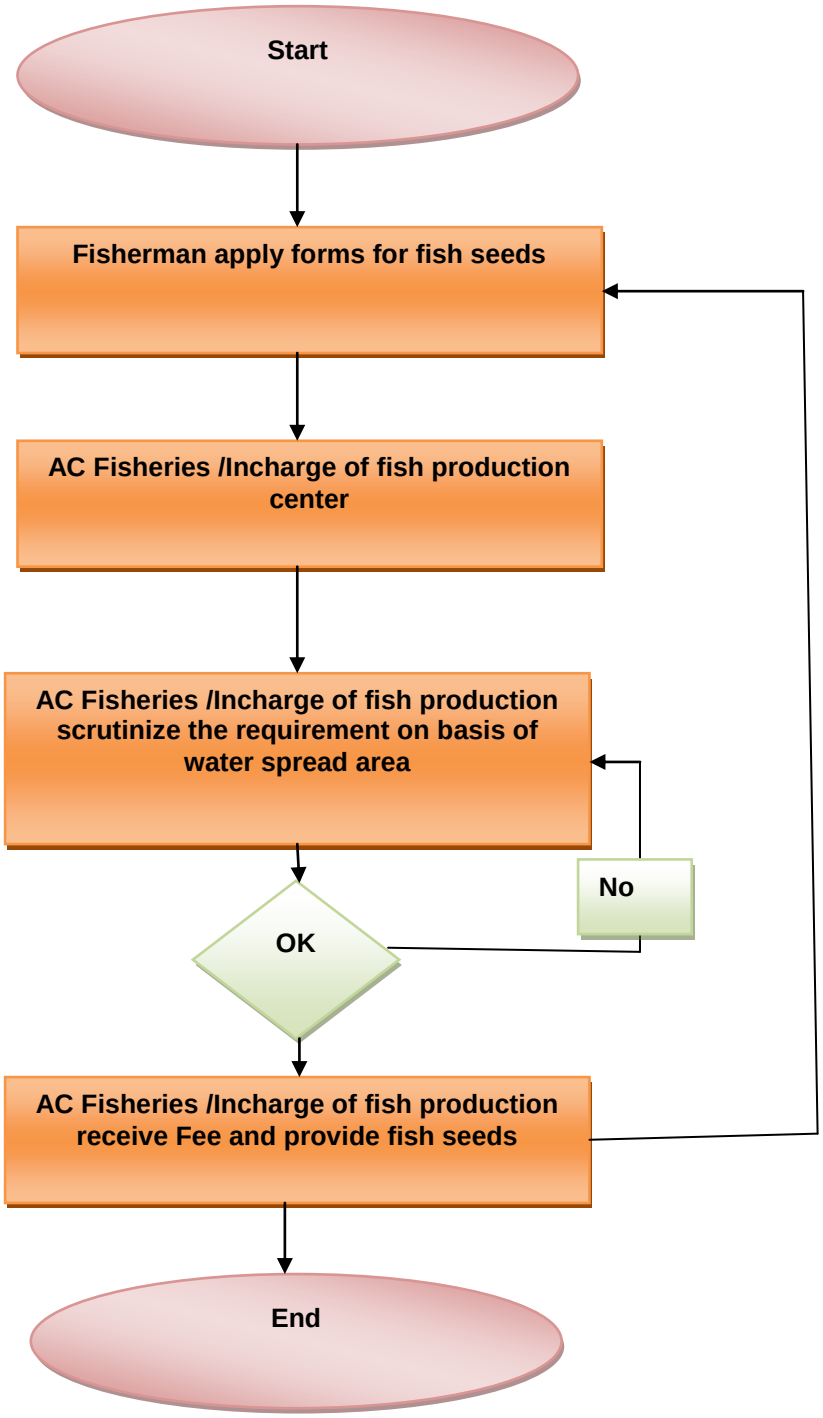
- **Fish production statistics**
- **Automation of fish seed grower & Fisherman registration**



Description: Fisherman/Fishermen co-operative society applies application for registration. Registration form's details are keeping by Assistant Registrar/Dairy; Assistant registrar sends the application forms to District fisheries development officer, he checks the forms details and do verification and sends the file to Regional Dy.Commissioner of fisheries for final approval .RDCF provide the approval and forwards the file back to district fisheries development officer

and district fisheries officer provides the registration certificate to fisherman/fishermen co-operative society.

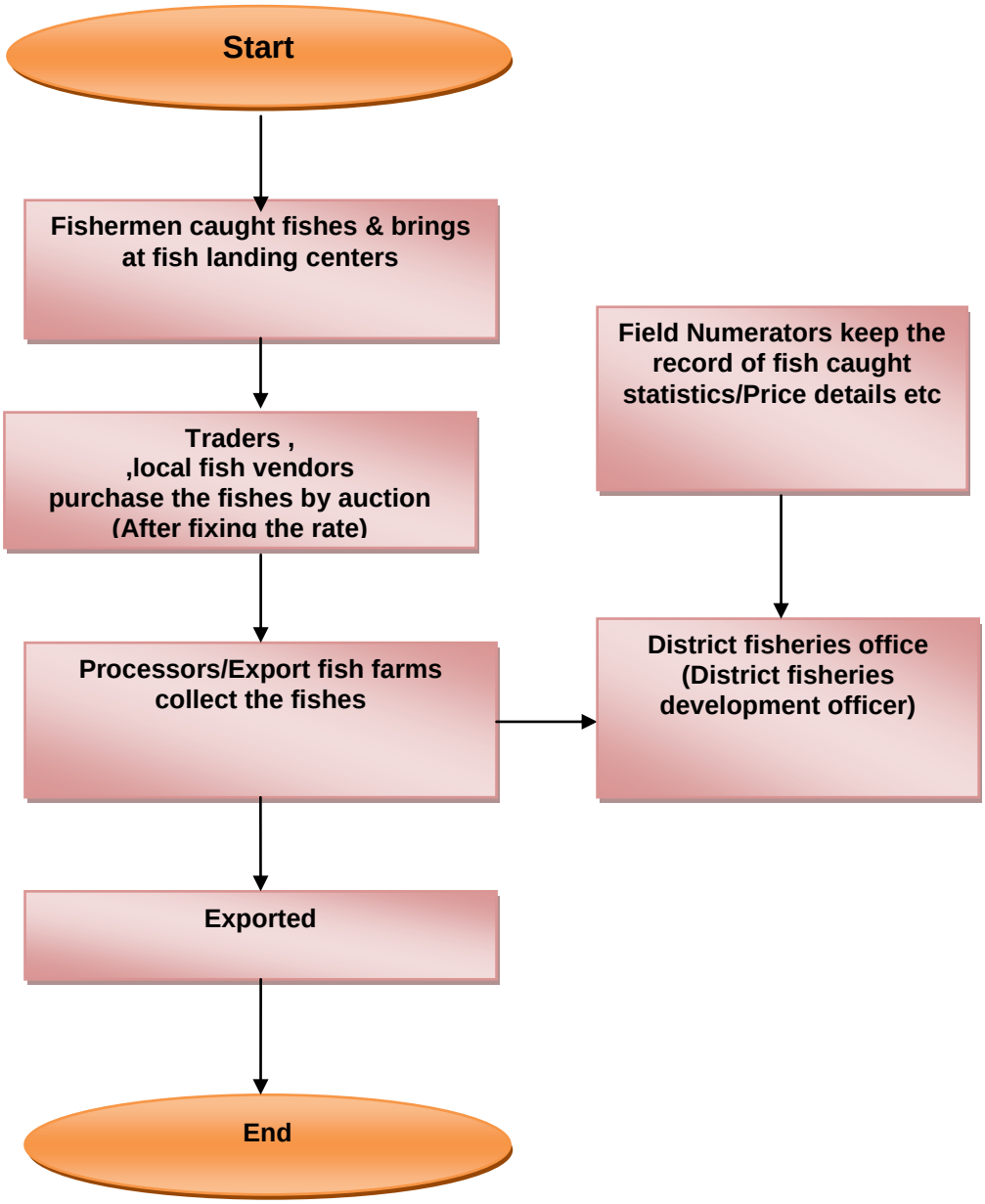
- **Information on Quality Fish Seed**



Description: Fisherman apply form for fish seed to AC fisheries/Incharge of fish production center.AC fisheries/ Incharge of fish production center scrutinize the requirement of the fishermen on the basis of water spread area available with fisherman ,if the application is

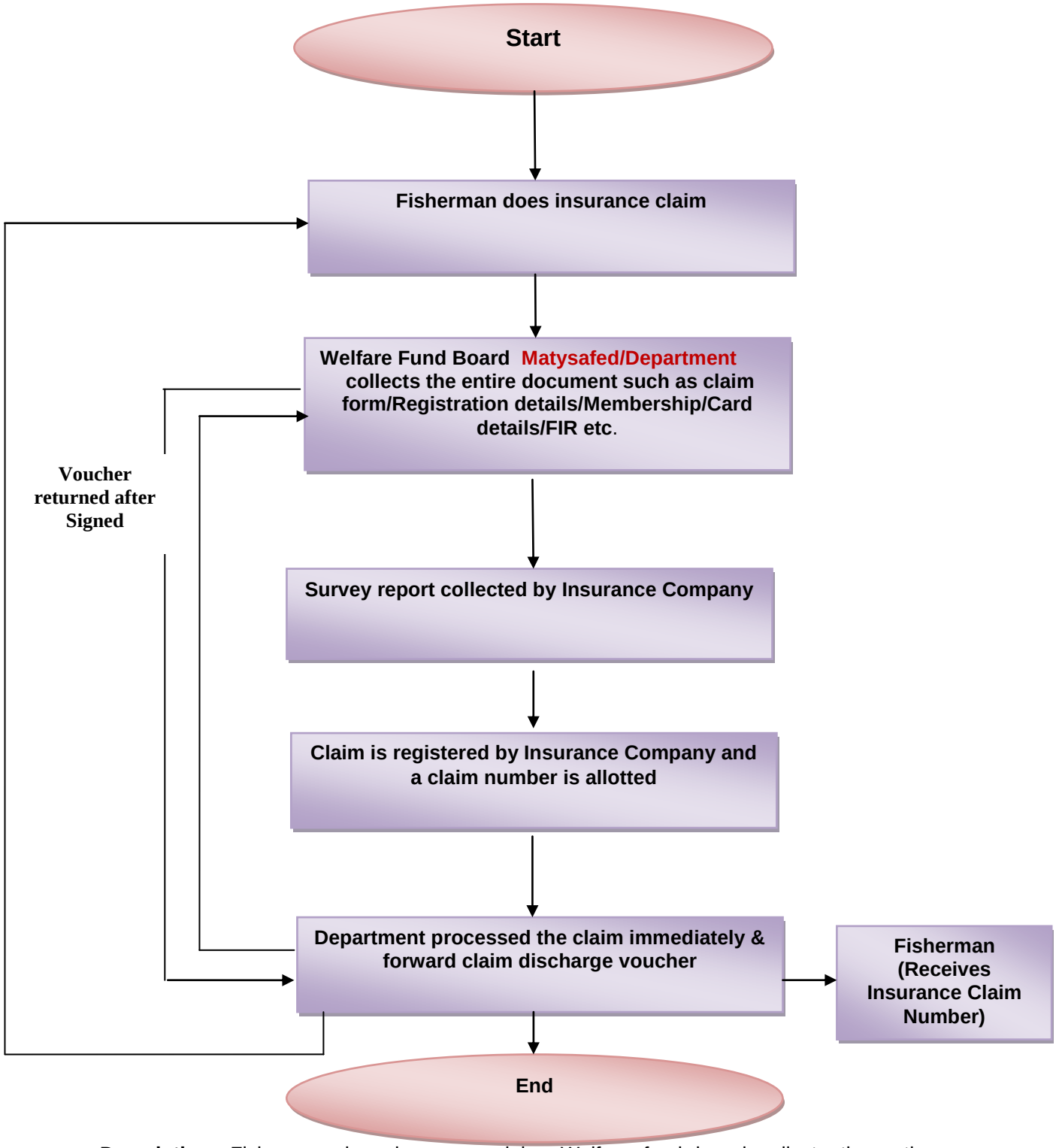
valid then AC fisheries/ Incharge of fish production center receive the fee and provide the fish seed to fisherman.

- **Market Information System**



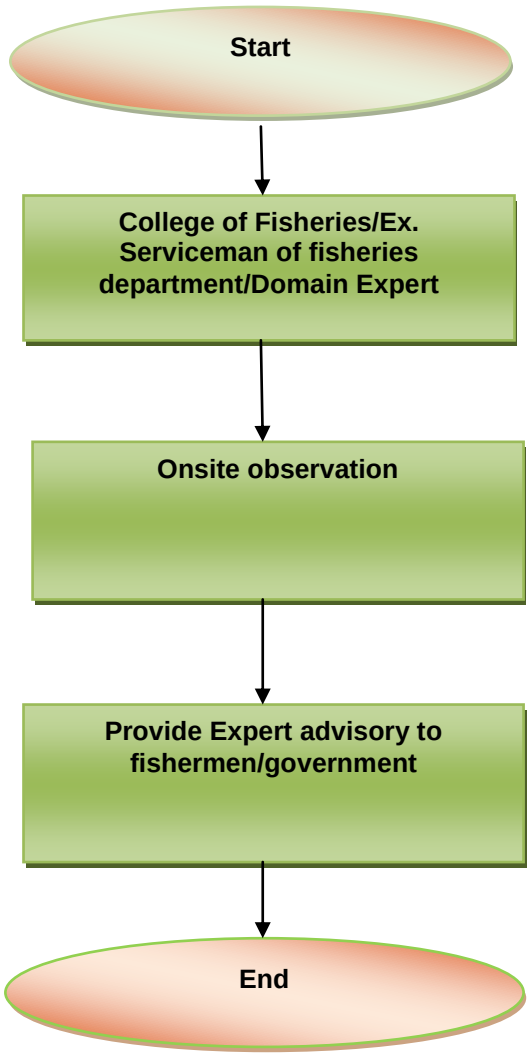
Description: Fishermen caught fishes and bring it at fish landing centers. After fixing the rate, Traders purchase the fishes by auction. From traders, processors/export fish farms collect the fishes and exported them .Meanwhile when traders purchase the fishes by auction then there is field numerators that keep the record of fish caught/purchase/price and provide the information to district fisheries development officer.

- **Insurance claim procedure:**



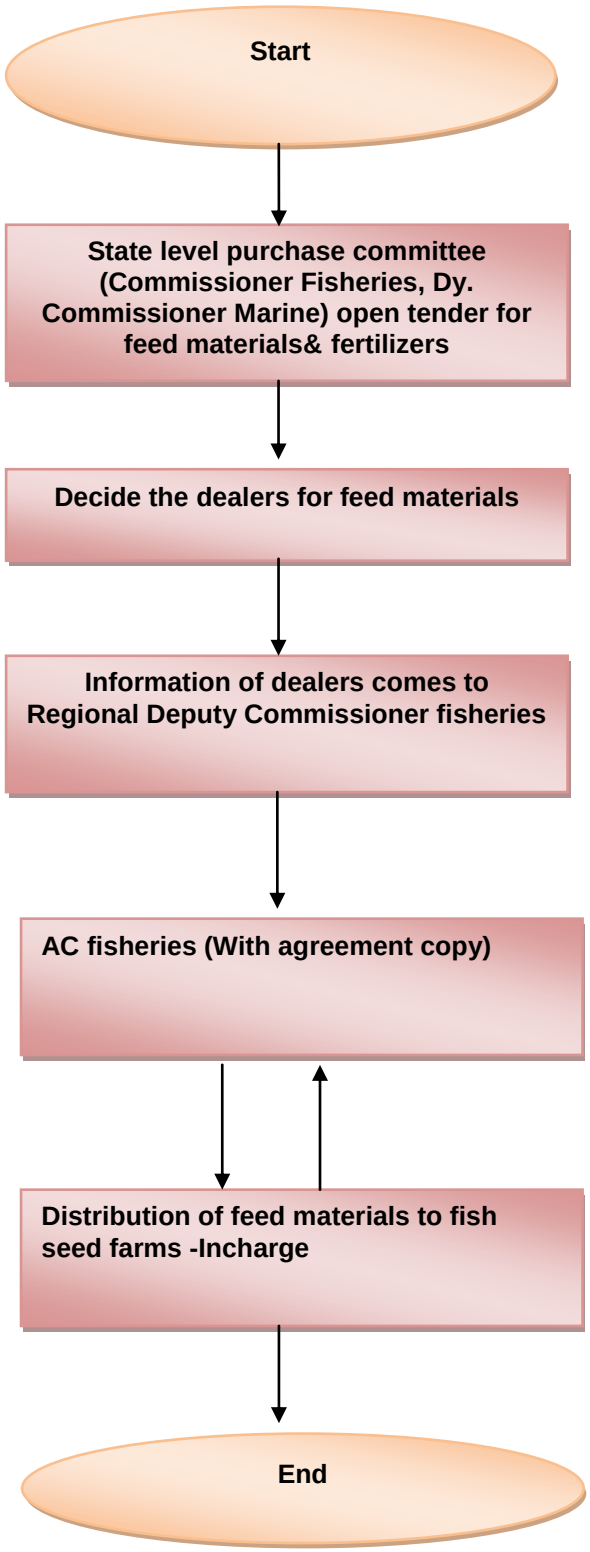
Description: Fisherman does insurance claim. Welfare fund board collects the entire document such as claim forms/registration detail/membership/card detail/fir etc. Insurance companies collects the survey report from welfare fund board .After collecting the report insurance company register the claim and allot a claim number to fisherman for status checking .Insurance company processed the claim immediately and forward claim discharge voucher to welfare fund board/fisherman for sign .when the voucher returned after signed then company forwarded the claim cheque to beneficiary.

- **Expert Advisory**



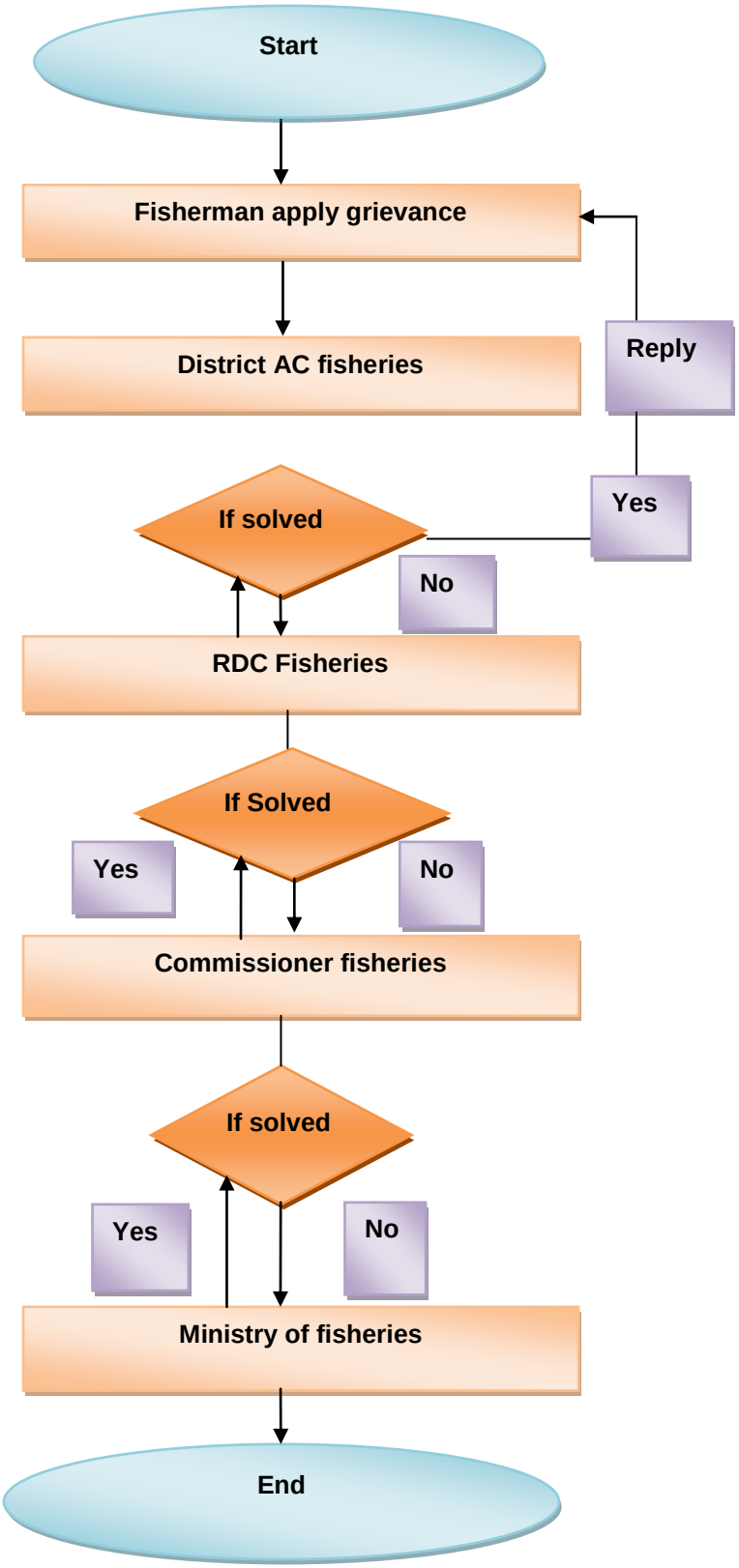
Description: Expert advisory is given by a domain expert/college of fisheries/Ex. Serviceman of fisheries department .whenever the advisory is needed then fisherman/department request for the expert advisory .Expert domain goes for the onsite observation and after observation they provide the expert advisory.

- **Efficient use of feed material**



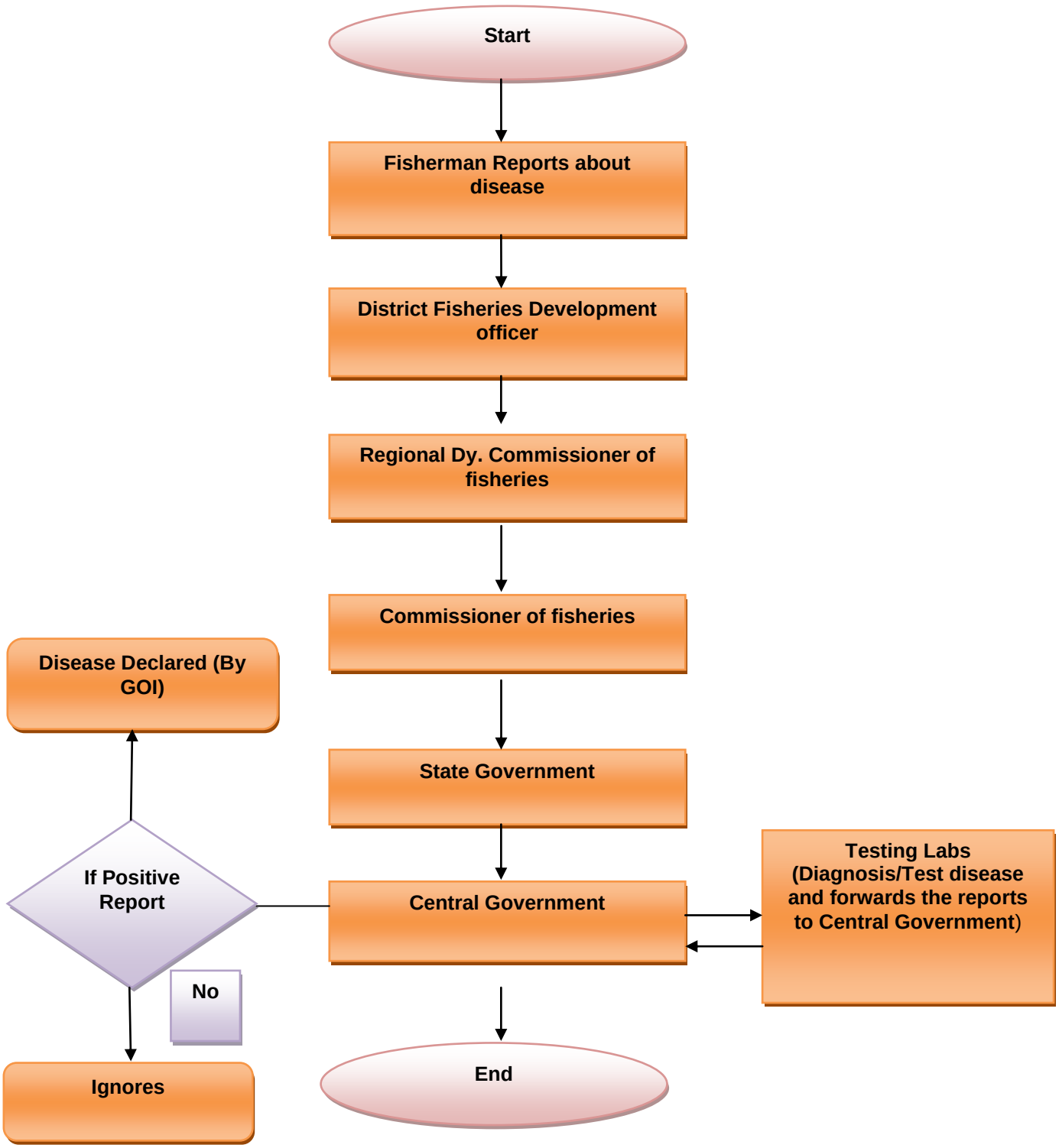
Description: For efficient use of feed materials there is a state level purchase committee .Commissioner of fisheries, Dy. Commissioner Fisheries (Marine), Dy. Commissioner Fisheries (Inland) are the member of state purchase committee and Commissioner of fisheries is the chairman of this committee .All the members decide the dealers for fish seed on the basis of quality and rate .After nomination of the dealers the list is forwarded to Regional Deputy Commissioner of fisheries ,he forwards the list to District AC fisheries with agreement copy and from there fish feed materials are supplied to fish seed farms Incharge.

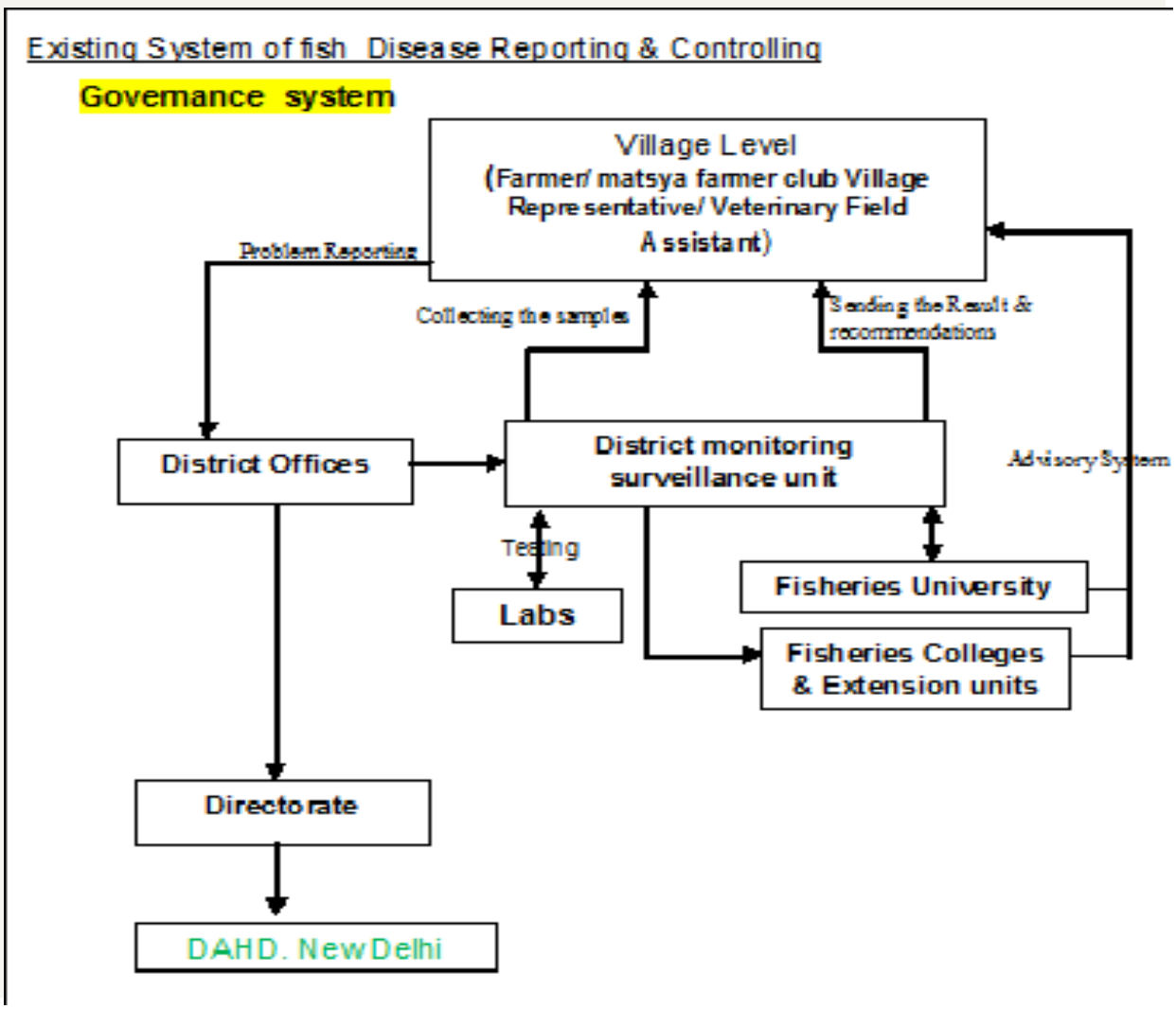
- **ICT based Grievance Redressed Management System**



Description: Fisherman/Fishermen co-operative society submits their grievances to district AC fisheries .If the grievance is related to him then he solve the grievance and provide the solution to fisherman .If the grievance is related to upper level then Ac fisheries forwards the grievance to Regional Deputy Commissioner of fisheries ,he looks into the matter if it is related to him and at his level then he provides the solution of that grievance otherwise he forwards the grievance to his upper level officer Commissioner of fisheries ,he also looks into the grievance and provide the solution to fisherman. If the grievance is related to upper level then Commissioner of fisheries forwards the grievance to Ministry of fisheries

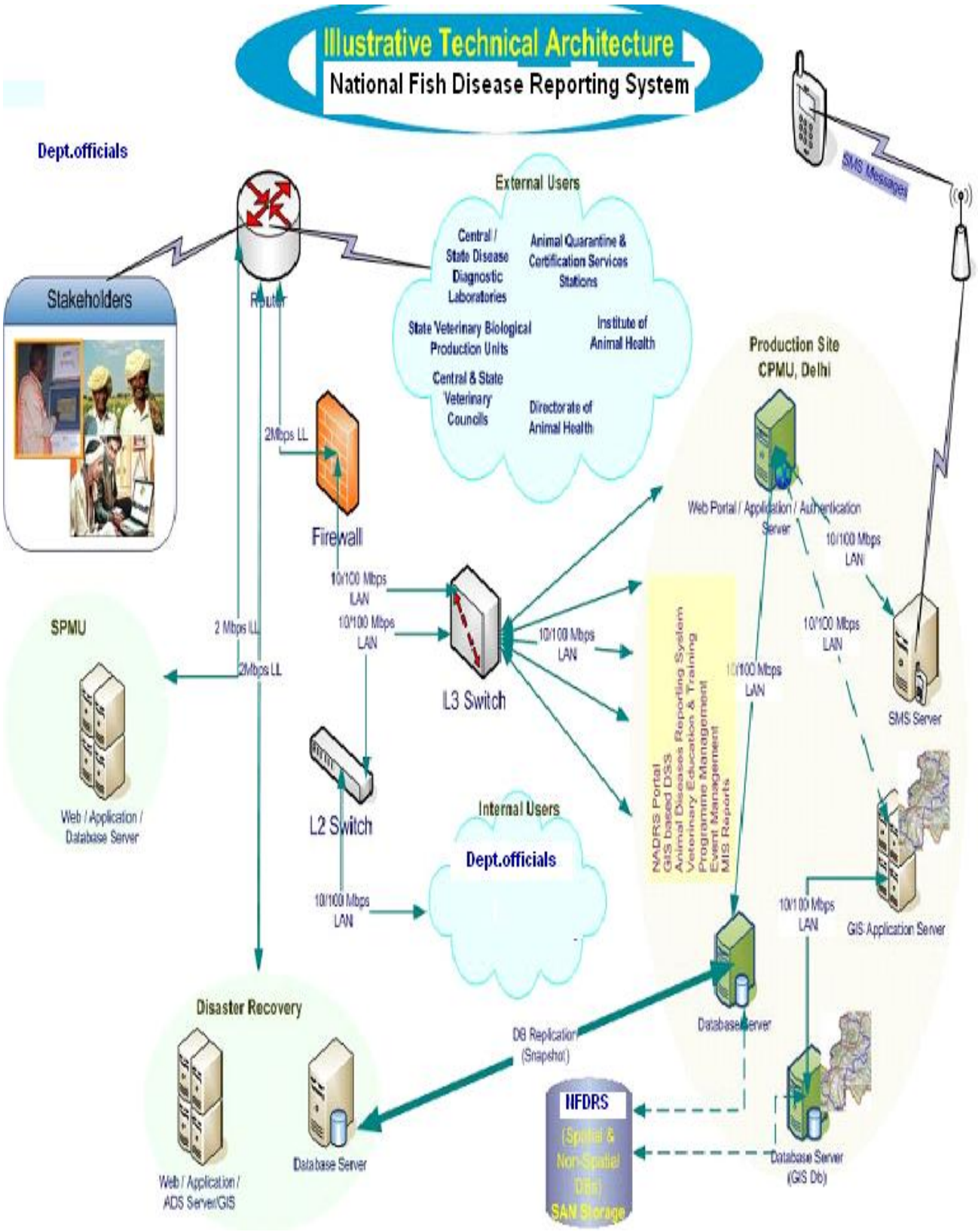
- **Disease Information System central System**





Description: Mainly fish disease is notices in brackish water .When any abnormal situation comes

Or any symptoms notices by fisherman, he reports to the District fisheries development officer. DFDO then goes for onsite observation and sends the samples and reports to the Regional Dy. Commissioner of fisheries. Regional Dy. Commissioner of fisheries forwards the reports to Commissioner of fisheries and Commissioner of fisheries forwards the reports to State government .Now State government forwards the reports to Central government (Concerned Department).Concerned Department sends the samples to testing Labs for reporting .After testing disease testing Labs provide their report to Concerned department .If the report is positive then GOI declared the disease otherwise ignores it.


Illustrative Technical Architecture
National Fish Disease Reporting System
Dept.officials
SMS Messages
External Users
Central / State Disease Diagnostic Laboratories
Animal Quarantine & Certification Services Stations
State Veterinary Biological Production Units
Institute of Animal Health
Central & State Veterinary Councils
Directorate of Animal Health
Stakeholders
Router
2Mbps LL
Firewall
Production Site
CPMU, Delhi
Web Portal / Application / Authentication Server
10/100 Mbps LAN
SMS Server
SPMU
2 Mbps LL
2Mbps LL
10/100 Mbps LAN
L3 Switch
L2 Switch
Web / Application / Database Server
Internal Users
Dept.officials
NADRS Portal
GIS based DSS
Animal Diseases Reporting System
Veterinary Education & Training
Programme Management
Event Management
MIS Reports
GIS Application Server
Database Server
Disaster Recovery
DB Replication (Snapshot)
Database Server
Web / Application / ADS Server/GIS
HFDRS
(Spatial & Non-Spatial Data)
SAN Storage
Database Server (GIS Db)

1.3.1 Disease Monitoring System

A knowledge based portal cum web based online application system (NFDRS) will be developed with networking of all labs , fisheries colleges, universities , extension units, department offices and other related agencies.

The proposed system will have the following functionalities for the effective monitoring of disease diagnosis system.

1.3.2 e-governance system

1. **Creation of data base for**
   - Type of fish disease, symptoms, treatment , species will be affected
   - pathogens caused for each fish disease
   - root cause for each disease
   - symptoms of each disease parameters
     – body part (gills, eyes, belly anus)
     - Type of symptoms (spots, blotches, boils, ulcer etc)
     - color (white, red, dark , others)
     - position (head, trunk, tail, dorsal, ventral, dorsal fin, ventral fin etc)
   - FAQ
   - Registration of all water bodies
   - Availability of fish seeds status of each water bodies
   - Testing of samples and publish the result(with or without demand)
   - Issuing QC&A certificates
   - Monitoring of water bodies for healthy aspect
   - E-alert , email , epost , sms , portal facility for push/ pull information
   - Training details
   - Disease reporting , controlling and treatment system
   - Tele system
   - Online insurance claim for the farmers / hatchery units

1.3.3 Product functions

1. Disease profile
   a. Type of disease
      (Infectious, non infectious)
   b. Category of disease
      - Bacterial, Bacterial,Viral,Fungal,Parasitic,protozoan,worm ,Crustacean
      - Nutritional, Environmental, Genetically,Contaminants
   c. Disease details
      a. Type of disease
      b. Category
      c. Name of the disease
      d. Common name
      e. Name of the species affected
      f. Name of the host
      g. Common Symptoms

h. root cause for each disease

i. symptoms of each disease parameters

- body part (gills, eyes, belly anus)
- Type of symptoms (spots, blotches, boils, ulcer etc)
- color (white, red, dark , others)
- position (head, trunk, tail, dorsal, ventral, dorsal fin, ventral fin etc)

2. water quality parameters (color, Temperatue,pH,O2,do,.co2,no2,no3)
3. ideal range for each water quality parameters
4. soil parameters (color texture , water holding capacity etc)
5. ideal range for each soil parameters
6. Samples preserved method (fresh, frozen, transport medium)

7. Reporting system
    - Farmer id
    - Name of the farmer/ club
    - Address
    - Registration Number of water body (link to water body (linked to registration of water bodies system)
    - Reporting date
    - Symptoms identified
    - Identified & diagnosed by whom
    - Damage caused in terms of area, amount
    - Preventive measures by domain experts
    - Area / location treated
    - Scanned image (uploading)
    - Inspection details
        - Species of fish; age; average size; disease suspected
        - Water quality including colour; PH; temperature; dissolved oxygen; ammonia
        - Type of system or production facility e.g. pond; tank; raceway
        - Stocking density
        - Date mortality began and mortality rate
        - Clinical signs e.g. poor feeding; abnormal swimming; "flashing"; sudden death

8. Collection of samples
    - Registration no. of water body
    - Samples collected by whom
    - Date of collection
    - No.of samples collected

- Sample id (system will generate ID for each samples)
- Date of result published
- No. of samples rejected
- Test results
- Recommendation
- Treatment methodology
- Insurance claim (link to online insurance claim system)
- Fee collected

9. Testing of samples
    - Registration no. of water body
    - Samples tag id
    - Name of the lab
    - Type of test (*Antibacterial Gr A, PCR)*
    - Examination type - (virology, bacteriology, parasitology, histopathaology)
    - Treatment methodology
    - Date of result published
    - Recommendation
    - Test results
        - Type of pathogen, intensity , water quality etc
        - Treatment whether short trem therapy or long term therapy
        - Treatment methodology
            - Apply of medicine, vaccine , drugs, pesticides etc
        - Status of water body (based on the result system will update the water bodies profile as infected, not infected , waiting for treatment, under treatment etc)

10. QCA
    - Registration no. of water body
    - Test result reference number
    - Date of Issuing certificate
    - Issued by whom

11. Issuing phyto sanitary certificate (linked to pqis system at the entry of export/ import zones
12. CASE HISTOY /HISTORY OF THE STOCK

    1. Whether pre or post history
    2. Water body details
        a. Type of the water body

b. Name of the water body
c. Place /locality
    1. Location – state
    2. District
    3. Local body type
    4. Name of the local body
d. Size of the water body

3. Case number (system generated)
4. Date with time
5. Name of the interviewed officers (user id)
6. Case details
    a. Maintenance details
        1. No.of species stocked
        2. Density
        3. Feeding
        4. Fertilizer
        5. Therapeutic/prophylaxis
        6. Water quality
    b. Conditions/ symptoms
    c. progress of disease
        1. Observed stress condition
        2. Period of severity
        3. Earlier observation
        4. Eventual causes
7. Remarks
8. Name of the approval officer

13. HEALTH CONDITION THROUGH REFLEX ACTIONS

1. Water body details
    a. Type of the water body (pond, tank etc)
    b. Name of the water body with id no
    c. Place /locality
        1. Location – state
        2. District
        3. Local body type
        4. Name of the local body
    d. Size of the water body (if it is registered, system will display the values)

2. Name of the species
3. **Case number (system generated)
4. Date with time
5. Name of the interviewed officers (user id)
6. Total no.of species studied
7. No.of escape reflex sick
8. No.of escape reflex healthy
9. No.of defensive reflex sick
10. No.of defensive reflex healthy
11. No.of tail reflex sick
12. No.of tail reflex healthy
13. No.of ocular reflex sick
14. No.of ocular reflex healthy
15. Water quality parameters (system will display the parameters and the details to be entered against each patrameter)
16. Remarks
17. Name of the approval officer
18. Date and time of approval

2. Samples collected

a) Date of collection
b) Name of the officer
c) Name of the location
d) Type of samples collected (multi values-grid)
   - Head, full fish, intestine, head, gill, lever etc ..
e) Type wise no.of samples collected
f) Type of tests conducted(pathology/parasitology)
g) Name of the fish
h) Name of the species
i) Age of the fish
j) Analytical result
k) History
   I. Clinical sign parameters wise
   II. Maintenance parameters wise
   III. Temperature
   IV. Environment parameters wise
   V. Water quality parameters wise
   VI. Stress level
   VII. Therapy

VIII. Neroposy findings
IX. Lesion details
X. Images upload

l) Samples preserved method (fresh, frozen, transport medium)

XI. Clinical sign parameters wise

3. DISAGNOSTIC DETAILS

1. Date
2. Case no.
3. Name of the officer
4. Name of the officer
5. Date and time
6. History of Water body details
   a.Water body details
   b.Type of the water body
   c.Name of the water body
   d.Place /locality
   - Location – state
   - District
   - Local body type
   - Name of the local body
7. Size of the water body
8. Name of the species
9. No.of fishes
10. No.of species affected
11. Average affected fish size cm
12. Age of affected fish
13. Morbidity started
14. Morbidity ended
15. Mortality started
16. Mortality ended
17. How long system has been set up
18. Type of life support present
19. When new items introduced
20. Type of Irrigation sources
21. Water appearance (cloudy /coloured)
22. Air temperature
23. Water temperature
24. Behavioral changes

25. Respiratory changes (normal, faster, slower)
26. Appetite (normal, less, more)
27. Other clinical signs
28. History of routine maintenance

29. EXTERNAL/ INTERNAL OBSERVATION SHEET FOR FISH PARASITES
    a.Name of the PARASITE GROUPS/ SPECIES
    - Platyhelminthis group , Nematode group , Tape worm , Acanthocephalus
    -Stage of parasities (Egg/cyst/larvae/juvenile/ Adult (male/female)
    - Count of parasites
30. BIOPSY OBSERVATION
    a.type of Magnification (20x,100x,400x)
    b. Parasites FOUND
    c. CUTANEOUS SMEARS
    d. FIN BIOPSY
    e. GILL BIOPSY
31. Recommendation
32. Remarks
33. Result of treatment

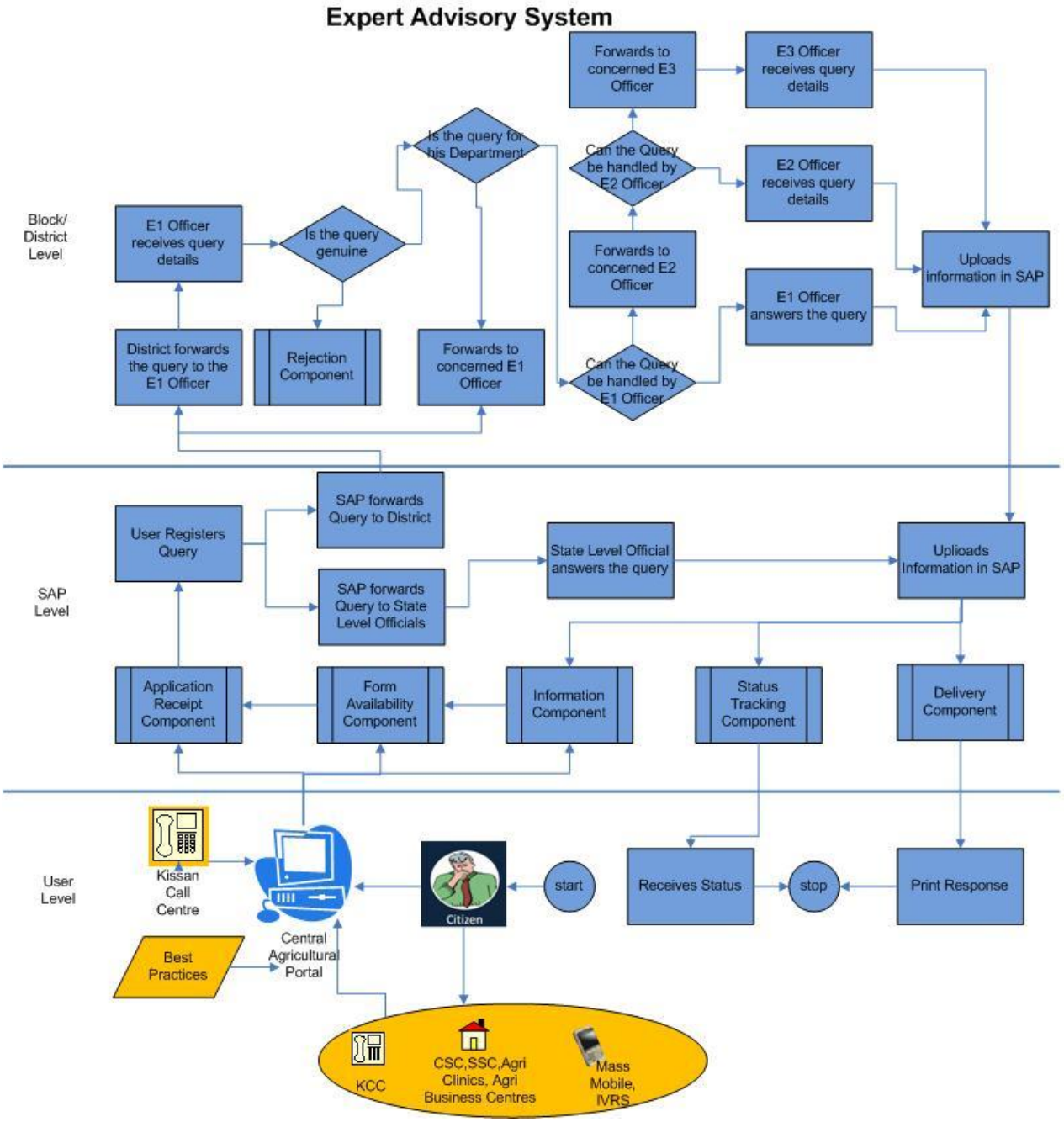
14. online diagnosis using knowledge based information system (KIS)

- Authenticated farmers will login to the web based expert system and enter the disease symptoms and their treatment cases . Once entered system will generate reference id for further query. System will trigger the details to the expert advisory unit , who in turn will send reply or respond to their query . Based on the trigged query, advisory unit will do sample collection and do the test analysis. Based on that result analysis, system will trigger the information to farmers either by e-mail, sms, epost etc.

15. Tele diagnosis (KIS) – knowledge based information access system

Fish disease diagnosis is a complicated process and requires high level of expertise, an expert system for fish disease diagnosis is considered as an effective tool to help fish farmers. However, many farmers have no computers and are not able to access the Internet. Telephone and mobile uses increase rapidly, so, the provision of call centre service appears as a sound alternative support channel for farmer to acquire counseling and support.

fish farmer, he or she can describes the symptoms of their fishes' disease to the call centre agent by telephone, and the call center agent inputs all these symptoms into the Fish-Expert interface, and tell the fish farmer the diagnosis result based on the web-based expert system if there is a same disease case in the case base, meantime, this case will be input in the knowledge acquisition system as an successful case. the agent also can ask some questions to the fish farmer based on the web-based expert system, which can add some useful information for fish disease diagnosis. For computer-owned fish farmer, he/she can login the web-based expert system directly, and use to the Fish-Expert to solve his or her question.



Process of the Expert Advisory System

- User logs into SAP and fills-up form in Query Management Application
- Module generates a unique reference number and intimates user about successful registration of query. It forwards query to the State Level.
- From the State Level the query is redirected to the Level one office.
- Level one office receives query details and checks the genuineness of the query
- If query is not genuine, he will reject the request and upload information

- If query is genuine, he will check for relevance of the query and if query is not for his department, he forwards query to concerned department's E1 officer
- If E1 officer can resolve the query, he does so and uploads information on SAP. If he can't resolve the query, he forwards query to concerned E2 office.
- If E2 officer can resolve the query, he does so and uploads information on SAP. If he can't resolve the query, he forwards query to concerned E3 officer.
- E3 officer resolves the query and uploads the information on SAP.
- User enquires about the status of query handling by entering reference number in the "status tracking" module of the application.
- User views answers to his/her queries by providing his unique reference number

<table>
<tr><td rowspan="9">Providing information on fishery inputs</td><td>Best Practices</td><td>G2C</td><td>Grievance Management</td><td>G2C</td><td>Fish Seed Grower Registration</td><td>G2C</td></tr>
<tr><td>Package of Practices</td><td>G2C</td><td>Expert Advisory</td><td>G2C</td><td rowspan="3">Vessel Registration</td><td rowspan="3">G2B</td></tr>
<tr><td>Dealer Network</td><td>G2C</td><td colspan="2" rowspan="6"></td></tr>
<tr><td>Market Information</td><td>G2C, G2B</td></tr>
<tr><td>Fishermen Safety</td><td>G2C</td><td rowspan="4"></td><td rowspan="4"></td></tr>
<tr><td>Quality Control & Assurance</td><td>G2C</td></tr>
<tr><td>Fish Production Statistics</td><td>G2C, G2B, G2G</td></tr>
</table>

1.4 Definitions, acronyms, and abbreviations

Term	Description / Explanation
ADDL	Animal Disease Diagnostic Laboratory
ADAK	Agency for Development of Aquaculture, Kerala
ADIU	Animal Disease Intelligence Unit
FO	Fisheries Officer
A-MMP	Agriculture Sector as a Mission Mode Project
AQCS	Animal Quarantine and Certification Services
ADAK	Agency for Development of Aquaculture, Kerala
BFDAs	Brackish water Fish Farmer Development Agencies
BQ	Black Quarter
DAC	Department Of Agriculture and Cooperation
DAHO	District Animal Husbandry Officer
DD	Deputy Director
FFDA	Fish Farmer Development Agencies
IVRS	Interactive Voice Response System
KCC	Kisan Call Centre
KVK	Krishi Vigyan Kendra
NeGP	National E-Governance Program
NGO	Non-Government Organizations
NIC	National Informatics Centre
NIFPHTT	National Institute of Fisheries Post Harvest Technology and Training
SAF	Society for Assistance to Fisherwoman
SCC	State Call Centre
SDD	Software Design Document
SMS	Short Message Service
SRS	Software Requirement Specification
VO	Veterinary Officer
WHO	World Health Organization

1.5 References

References from Different States-

S. No.	State	Officials
1	Maharashtra	1) Mr. V.T. Savant (Dy. Commissioner fisheries,Pune) 2) Mr. G.N. Nadgauda(Fisheries Development officer,Pune) 3) Mr. U.M. Sawant(Fisheries development officer Mumbai 4) Mr. V.V. Naik(Dy. Director of fisheries(Brackish Water, Mumbai) 5) Dr. S.S. Kulkarni(Dy.Commissioner Inland/Regional Dy. Commissioner Mumbai region Mumbai) 6) Mr. Shrish Gatade(IT Hub core committee member,Bandra) 7) Mrs Hruta A. Dixit(IT Hub core committee member,Bandra) 8) Mr. Uday A. Deshmukh(Dy. Director Agriculture Projects ,Commissionerate of Agriculture,Maharashtra,Pune-5)
2	Assam	1) Mr.Purkayastha(CNO) 2) Mr. Pranjal Sharma(DFDO District Kamaru) 3) Mr. U.S. Prashad(Market Manager FISCOFED) 4) Mr. Sanjay Sharma(Seed Stock Manager)
3	Madhya Pradesh	1) Sh. U.S Tomar 2) Sh. S.K. Srivastava 3) Sh. CMS Thakur 4) Sh. H.K. Khare 5) Sh. A.K. Srivastava 6) Sh. Hiralal Verma 7) Sh.Ajay Kelkar 8) Sh. Padam Thakur
4	Kerala	1) Smt. Kasthuri , Technical Director , NIC and 2) Mr E.K Unnikrishnan (Principal Systems Analyst, NIC) 3) Smt. Sheela R Deputy Director. Inland Fisheries 4) Smt. Anithakumari Deputy Director Marine

		Fisheries 5) Mr. Jayachandran Deputy Director PME 6) Mr. Rajendran Matsyakeralam cell.
5	Himachal Pradesh	1) Mr.Puran Gahalot(NIC) 2) Sh. Gurucharan Singh(Joint director of fisheries)
6	Karnataka	1) Mr. Viswanath (Assistant Director- Fisheries) 2) Mr. Kotal(NIC)
7	Jharkhand	Director (Fisheries) Deptt. Of fisheries Ranchi, Jharkhand
8	Central	Mrs Pratibha Lokhande Mrs Shweta Malhotra Mr Naveen Kumar

2. OVERVIEW

The document concentrates on one entity of the service section wise. The detailing of the entity will be in the order seed, pesticide and fertilizer respectively if the module is not common for all entity.

2.1 Gap ANALYSIS (State-Wise)

2.1.1 Kerala

Service	Existing System	Proposed System
Registration- Inland fisheries	Information Available but no online process	A online system registration
Licensing	Information available but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No alert system	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and mailed to the respective offices. And the control measures are taken after lot of damage.	
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

2.1.2 Assam

Service	Existing System	Proposed System
Registration - Inland fisheries	Manual registration process is available but no online process	A online registration system
Licensing	License is provided manually there is no online process	A online system for issuing Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No alert system	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer/Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers ,Ex-Servicemen of fisheries department	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and manually send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

2.1.3 Madhya Pradesh

Service	Existing System	Proposed System
Registration - Inland fisheries	Manual process is available but no online process	A online system registration
Licensing	License is issued manually but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No alert system in Inland fisheries	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers, Ex. Servicemen of fisheries department	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Samadhan online/Jansunwai	

2.1.4 Maharashtra

Service	Existing System	Proposed System
Registration - Inland fisheries	Manual Registration available but no online process	A online Registration System
Licensing	Manual process but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	With the help of All India radio Metrology	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers,Ex.Serviceman of fisheries department	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

2.1.5 Himachal Pradesh

Service	Existing System	Proposed System
Registration - Inland fisheries	Manual registration but no online process	A online registration system
Licensing	License issued manually but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No alert system	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

2.1.6 Jharkhand

Service	Existing System	Proposed System
Registration - Inland fisheries	Information Available but no online process	A online system registration
Licensing	Information available but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No alert system	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

2.1.7 Karnataka

Service	Existing System	Proposed System
Registration-Inland fisheries	Manual Registration available but no online process	A online Registration System
Licensing	Manual process but no online process	A online system for Licensing
Status Tracking	Manual (applicant has to visit or call respective office)	Applicant can check in the portal and send SMS
Alert system	No Alert System	SMS will be sent to applicant's registered mobile, e-mail etc
Testing (fish seeds, water quality)	Information available through field offices	All information will be available in portal (form to be filled, sample to be tagged etc)
Manufacturer / Dealer information	Varied sources and not complete	All information will be available at single point (consolidated and classified)
Prices	Information available through field offices	Manufacturer / Dealers can post prices through their login.
Expert Advisory	Fisheries colleges, universities, field extension officers,Ex.Serviceman of fisheries department	Will be provided in the portal
Stock	Information available through field offices	Manufacturer / Dealers can post their stock through their login
Proactive & Forewarning system	Any identified problems are documented in detail and send to the respective offices. And the control measures are taken after lot of damage.	A online information system for proactive & forewarning
Training	Training schedule is provided manually to fishermen	Online schedule System/SMS will be sent to applicant's registered mobile, e-mail etc
Fish Disease	Information regarding fish disease is documented in detail and send to respective offices only because of sensitive information	A online fish disease reporting system
Grievance Management	Manual Solution is provided for grievances	A online grievance management system

3. SALIENT FEATURES AND BENEFITS OF PROPOSED PORTAL

- Online application entry, verification, sanctioning and approval of applications related to any service 9 oriented details by the authorized officers.
- No need of physical movement of filled up applications. Data entry can be made at any level wherever Internet connectivity is provided and the original application can be scanned and uploaded for verification by higher officials.
- Software also supports local language Unicode font. Allows users to use the software in their local language.
- Review can be conducted at any level
- Search of application status
- Information about any dealers networked under this system
- Avoid delay in issuing Registration & License Certificate,
- Facility to check authenticity of the certificate.
- Generation of various reports at different level - dealer wise, block wise district wise, state wise summary reports)
- Provides G2C,G2B, G2G and G2E services
- To bring transparency in the department and reduce response time to the user as well as internal department officials.
- Facility for online expert advisory
- Features for online grievance management
- Facility for online transaction based daily report of fish statistics/market details etc

3.1 Work Flow Based

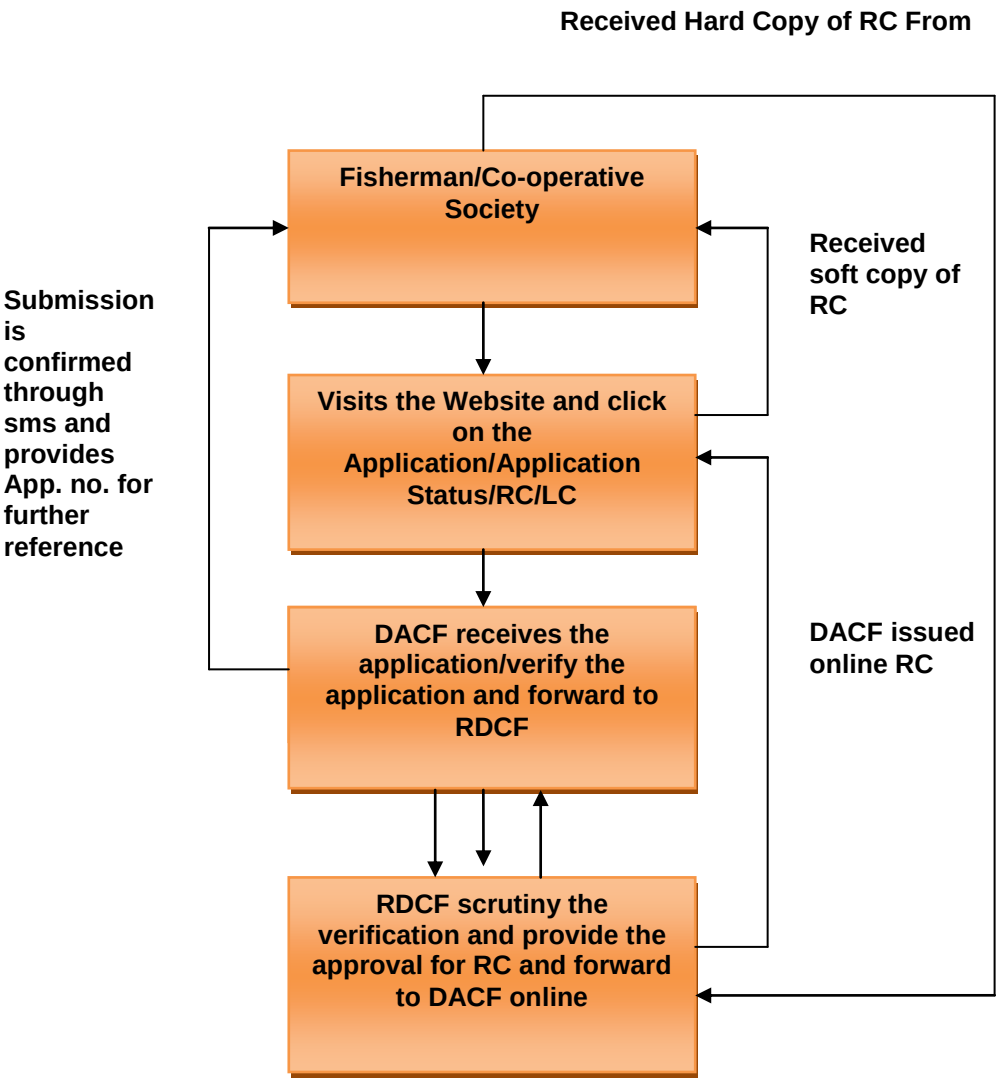
3.1.1 Registration

1 Application forms are received in Field offices of the department. After physical verification, the forms are sent for data entry or if it is online submission, dealer can submit the formsand submit all the physical forms to the concerned officer if needed. Once ventered sysytem will issue token no./ reference number for further query

2 There is provision for scanning and up loading of application forms at the data entry level. So the physical movement of the application from one office to another is not required.

3 The data entry operator(DEO), after making the entries, forwards the application to the next levvel till the application reaches the final authority (level of users , role will be assigned by system by SA). Depends on that datta will be moved from one place to another. At any level , the concerned officer can revert the case if he is not satified else he can forward it to the next level.

4 After the final approval, print the certificate issued to the applicants. By the time sysytem will send the status of application at each level.


Received Hard Copy of RC From
Fisherman/Co-operative Society
Received soft copy of RC
Submission is confirmed through sms and provides App. no. for further reference
Visits the Website and click on the Application/Application Status/RC/LC
DACF receives the application/verify the application and forward to RDCF
DACF issued online RC
RDCF scrutiny the verification and provide the approval for RC and forward to DACF online

3.1.2 Licensing

1. For inland fishing, when the registration certificate is issued to the applicants he can apply for the license certificate to district fisheries development officer, otherwise he can apply without registration certificate.

2. On the basis of registration no. applied in application form Fisheries development officer verifies the application if the application is valid Fisheries development officer approve the application and receives the fee of Rs. Two hundred for four months and issues the license certificate to the progressive fisherman for fish harvesting

3. There is also a provision for store the license certificate information in database at data entry operator level. So that any field officer be able to check and verify the license certificate on the basis of license number

4. After the final approval a hard copy printout of license certificate is issued to fisherman by the authorized officer

The work flow described above is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature.

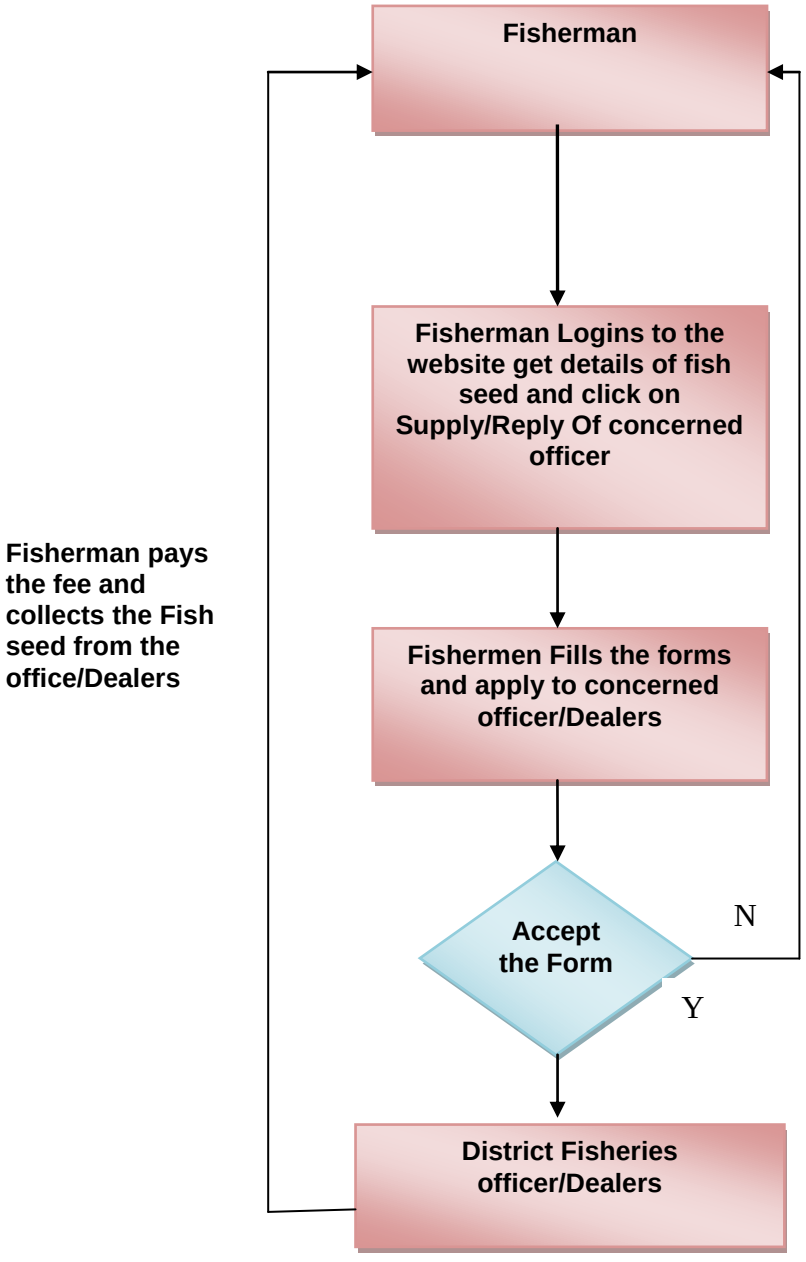
3.1.3 Fish Seed Distribution

1. Fiseherman apply online Application form for fish seed with required scanned documents

2. Online request will received by concerned officers such as Ac fisheries/Incharge of fish seed production centers

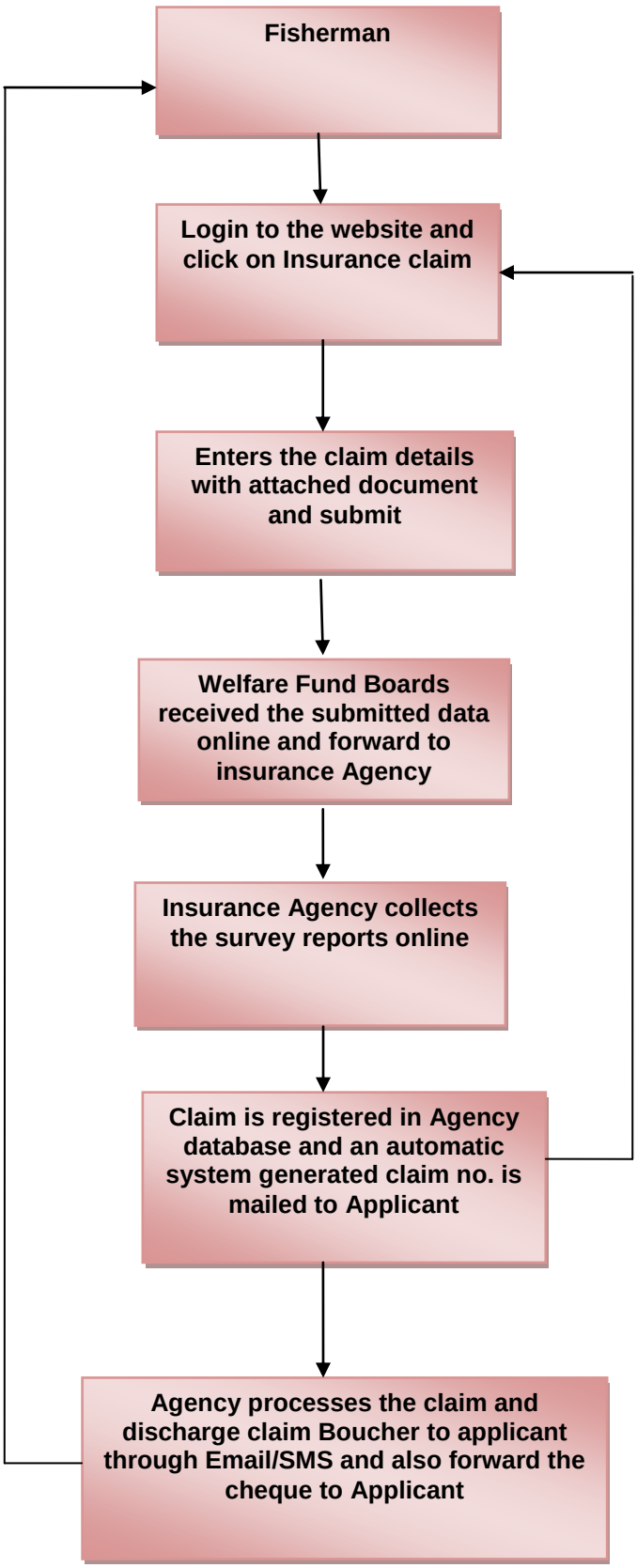
3. AC fisheries/Incharge of fish seed production centers scrutinize the requirement on the basis of water spread area available with fisherman. System will calculate the feed required for each water body based on the infrastructure capacity table.

4. If all the documents and requirement submitted by fisherman is valid then AC fisheries/Incharge of fish seed production centers collect the fee receipt done by payment gateway and provide seeds to fisherman

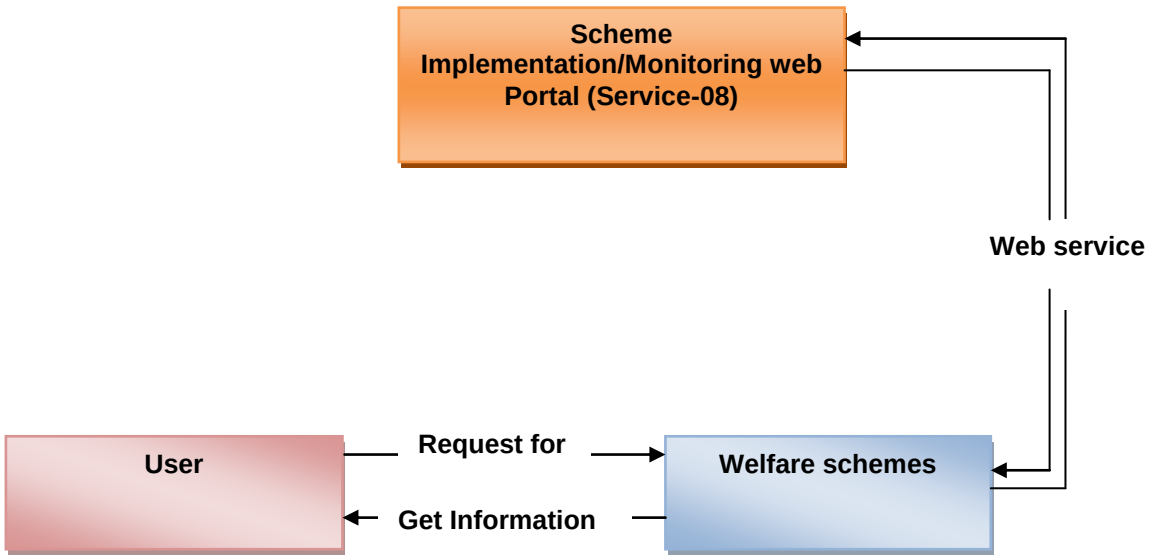

Fisherman
Fisherman Logins to the website get details of fish seed and click on Supply/Reply Of concerned officer
Fisherman pays the fee and collects the Fish seed from the office/Dealers
Fishermen Fills the forms and apply to concerned officer/Dealers
Accept the Form
N
Y
District Fisheries officer/Dealers

3.1.4 Insurance Claim Procedure

1. Web based submission of application or registering the claim by sending SMS to the concerned officer.
2. If it is SMS, claim will be registered in the system. After physical verification, remaining data will be entered online
3. Online provision to upload all scanned documents, images etc.
4. As-soon-as details entered online, system will do validation with real craft database, negpa database (service 1) it will go for verification, approval and send system generated token number to the insured to know the further status.
5. Once claim is approved on web, claim will be settled. Date of claim, amount will be informed over SMS.
6. Web based provision/SMS to know the status of claim by entering the claim number by insured person/fisherman
7. Claim will be transferred online to bank. Using payment gateway


Fisherman
Login to the website and click on Insurance claim
Enters the claim details with attached document and submit
Welfare Fund Boards received the submitted data online and forward to insurance Agency
Insurance Agency collects the survey reports online
Claim is registered in Agency database and an automatic system generated claim no. is mailed to Applicant
Agency processes the claim and discharge claim Boucher to applicant through Email/SMS and also forward the cheque to Applicant

3.1.5 Welfare Schemes for Fishermen



3.1.6 Alert System

1. On the basis of whether forecasting done by metrological department there should be a System to send the SMS/e-Mail on the mobile of registered fishermen so that they can get information in prior and be alert
2. There should be a provision for voice information such as radio/walky-talky so that they can get instant information about Tsunami/whether etc.
3. There is a provision of EWS(Early Warning System)
4. AAS – Agromet Advisory Services to farmers based on the IMD data.(triggered by system)

    Under depression, rainy season, cyclone conditions

    1. Farmers should stop feeding
    2. Reduce Stock Density
    3. Test Water Quality
    4. If Ammonia is high apply Zeolite at 10-15 Kgs per acre
    5. Test the Fish/Prawn and find out the reason for mortality and suitable remedial measures may have to be adopted.
    6. Use Bioremediators to prevent release and accumulation of bad gases like ammonia, hydrogen sulphide etc.
    7. Best solution during inclement weather is to stop feeding.

The process described in alert system is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature.

3.1.7 Testing (fish seeds, water quality)

1. There is provision to send the sample of fish seed to testing labs
2. Testing labs send their report to district fisheries officer
3. If the fish seed quality is appropriate then they put into ponds otherwise good quality fish seed is put into ponds
4. There should be also facility to teach the fishermen how to carry the fish seed from one place to another place and how to release them into ponds
5. There should be also a provision for providing online information about better fish culture process

3.1.8 Status Tracking

There is a provision to search the status of any application submitted for various services with the help Ref.No, RC/LC No. location based , subject wise, name wise etc..

The process described in status tracking is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature.

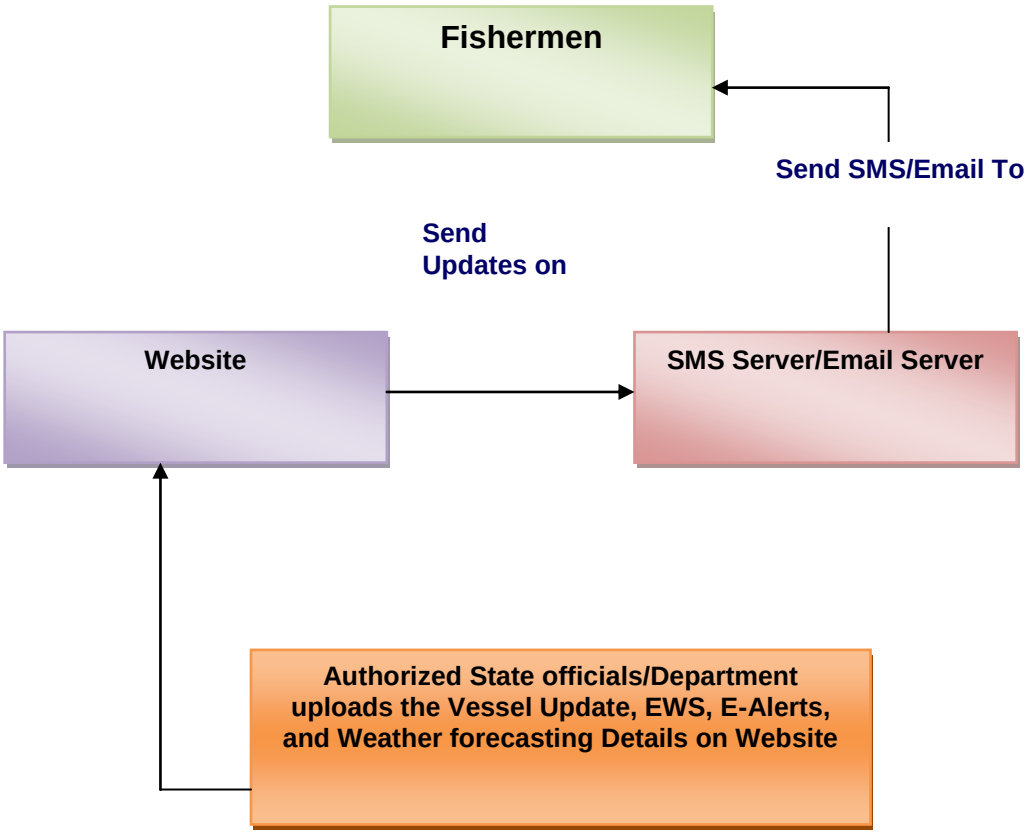
3.1.9 SMS-Pull/Push

1. Push

1. Once the application submitted online by the fisherman/Dealers is approved after scrutinize the document as soon as the approval is done by authorized officer system will send SMS to the concerned farmer for acceptance of application.
2. Whenever the training schedule is decided by the authorized officer and uploaded on the website at the mean while SMS is sent to fishermen for attending the training on given date and time
3. Once the application submitted online by the fisherman/Dealers for fish seeds to concerned AC fisheries after online scrutinize the document as soon as the approval is done by authorized officer system will send SMS to the concerned farmer for collecting fish seed
4. Test results will be sent to the farmer / hatchery through SMS
5. Insurance - registered –ref. no, Claim release date, amount will send through SMS to the fisherman/welfare fund board as soon as the insurance agency/company release the insurance claim amount online
6. As soon as the information about Early warning ,weather is updated on the website at that time the report send through SMS to registered fishermen
7. Whenever the information of Stock position is updated on the website at the same time information send through the SMS to registered Fishermen/dealers
8. As soon as the Application / certificate status is updated on the website the information regarding application / certificate status is to be send through SMS to dealers/farmers
9. Update on daily basis Price of seeds information is to be send to farmers through SMS
10. Disease outbreak in biomass information is to be send to fishermen through SMS as soon as updated on the website
11. Whenever the market price details is updated/uploaded on the website at the same time market price details information is to be send through SMS

2. Pull

1. Whenever the application/ certificate / sample test status is updated on the website at the same time Information about updating status is to be send to fishermen through SMS
2. Status about Price details – species wise is to be send to fishermen through SMS
3. Stock position – species wise, dealer wise information is updated on website as well as information is send to registered fishermen through SMS
4. Grievance status information is send through SMS to concerned Fishermen/dealer etc.
5. After onsite observation Expert Advisory is send to registered fishermen of that location through SMS
6. Whenever the market price details is updated/uploaded on the website at the same time market price details information is to be send through SMS



3.1.10 Proactive & Forewarning system

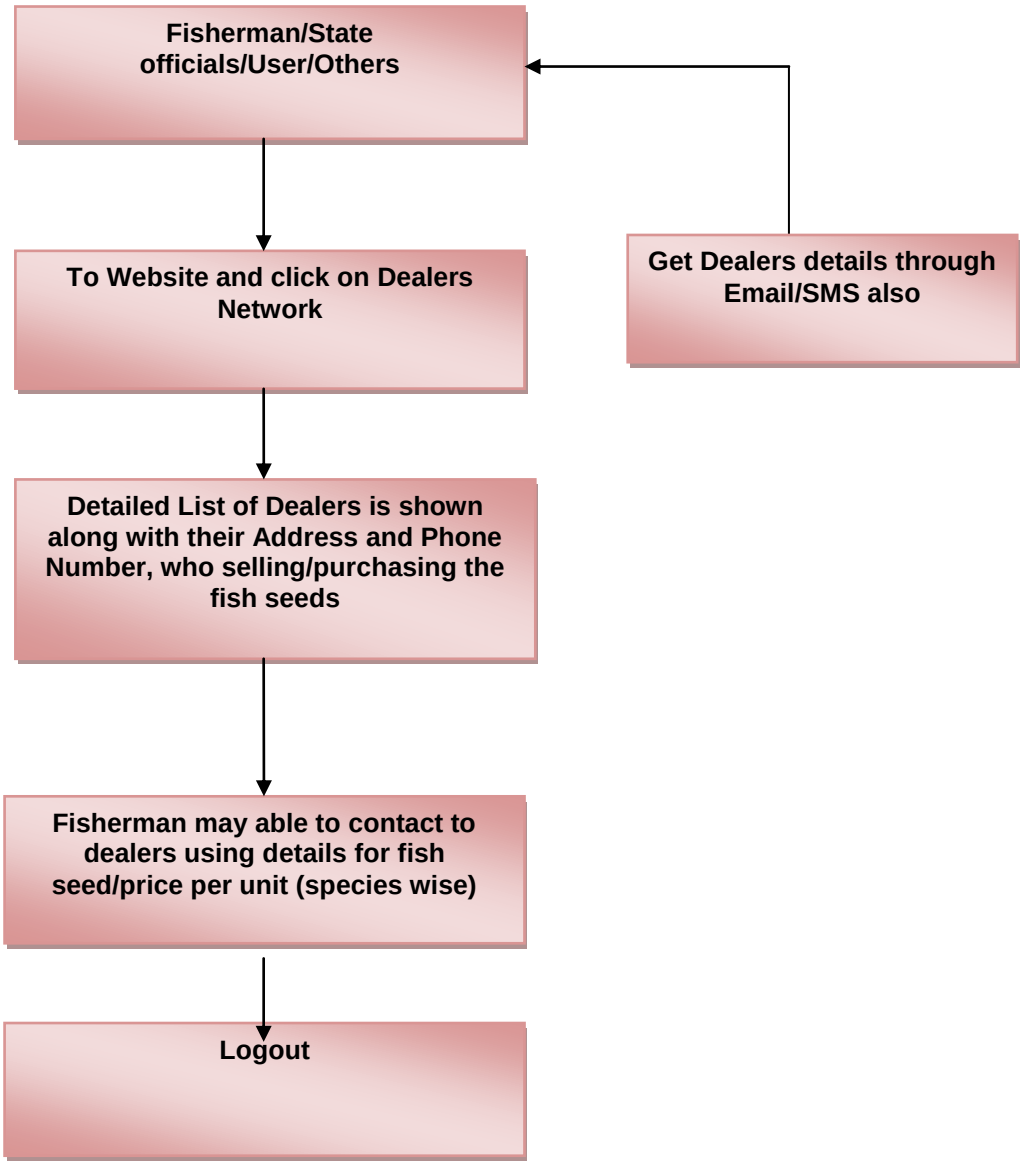
1. Web based documentation of any identified problems in details and online provision for submit these details/information to concerned department so that we can control measures/problems without any damage.
2. Web based quick response for identified problems.

3.2 CONTENT BASED

3.2.1 Manufacturer / Dealer information

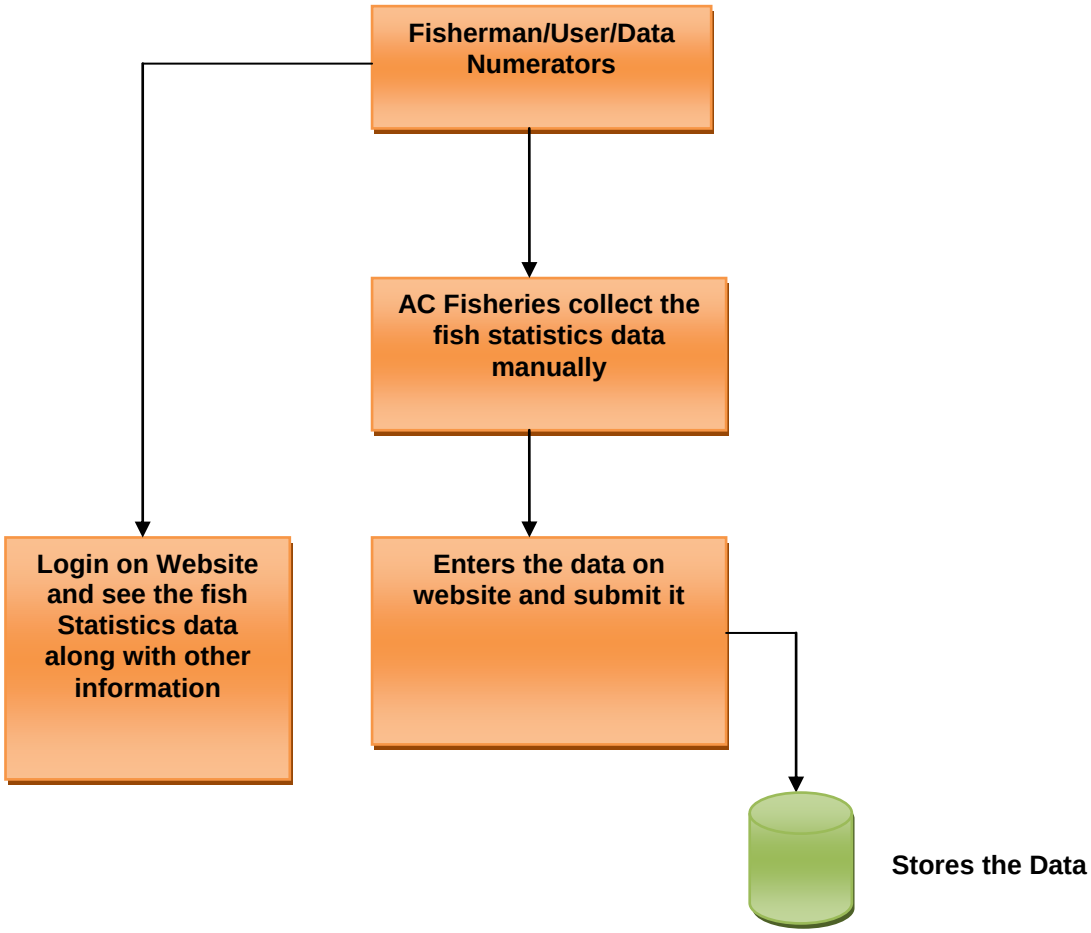
1. There should be a online provision for list of Manufacturer/Dealer information so that Anyone can see the detail of Manufacturer/Dealer
2. There should be online facility to contact with dealer and manufacturer
3. Online provision for location wise Manufacturer/Dealer listing

The process described in manufacturer/Dealer information is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature



3.2.2 Price statistics Details

1. There should be a online report provision about price details(Min/Max/Modal)l of fish on the basis of different locations
2. Species wise price listing should be included online
3. Web based information about Name of the market/FLC ,date of reporting ,Name of the species , quantity/unit ,SMS pull/push

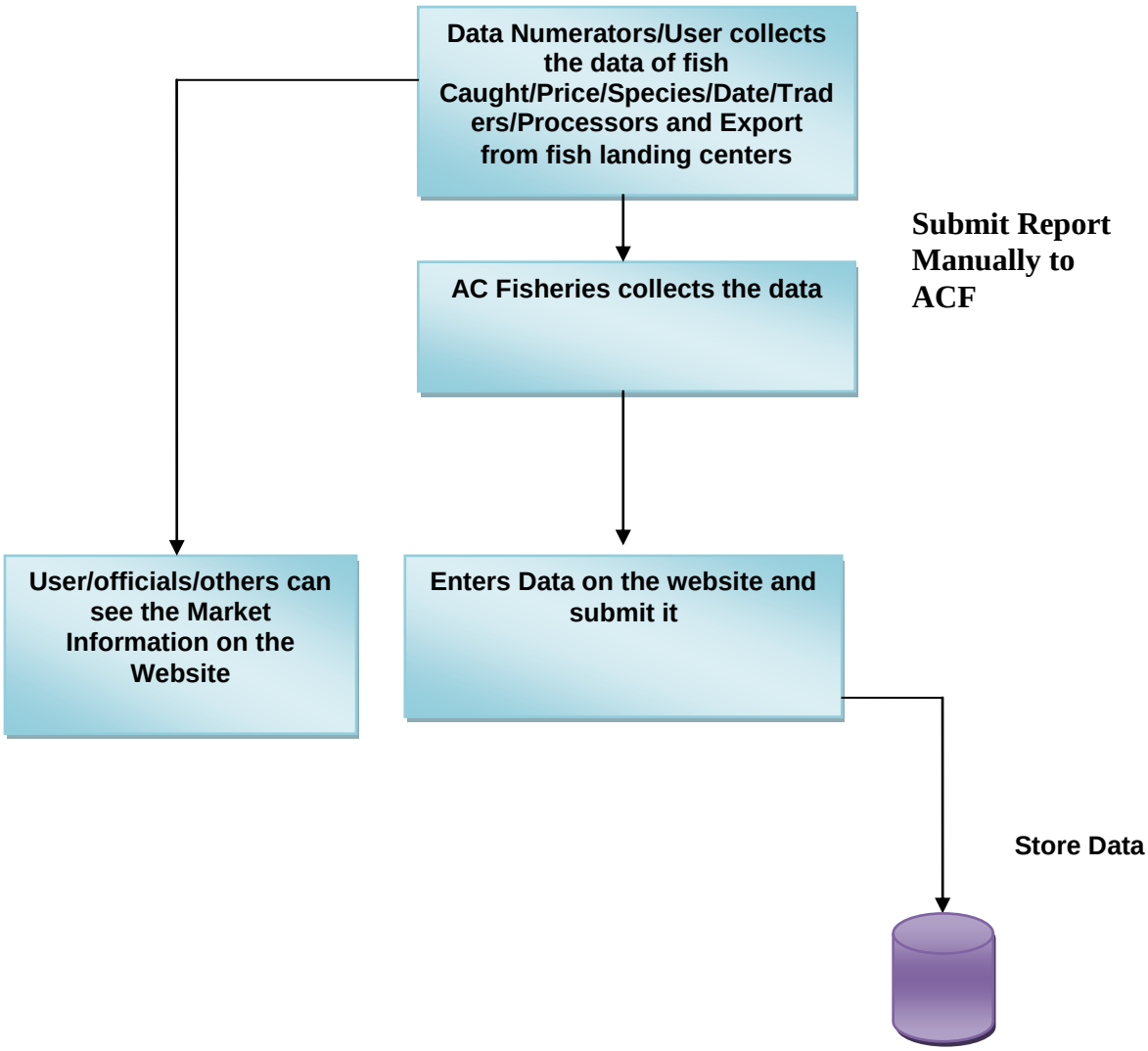


3.2.3 Stock Details (Fish Seed)

1. Web based location wise fish seed stock detail
2. Price detail should be also included online
3. Stock owner address/contact detail should also be displayed online
4. Provision for online species wise fish seed stock report
5. Fish seed species, size and their price details

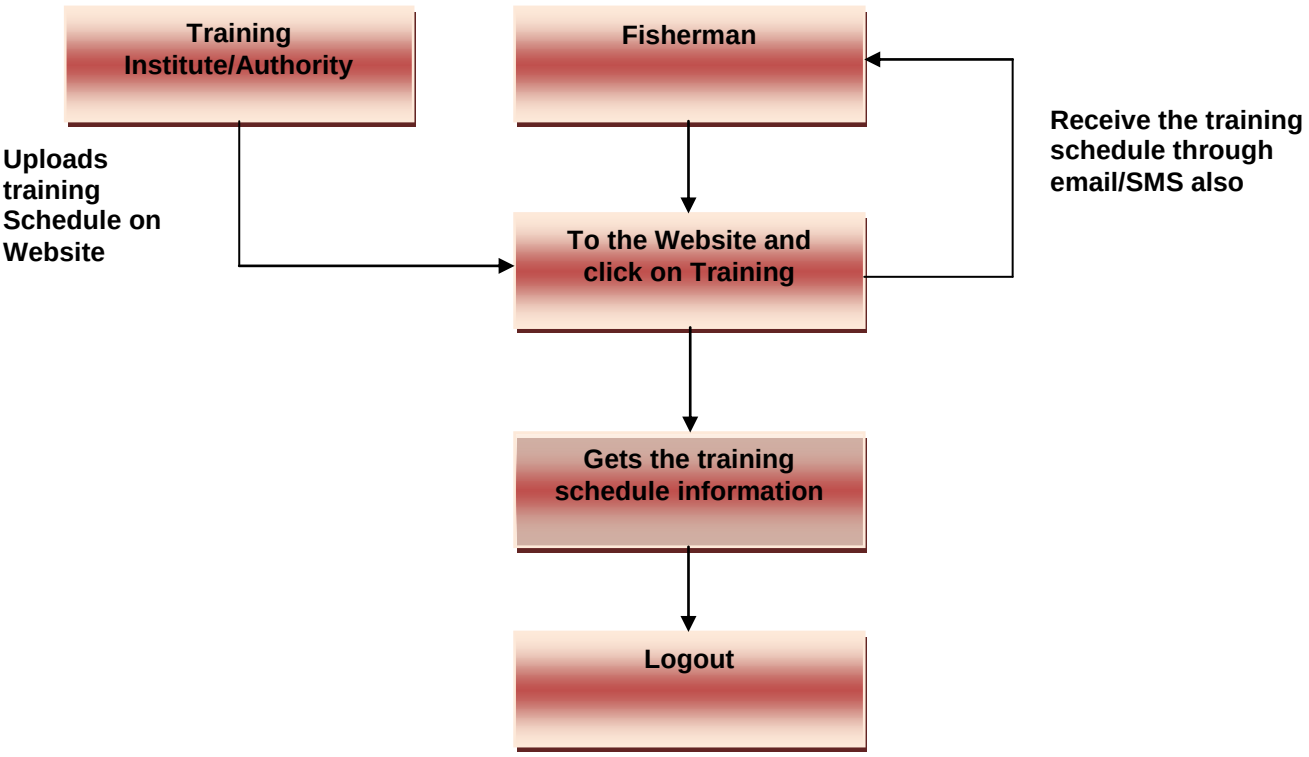
3.2.4 Market Information System

1. Web based market price details on daily basis
2. Online information about Name of the market/FLC
3. Online Reporting date
4. Online information/Listing about Name of the species, quantity/unit,
5. Online market arrival details(Name of the market ,Number of arrivals, No. of transporting vehicles ,date of arrivals ,mode of arrivals)
6. Online traders details(Name of traders, mode of transaction ,address details with mobile phones Name of the species , Quantity of species for transaction)
7. All these information should be online so that fishermen can get instant information about these services.



3.2.5 Training

1. There should be a provision for fishermen that periodic training should be given to them regarding fish harvesting/fish farming/efficient use of feed materials/improve fish seed etc.
2. Training schedule information should be provided to active/registered fishermen by SMS/E-mails
3. There should be also a online provision to display the training schedule/date/location/day/fishermen list selected for training as a flash news till last training date.
4. Training schedule should be rotational so that maximum no. of fishermen get trained for better fish productions.



3.2.6 Ponds Allotment

1. The fishermen can see the following details from the Website regarding Ponds allotment. On the basis of information he can apply for the ponds-

   i. Ponds allotment criteria

   ii. Categorization of ponds

   iii. Priority for allotment of forms

   iv. Per person criteria for allotment of ponds

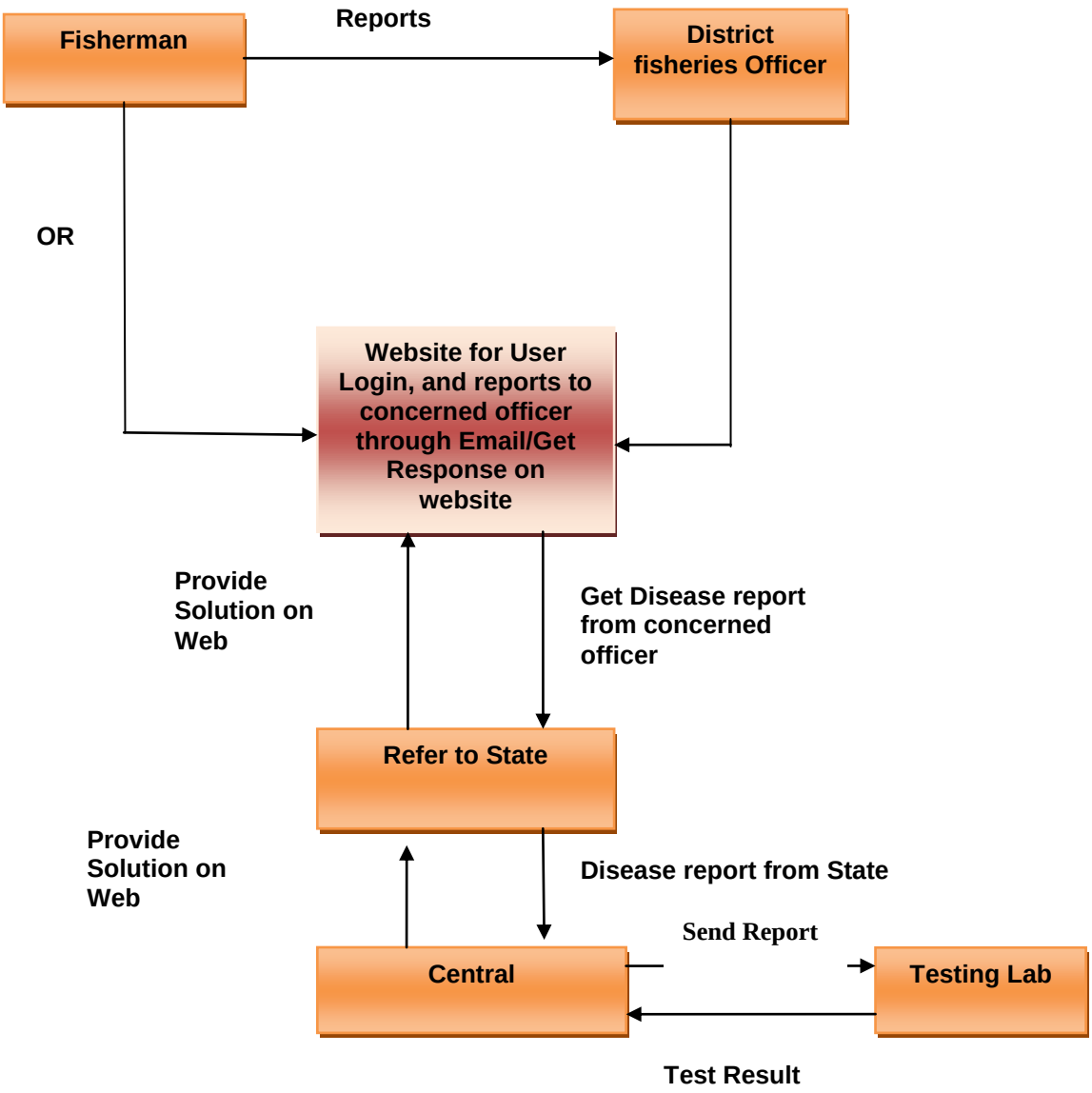
   v. Rate of allotment of ponds

3.2.7 Success story

1. Any user/fisherman can see/access the Success story uploaded on the Website about the progressive fisherman so that they get inspired from the story of progressive fisherman.

3.2.8 Fish Disease

1. Fish disease is sensitive information so it can be only seen/reported to authorized Person
2. There is restriction/validation to see the fish disease report who is not authorized for this service
3. Fishermen reports to the district fisheries development officer for the fish disease outbreak
4. DFDO takes the sample and forward it to regional fisheries development officer
5. Regional fisheries development officer forward the fish disease report to commissioner of fisheries
6. Commissioner of fisheries forward the fish disease report to central(Director of fisheries)
7. Director of fisheries sends the sample and report to testing labs
8. Testing labs test the disease if testing labs verifies the disease then
9. Disease is declared and relief fund is released by central government
10. Fish disease report is also send to OIE(International fish disease organization)

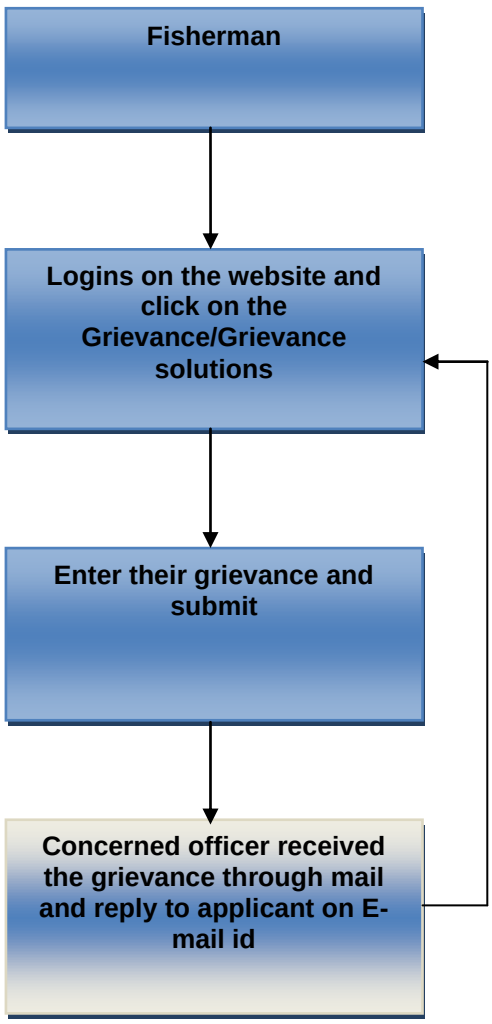

Fisherman
Reports
District fisheries Officer
OR
Website for User Login, and reports to concerned officer through Email/Get Response on website
Provide Solution on Web
Get Disease report from concerned officer
Refer to State
Provide Solution on Web
Disease report from State
Send Report
Central
Testing Lab
Test Result

3.3 Transaction based

3.3.1 Grievance Management

1. There is a provision for submit the login based grievance by registered fishermen to Concern officer
2. Concerned officer(District Fisheries development officer) look into the matter if the grievance is related to that officer then he provide the solution of grievance
3. If the grievance is related to upper level officer (Regional Dy. Commissioner of fisheries) then the grievance is forwarded to RDCF. if it is related to RDCF then he will solve the grievance otherwise it is forwarded to Commissioner of fisheries
4. If the grievance is related to commissioner of fisheries then he solves the grievance otherwise it is forwarded to ministry of fisheries
5. Finally fishermen finds the solution of their grievance

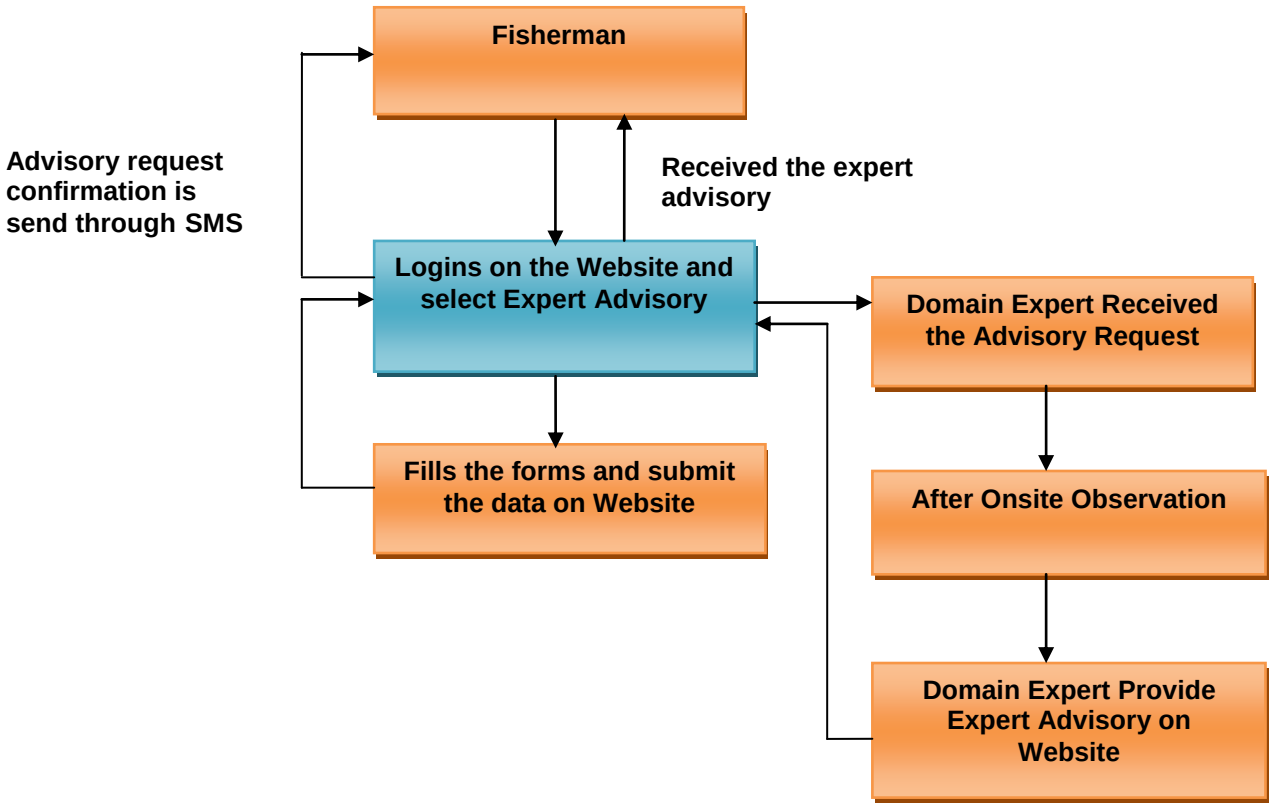
The process described in grievance management is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature



3.3.2 Expert Advisory

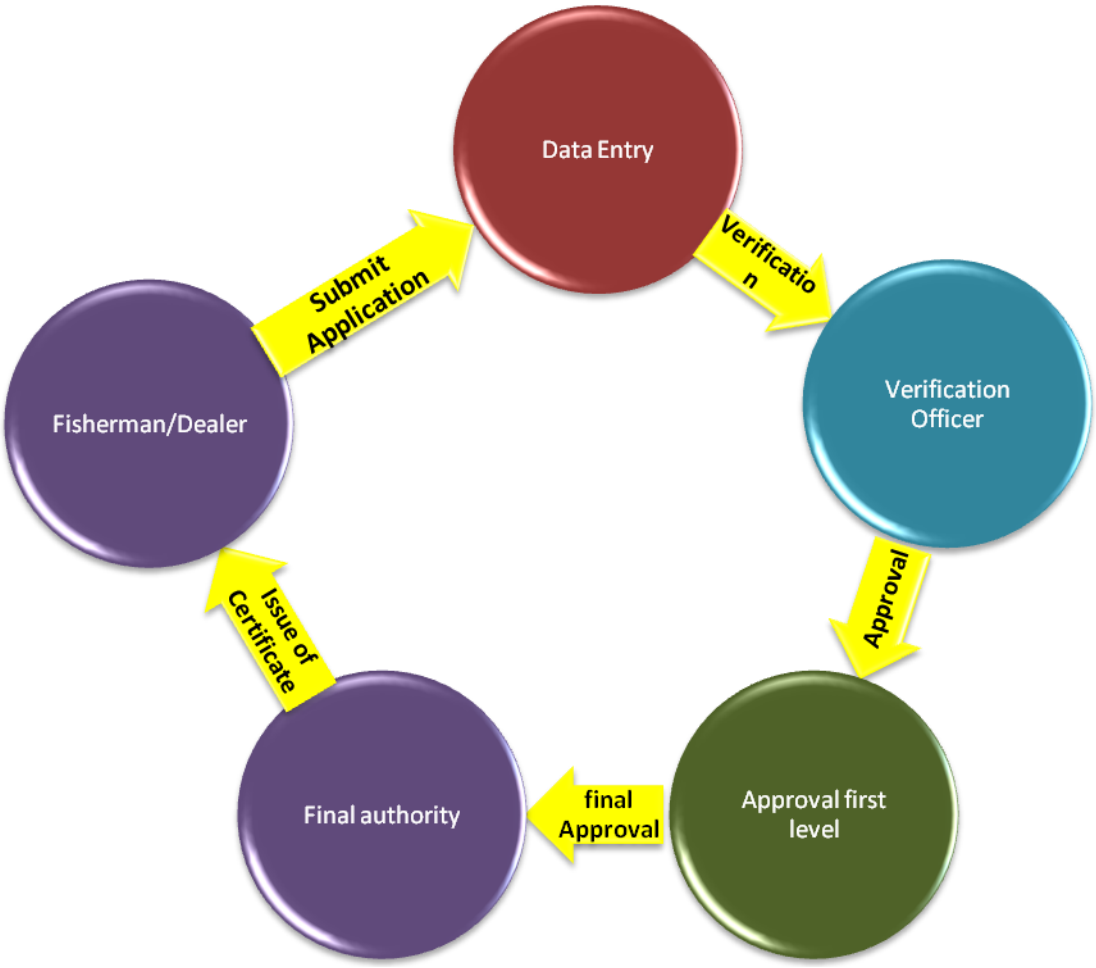
1. Expert advisory is provided by colleges of fisheries and Ex. Serviceman of fisheries Department
2. Expert advisory should be condition/situation/location and time specific
3. On the basis of requirement of expert advisory the domain expert go for onsite observation
4. After onsite observation of the situation domain expert provide the advisory to fishermen as well as government also on the website

The process described in expert advisory is typical of the normal procedures followed by each states.However,it is flexible/customizable so that each state can modify the work flow to merge the offices as per the procedure followed by that state. The workflow is a template feature



3.4 WORK FLOW

The Workflow is a Template facility provided in the software and can be customized for each state by the System Administrator This picture dipct the registationa and licensing activities



3.5 Master Data Management (MDM)

Master Data Management (MDM) comprises a set of user management processes that consistently defines and manages the non-transactional data entities. It is used to create and maintain consistent and accurate master data. It is the single source of basic data used throughout the applications.

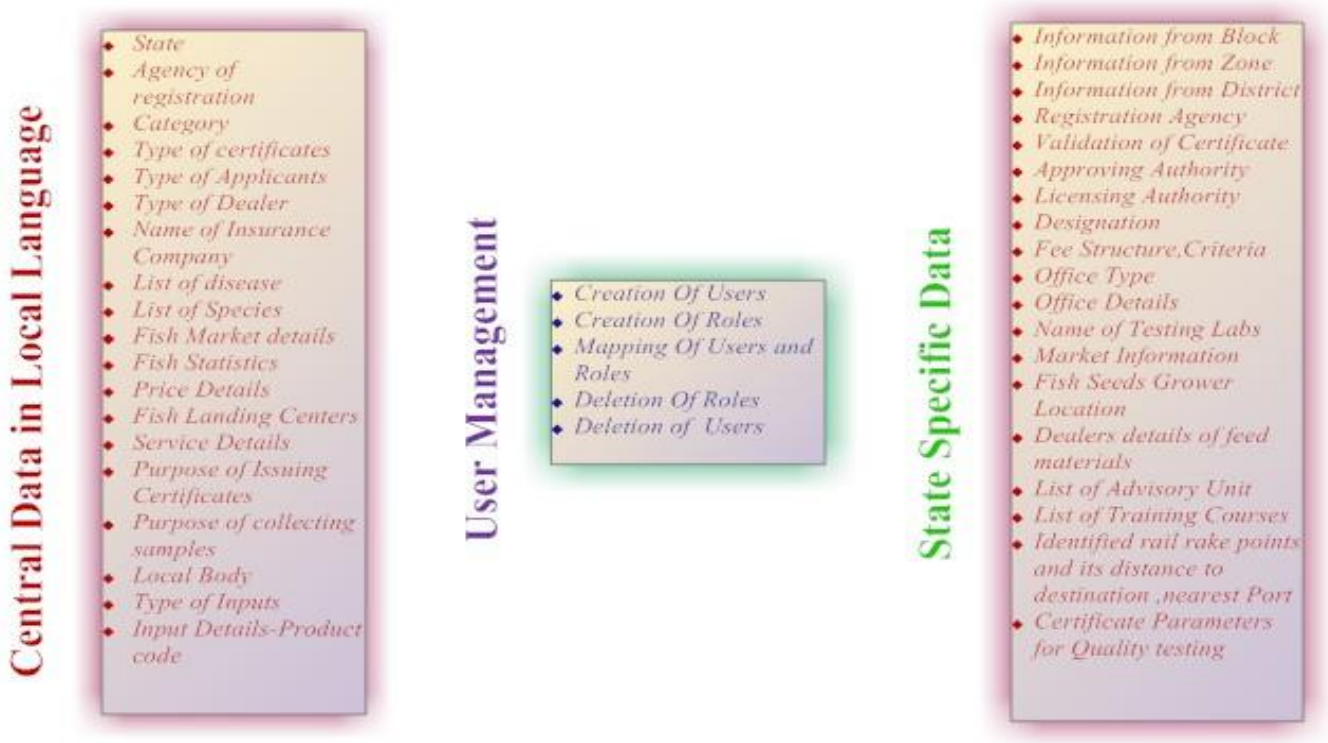
The application in all the software modules is for all the states. The key feature of the MDM is that the master details like , locations, designated officers, etc., have been standardized and codified in a single database resulting in a common data set for the whole country. This makes it possible to derive MIS information across all states from the common database to arrive at the standardized and uniform national data set covered under this project. So it is mandatory to maintain uniform coding for all the master data as the aggregation of data will take place at state level and at central level.

The master data is the backbone of the application system. Without basic data No transaction can be effected. It can be created through the master data management. The objective of the creation of master data is to ensure consistency, accuracy and to reduce duplicated data and to introduce interoperability.

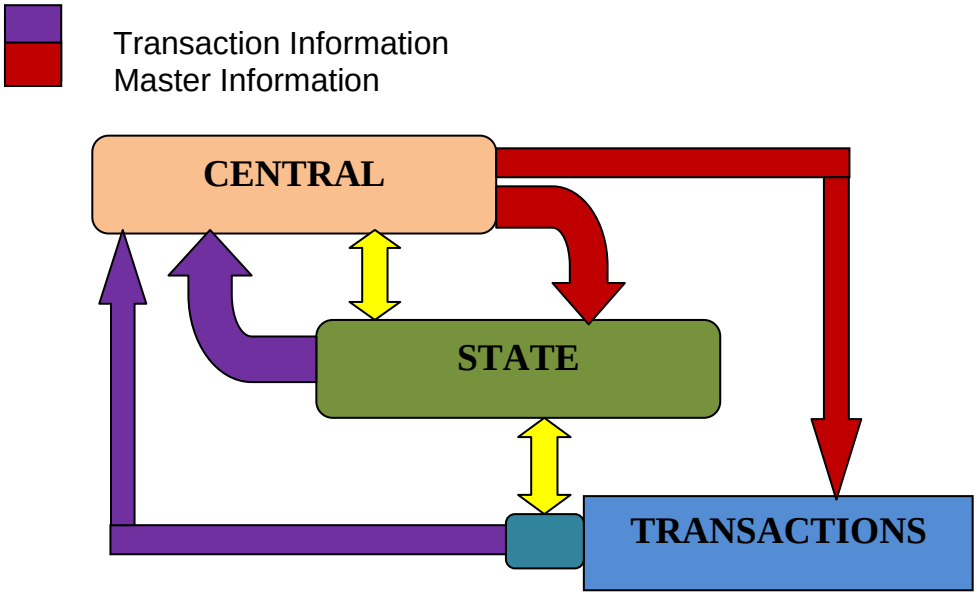
The Central Administrator has to capture and maintain the following data at national level. That data will be shared by other states/ UTs

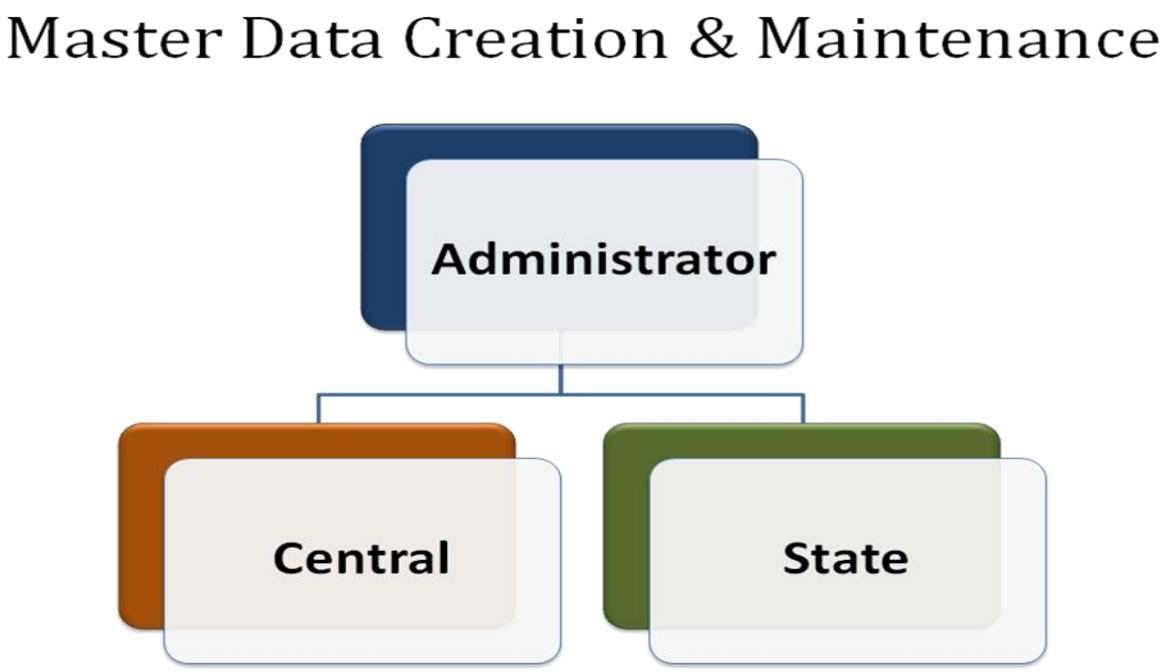
- State
- Agency of registration
- Category
- Type of Certificate(RC,LC,QC&A)
- Type of Dealers
- Type of Applicant
- Purpose of Issuing Certificates
- Purpose of Collecting Samples
- Registration Certificates Formats
- License Certificate Formats
- Document
- Local Body Type
- Type of Inputs
- Input Details-Product Code
- List of banned Inputs
- List of Pathogens
- Name of Insurance Company
- List of Species
- List of Disease
- Fish Statistics
- Price Details
- Market Details
- List of Fish Landing Center

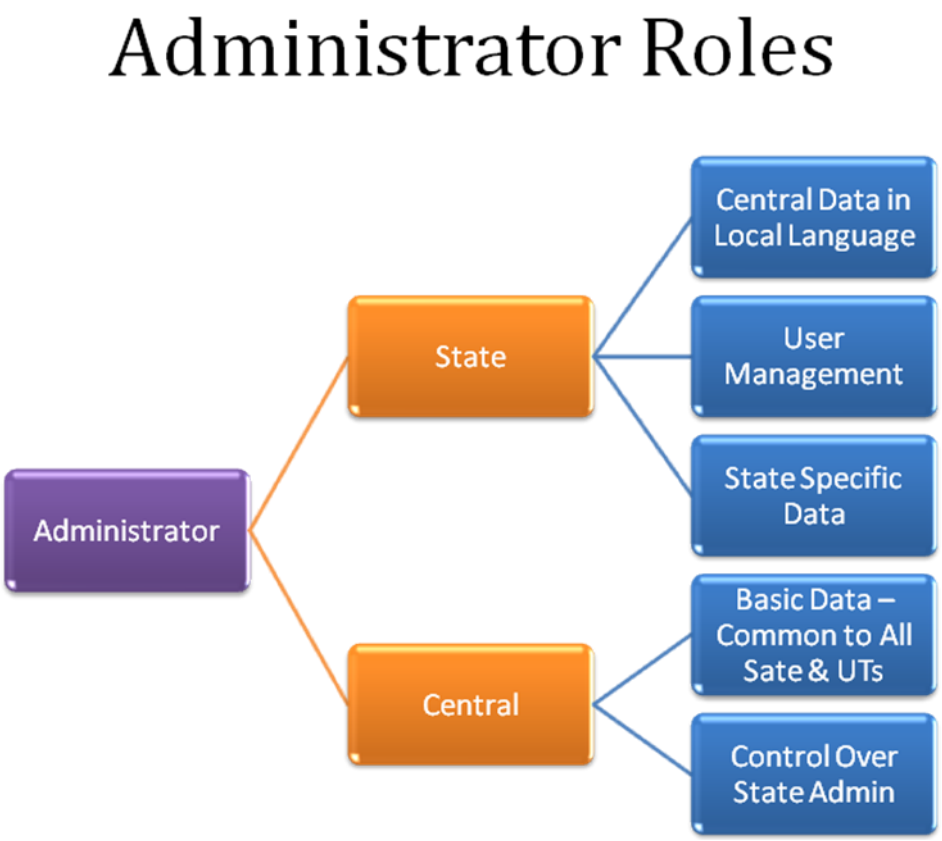
❖ **Data Entities with their Specification:**



❖ **Master Data and Transaction Information**







The State Administrator has to capture and maintain the above data at national level. He will maintain state specific data.

4. OVERALL DESCRIPTION

4.1 Product Perspective

The product will be used to automate the process of fishery inputs. It will result into an effective and transparent system and will thus reduces the time required for data consolidation and reporting fish production at all levels .It will improve the government service delivery to a great extent and will also serve as an important source of relevant information.

Main Features:

- ✓ Fish Farmer/ Seed Grower/ Dealer Agency Details
- ✓ Information regarding Fish Production
- ✓ Training Details
- ✓ Expert advisory
- ✓ Insurance Information
- ✓ Grievance management
- ✓ Market Place
- ✓ Fisher Man Safety System
- ✓ Disease Management

4.2 System Interfaces

4.2.1 User Interfaces

The users will be provided interface for entering data and viewing reports/alerts.GUI (Graphic User Interface) will be provided to users for interaction with application, where screens will be designed with menu tabs/buttons/links for different kind of user access control in the system.
Market information detail such as (fish catch, arrivals, Price details Species wise) reporting can be done through SMS, Emails and from Fisheries Web portal. User can also call KCC to get the market details; price details ect Where the KCC Software will further push the data into fisheries inputs module in the Software.
Alerts can be received through emails, web based application interface and SMS on mobile phones.

4.2.2 Hardware Interfaces

4.2.2.1 Front End Web Servers

It is proposed that 2 servers act as front end servers, clustered in a load balanced; the proposed distribution is as follows:

a. Web Front End Server1 would run four Virtual Servers running instances of:
- ❖ Portal Server (Microsoft Office SharePoint Server – MOSS)
- ❖ Integration Server for integrating web services, SMS
- ❖ Application Server

b. Web Front End Server2 would be a cluster server to Web Front End Server1 to host all the above workloads in virtual environment. So, essentially all the VMs of Web Front End Server1 would be clustered to VMs of Web Front End Server2.

4.2.2.2 Database Servers

It is proposed that there would be two clustered instances of database servers Running SQL Server 2008 Enterprise Edition R2 as described below:
- ❖ 1st instance is proposed to be Primary database server.
- ❖ 2nd instance is proposed to be a cluster server of the 1st instance.
- ❖ The above cluster is proposed to be in active state by using a witness server which can reside on the infrastructure server hosting the backup software. Data is proposed to be stored in SAN.

4.2.2.3 Infrastructure Servers

The third layers of servers are proposed to be infrastructure servers running the following:
1st Server is proposed to run four virtual servers to run:
- ❖ Active Directory Server – This would be the primary domain controller providing authentication and authorization services for the applications including the CMS, DMS, e-Document data
- ❖ System Center Operations Manager for monitoring the server components
- ❖ System Center Configuration Manager for Patch Management, Inventory and Asset Management
- ❖ System Center Virtual Machine Manager Server for managing all virtual servers.

b. 2nd Server is proposed to run the failover server of the 1st server running all the above workloads.
c. 3rd Server is proposed to run System Center Data Protection Manager Server. This server is proposed to have interfaces/connectivity for taking backups on external disks.

4.2.2.4 SMS Server

As depicted, it is proposed that existing SMS services of NIC will be used.

4.2.2.5 Development environment

Please note that the recommended components for development environment assume that there would be about 8 developers. It is proposed that one server be kept to host the Team Foundation Server (which comes along with Visual Studio when procured with MSDN) so that developers can work in a collaborative environment. The server can be any existing server running Windows Server 2008 and hence has been kept out of the proposed bill of material.

4.2.2.6 Client End

Machines have been provided at block level, district level and state level all across India. The application can be accessed through IE-6 and above.

4.2.3 Software Interfaces

- Visual studio 2010
- Windows Server 2008
- SQL Server 2008 Enterprise Edition
- Sql Server Reporting for Report Generation

4.2.4 Communications Interfaces

The data will communicate on internet in between different modules of the system through a TCP/IP connection.

4.2.5 Memory Constraints

4.2.6 Operations

4.2.7 Site Adaptation Requirements

User Training

Initial user level training will be given by implementation agency to NIC officials along with the e-learning material, which will be used in Training programmers, which will be conducted by other agencies to create awareness about the system.

4.3 Product Functions

4.3.1 Central –wise

1. country
2. State
3. Type of water resources
    - ❖ Fresh water
    - ❖ Brackish water
    - ❖ Additional prawn filtration field reservoir
    - ❖ Warm water/cold water river ravine
    - ❖ Trout raceways
    - ❖ Cold water lakes and ponds
4. Fish - Genus & Species, common & local name of fish, image
5. Fish Seeds - Genus & Species, common & local name of fish
6. Type of infrastructure
    - ❖ Institutions
    - ❖ Societies
    - ❖ Harbour
    - ❖ Fish landing centers for mechanized boat,
    - ❖ Traditional
    - ❖ Fishery schools
    - ❖ Fish processing unit,
    - ❖ Markets, ornamental fishery resources
    - ❖ Quarantine stations
    - ❖ Advisory units etc
7. Type of applicant
    - ❖ Fish farmer,
    - ❖ Dealer,
    - ❖ Contractor,
    - ❖ Feed growers,
    - ❖ Seed growers

8. .Insurance agencies

9. Name of the insurance scheme (Matya Surkasha Insurance Cover etc**)**

10. Purpose for issuing Registration & license certificate

- Filtration field,
- Using fixed gear
- Aquaculture
- hatcheries
- fishing vessel and free nets
- inland fishing etc)

11. Purpose of lab testing

- Hatchery,
- Farms
- Export
- Import

12. Type of lab test name (antibacterial – gr- a, ph)

13. Type of lab test method(L C mass spectrometry)

14. List of vaccines, medicines, species wise and its treatment

15. Type of certificates

- Registration certificate
- License certificate
- TP,
- Quality Control and Assurance

16. Purpose for issuing RC

- Fishing Vessel
- Fixed Gear
- Free net
- Aquaculture hatchery
- Filtration etc

17. Purpose for issuing License

- ❖ Fishing and angling
- ❖ Selling feeds

18. User roles
19. Training courses
20. Reason for changing ownership
21. Reason for changing ownership
22. Reason for issuing duplicate certificate
23. Reason for cancel certificates
    - ❖ Licensee convicted of an offence,
    - ❖ Suppression of facts.
    - ❖ Restriction on entry in fish sanctuary
24. Reason for rejecting issuing RC is defective affect public interest, has not furnished particulars etc.Inconsistent with any law, fishing vessel, Unit (Rupees, lakhs, tons, liter etc.)
25. Type of insurance(individual, unit)
26. Type of insurance claim (death, damage, loss, etc)
27. Type of transaction(buy, sell, export, import etc)
28. Validity of Certificates (type wise – RC, LC, TP etc))
29. Service wise certificate issuing agencies (QCA by ADAK, MPEDA, Aquaculture Registration by coastal aquaculture Chennai)
30. List of Insurance Company
31. Service wise Authority (Approving Authority)
32. Registration Agencies type wise)
33. Type of agencies for gateway (bank)

4.3.2 State –wise

1. District
2. Block
3. Local Body Code
4. Location for issuing License

5. Location for issuing Registration
6. Office Type
7. Office Details
8. Designation
9. Certificate Format (for RC, LC, TP, QCA etc)
10. Service wise Fee Criteria
11. Service wise Fee Structure
12. Home Page Information
13. Infrastructure details (water bodies, Fish landing centers etc)
14. Certified parameters for quality testing (chlorempheniol,
15. Nitrofuran metabolite- SEM nitrofuran
16. Metabolite-AOZ, nitrofuran metabolite-AMOZ nitrofuran metabolite-AHD
17. Buyers & sellers for e-trade
18. Welfare schemes & implementation guidelines
19. List of registered, banned, restricted seeds (input wise
20. List of designated inspectors for quality control
21. List of documents service wise
22. For Registration of hatcheries -
    - ❖ Location plan issued by the Village Officer
    - ❖ Infrastructure development plan in relation to proposed hatchery or fish breeding facility approved by concerned Local Self Govt. Institution.
    - ❖ A detailed project report of the proposed hatchery or fish breeding facility which include the report on environment impact, cost benefit ratio, cash flow statement, etc.,Identity proof of the owner/manager/applicant, Land ownership documents,,Ownership/ Lease document of hatchery (minimum five years),Copy of commercial registration, if any,Income Tax clearance Certificate,Registration with Labour Office.
    - ❖ Proof of financing; if hypothecated to financial institution.
    - ❖ Necessary permission for water source; if farm depends on external resources. Demand Draft/ Cheque (Fee)

4.4 Input/output fields and Report Formats

4.4.1 Input fields for Forms of Application for Licensing of fishing Vessels

S. No.	Input Fields	
1	Name of the Owner	
2	Address of the owner(Local/Permanent)	
3	Occupation of the owners	
4	Name of Fishing Vessels	
5	Registration Number	
6	Application Date	
7	Place of Registration	
8	Agency Name	
9	Office with which Registered	
10	License No. and Period(If previously Licensed)	
11	Particulars of Fishing vessels ❖ Length ❖ Breadth ❖ Draft ❖ Make and HP of engine ❖ Type of Vessel	
12	Constructed Place	
13	Year of Construction	
14	How & when Acquired	
15	No. of Crew	
16	Crew Name	
17	Qualification	
18	Type of Fishing Gear Proposed	
19	Specified area of operation for which License is applied for	
20	Validity of License	
21	Remitted Fee Amount	

22	Mode of remittance	
23	Place	
24	Date	
25	Signature of Owner/s	
26	Declaration	
27	Witness	
28	Image	
29	Thumbnail	
30	Owners father Name	
31	Owner/s DOB	

4.4.2 Input fields for Forms of Application for Registration of fishing Vessels

S. No.	Input Fields	
1	Owner/S- ❖ First Name ❖ Middle Name ❖ Last Name	
2	Name of the fishing Vessel	
3	Particulars of Previous registration ❖ Registration No. ❖ Validity Duration	
4	Fishing Vessel Secured ❖ Place ❖ Date	

5	Particulars of fishing Vessel ❖ Length ❖ Breadth ❖ Draft ❖ Make and HP of engine ❖ Type of Vessel	
6	Vessel Constructed Place Name	
7	Construction Year	
8	Acquired Date	
9	Acquired Process	
10	Base of operation	
11	Number of Crew	
12	Crew Name	
13	Qualification	
14	Life saving appliances in vessel	
15	Remitted fee Amount	
16	Mode of fee remittance	
17	Place	
18	Date	
19	Signature of the owner/s	
20	Image	
21	Thumbnail	
22	Owner/s Father Name	
23	Owner/s DOB	

4.4.3 Application OF RC and issue of lc for fish seed Grower/producer

S. No.	Input Fields	
1	Applicant Name/Farm ❖ First Name ❖ Middle Name ❖ Last Name	
2	Applicant Address	
3	Applicant Father Name	
4	Applicant DOB	
5	Education Qualification	
6	Citizenship	
7	PAN Number	
8	Water Area(In Ha)	
9	Nature of ownership	
10	Qty. of fish seed to be produced ❖ Capacity/Year	
11	Name of the Business ❖ Fish seed Producer ❖ Fish seed Grower	
12	Fish seed production Infrastructure Details ❖ Total Hatchery ❖ Area of Hatchery(Sq.Mtr.) ❖ Hapa a) Number b) Size ❖ Mini Bundh a) Number b) Total Area c) Size	
13	Implements Name(Power Pumps ,Nets)	
14	Source of Water ❖ River	

	❖ Ground water ❖ Other	
15	Year of construction ❖ Hatchery ❖ Mini Bundh ❖ Hapa	
16	Training details in fisheries	
17	Declaration	
18	Signature of DFDO	
19	Signature of Applicant	
20	Date	
21	Place	
22	Image of Applicant	
23	Applicant Thumbnail	
24	In case of Association/Society/Co-operative ❖ Name ❖ Address ❖ Registratio9n Number ❖ Issuing Authority	

4.4.4 Input fields for Insurance Claim

S. No	Input fields	
1.	Name of the Insured :	
2.	Address details	
3.	State	
4.	District	
5.	Block	
6.	Panchayat/ village	
7.	Pin code	
8.	Address details	
9.	Membership number if any	
10.	Type of claim(death, damage, loss etc)	
11.	Date of accident	
12.	Description of accident	
13.	Upload photos	
14.	Supporting documents	
15.	Insured item (vessel, unit, individual)	
16.	If other than individual, Registration number	
17.	Policy number	
18.	Date of policy	

19.	Amount of policy	
20.	Details of premium paid	
21.	Agreed value	
22.	Claim registered e->token Number	
23.	Under Scheme Name	
24.	Place	
25.	Date	
26.	Signature of Insured	
27.	Insured Image	
28.	Insured Thumbnail	

4.4.5 Fish Disease Report

State: _____
Period_____

<Image>						
<Header>						
Quarterly Aquatic Animal Disease						
S.No.	**Item**	**Disease Status**			**Level of Diagnosis**	**Epidemiological Comment Numbers**
1	<Value>	**Month**				
	<Value>	<Value>	<Value>	<Value>	<Value>	<Value>
N						
Prepared By- Name : Position: Signature: Date:				**Submitted By-** Name : Position: Signature: Date:		
<Footer>						

4.4.6 Renewal of RC issue of Lc for fish seed Grower/Producer

S. No.	Input Fields	
1	Applicant Name/Farm ❖ First Name ❖ Middle Name ❖ Last Name	
2	Applicant Address	
3	Applicant Father Name	
4	Applicant DOB	
5	Education Qualification	
6	Citizenship	
7	PAN Number	
8	Water Area(In Ha)	
9	Nature of ownership	
10	Qty. of fish seed to be produced ❖ Capacity/Year	
11	Name of the Business ❖ Fish seed Producer ❖ Fish seed Grower	
12	Fish seed production Infrastructure Details ❖ Total Hatchery ❖ Area of Hatchery(Sq.Mtr.) ❖ Hapa c) Number d) Size ❖ Mini Bundh d) Number e) Total Area f) Size	
13	Implements Name(Power Pumps ,Nets)	
14	Source of Water	

	❖ River ❖ Ground water ❖ Other	
15	Year of construction ❖ Hatchery ❖ Mini Bundh ❖ Hapa	
16	Training details in fisheries	
17	Declaration	
18	Signature of DFDO	
19	Signature of Applicant	
20	Date	
21	Place	
22	Image of Applicant	
23	Applicant Thumbnail	
24	In case of Association/Society/Co-operative ❖ Name ❖ Address ❖ Registratio9n Number ❖ Issuing Authority	
25	Renewal Date	

4.4.7 Agreement Form for construction of Mini Hatchery

<Image>		
<Header>		
Date__/___/__		
Articles of Agreement		
Agreement on	<Value>	
Agreement Between	<Value>	
Name	<Value>	
Village	<Value>	
Block	<Value>	
District	<Value>	
Cost of Contract		
Total cost of civil work (Equivalent to 30%)		
Out of the Total cost		
Name of Beneficiary		
Total cost of civil work (Equivalent to 100%)		
Out of the Total cost		
Disbursement of funds		
Directed By	<Value>	
First Installment		
Second Installment		
Maintenance of Accounts		
Completion Time		
Duties and Responsibility of first party		
Duties and Responsibility of Second party		
Dispute Settlement		
Signed and delivered by(Beneficiary)	<Value>	
In Presence of 1._____ 2._____	<Value>	
Signed and delivered by(DFDO) District Name	<Value>	

In Presence of 1._____ 2._____	<Value>	
<Footer>		

4.4.8 Agreement Form for construction of Ponds

<Image>			
<Header>			
Date__/___/__			
Articles of Agreement			
Agreement on	<Value>		
Agreement Between	<Value>		
Name	<Value>		
Village	<Value>		
Block	<Value>		
District	<Value>		
Cost of Contract			
Total cost of civil work (Equivalent to 30%)			
Out of the Total cost			
Name of Beneficiary			
Total cost of civil work (Equivalent to 100%)			
Out of the Total cost			
Disbursement of funds			
Directed By	<Value>		
First Installment			
Second Installment			
Third Installment			
Funds for culture Inputs			
Approved By	<Value>		
Release Date	<Value>		
Maintenance of Accounts			
Completion Time			
Duties and Responsibility of first party			
Duties and Responsibility of Second party			
Dispute Settlement			
Signed and delivered by(Beneficiary) **Complete Address**	<Value> <Value>	**Signed and delivered by(DFDO)** **Complete Address**	<Value>

In Presence of(Witness) **1. Name and Thumb Impression** **2. Name and Thumb Impression**	<Value>	**In Presence of(Witness)** **1.Name and Thumb Impression** **2. Name and Thumb Impression**	<Value>
	<Value>		
	<Value>		
<Footer>			

4.4.9 Format for submission of Training note by the officials

<Image>		
<Header>		
S. No.	**Input Fields**	
1	Name of the Training Institute	<Value>
2	Name of the officer	<Value>
3	Designation	<Value>
4	Title of the Training Programme	<Value>
5	Duration of the Training	<Value>
6	Training Methodology	<Value>
7	Relevance of Training for enhancing & communication skills	<Value>
8	Relevance of Training for enhancing technical Skills/Knowledge	<Value>
9	Brief note on Training attended	<Value>
10	Suggestion	<Value>
Signature **Name and address of the** **Trainee officer/official**		
<Footer>		

4.4.10 Format for submission of Training notes by the farmers

<Image>		
<Header>		
S. No.	**Input Fields**	
1	Level of farmer training camp	<Value>
2	Training camp Village	<Value>
3	Training camp District	<Value>
4	Venue of Training Camp	<Value>
5	No. of Participant	<Value>
6	No. of issues raised by the farmers	<Value>
7	Details of issues raised by the farmers	<Value>
8	No. of issues referred for redress	<Value>
9	Brief Summary of training camp	<Value>
Name and address of the organizing officer/official the Training Camp		**Signature**
<Footer>		

4.4.11 Fish production/Sample

S. No.	Input Fields	
1	**Fishing Details** a) Type of fishing Boats b) Registration No. c) Boat Tonage d) Engine HP e) Date f) Time Period g) Time taken during fish catch h) Actual time Taken i) Total no. of Hauls j) Total Crews k) Weather l) Direction of wind	<Value> - - - - - - - - - - -
2	Name of Species	<Value>
3	Weight of fishes(Kg)	<Value>
4	Total	<Value>
5	Village	<Value>
6	Zone	<Value>
7	District	<Value>
8	Day	<Value>
9	Month	<Value>
10	Year	<Value>
11	Time Schedule	<Value>
12	Name of field man	<Value>
13	Designation of field man	<Value>
14	Type of Boats a) Mechanized b) Sailing c) Tony	<Value> <Value> <Value>
15	Type of Net – T/B/G/P/L/R/O	<Value>
16	Arrived Boats	<Value>
17	Selected Boats	<Value>

4.4.12 Fish seed production MPR Format

<table>
<tr><td colspan="15"><Header></td></tr>
<tr><td colspan="15"><Image></td></tr>
<tr><td colspan="15">Region_____ Date___/___/____</td></tr>
<tr><td rowspan="2">S.No.</td><td rowspan="2">District</td><td rowspan="2">Name of fish seed product</td><td rowspan="2">Area available for rearing</td><td rowspan="2">Fry production Target</td><td rowspan="2">Place of Spawn procured</td><td colspan="3">Details of Spawn procured</td><td colspan="3">Fry</td><td colspan="3">S.F.</td><td colspan="3">Fingerlings</td><td rowspan="2">Actual Seed Production</td><td rowspan="2">Remarks</td></tr>
<tr><td>IMC</td><td>Cyprinus</td><td>Total</td><td>IMC</td><td>Cyprinus</td><td>Tota</td><td>IMC</td><td>Cyprinus</td><td>Tota</td><td>IMC</td><td>Cyprinus</td><td>Tota</td></tr>
<tr><td><Value></td><td><Value></td><td><Value></td><td><Value></td><td><Value></td><td><Value></td><td colspan="3"><Value></td><td colspan="3"><Value></td><td colspan="3"><Value></td><td colspan="3"><Value></td><td><Value></td><td><Value></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td colspan="3"></td><td></td><td></td></tr>
<tr><td colspan="15"><Footer></td></tr>
</table>

4.5 PROPOSED RC/LC/PERMIT OUTPUTS

4.5.1 LC Report Format

<Header>						<Image>
S.NO.	**License No.**	**Country Code**	**State code**	**Type of License**	**Running No.**	**Year**
<Value>	<Value>	<Value>	<Value>	<Value>	<Value>	<Value>
<Footer>						

4.5.2 RC Report Format

<Header>						<Image>
S.NO.	**Registration No.**	**Country Code**	**State code**	**Type of Registration**	**Running No.**	**Year**
<Value>	<Value>	<Value>	<Value>	<Value>	<Value>	<Value>
<Footer>						

4.5.3 Permit Report Format

<Header>						<Image>
S.NO.	**Permit No.**	**Country Code**	**State code**	**Type of Permit**	**Running No.**	**Year**
<Value>	<Value>	<Value>	<Value>	<Value>	<Value>	<Value>
<Footer>						

4.5.4 Type of certificates

A. Registration R		
1.	Registration of Fishing Vessels and Free nets	VF
2.	Registration of Hatcheries	HA
3.	Registration of Aquaculture Land	AL
4.	Registration of Filtration Field	FF
5.	Registration of Fixed Gear	FG
B. STATEMENT		
6.	Filing of Return	FR
7.	Statement regarding disposal of seized fish/shell in public auction	
C. License L		
8.	LICENSE FIXED FISHING GEAR	FG
9.	FISHING LICENSE	FL
10.	LICENSING FILTRATION FIELD	FF
11.	LICENSING AQUACULTURE	AC
12.	LICENSING HATCHERY	HA
D. PERMIT P		
13.	Transit Permit for fish, shell or meat or both	TP
14.	Permit to enter or reside in sanctuaries	RS
15.	Permit to transfer sale for the fixes gear/aquaculture units in public waters	TS

4.5.5 Prposed Registartion Certificate

< **Header>**
< Hologram>

<Barcode>

Registration Number :_____ **Date of Registration:_____**
State Code:____ **Validity Period**
:DD/MM/YYYY
Type of Registration:___
Year:_____

1. Name Of the Applicant
2. Address Details
   State :
   District:
   Block:
   Panchayat:
   Pin code:
   Address Details:

<IMAGE> Of the Applicant

3. Type of fixed fear used
4.Unit details : (if RC is for water bodies)

Location

State: District :
Block : Panchayat:
Village: Taluka:
Survey No /Sub Survey No:
Total land area (ha) Total water area (ha) :
Capacity:
Owned/ leased/hired:
Fish species:

PLACE :_____ Signature:____ Seal of Department
Footer

4.5.6 Lab Test Report

<Image>			
<Header>			
File No: _____			**Date: /…/…..**
Field Office	<Values>		
Sample Id	<Values>		
Date of Collection	<Values>	Type	<Values>
Date of Receipt	<Values>	Name of the Species	<Values>
Date of Completion of Analysis	<Values>	Test Name	<Values>

TEST SPECIFICATIONS

S.NO	Parameter	Result	Test Method	Limit of Detection	MRL	Conformity
1	<Values>	<Values>	<Values>	<Values>	<Values>	<Values>
2						
N						

TESTED BY		
CHECKED BY		

AUTHORISED SIGNATORY		
<Footer>		

4.5.7 Prposed LICENSE Certificate

<Header>	**< Hologram>**
	<Barcode>
LICENSE NO : __ **VALIDITY UP TO:___** **REGISTRATION NUBER :__** **STATECODE:** **TYPE OF REGISTRATION:** **YEAR:** 1. NAME OF THE APPLICANT 2. ADRESS DETAILS STATE : DISTRICT BLOCK PANCHAYAT PINCODE ADDRESS DETAILS 3. PURPOSE OF ISSUING LICENSE 4. DETAILS	**DATE OF LICENSE__** **DATE OF REGISTARTION_____** **VALIDITY PERIOD :DD/MM/YYYY** <IMAGE OF THE APPLICANT>
PLACE:___ **Signature:____**	**Seal of Department**
<Footer>	

4.5.8 Proposed Permit Certificate

<HEADER> **<HOLOGRAM>**

<BARCODE>

PERMITE NO : **DATE OF PERMIT:**
VALIDITY UP TO:

1. NAME OF THE APPLICANT
2. ADRESS DETAILS
   STATE :
   DISTRICT:
   BLOCK:
   PANCHAYAT:
   PINCODE:
   ADDRESS DETAILS:
3. PURPOSE OF ISSUING PERMIT:
4. PERMIT FOR WHAT:
5. UNIT/SANCTUARY DETAILS IF:

<IMAGE OF THE APPLICANT>

PERMTTED LOCATION DETAILS:

STATE DISTRICT :
BLOCK PANCHAYAT:
VILLAGE TALUKA:
IF UNIT

SURVEY No /Sub Survey no

Total land area (ha)

Capacity

Total water Area (ha)

PLACE
SIGNATURE

SEAL OF DEPARTMENT

<FOOTER>

4.5.9 Proposed Ponds Transferred Report

<Header>					**<Image>**
S. NO.	Detail	No of Ponds	Water area in hectares	Fish Production in tons	Collection rate per hectare
A – District Production					
1	Departmental Ponds	<value>	<value>	<value>	<value>
2	FCS's ponds	<value>	<value>	<value>	<value>
Ponds transferred to Three tier 'Panchayati Raj Arrangement'					
1	Panchayat Ponds	<value>	<value>	<value>	<value>
2	JP Ponds	<value>	<value>	<value>	<value>
3	ZP Ponds	<value>	<value>	<value>	<value>
Total		<value>	<value>	<value>	<value>
Village Ponds					
1	Fisherman's development agency	<value>	<value>	<value>	<value>
2	Other Ponds	<value>	<value>	<value>	<value>
Total		<value>	<value>	<value>	<value>
From Rivers					
3	Departmental Income (in Lacs)	<value>	<value>	<value>	<value>
4	Income from the ponds transferred to three tier 'panchayati raj arrangement'				
5	Income of village panchayats	<value>	<value>	<value>	<value>
6	Income of JP	<value>	<value>	<value>	<value>
7	Income of ZP	<value>	<value>	<value>	<value>
Total		<value>	<value>	<value>	<value>
<Footer>					

4.6 User Characteristics

The internal users of the system are expected to be computer literates, who should be able to access and use the system through web based technology. They are also expected to be given a training of multiple levels to make them accomplished with the functionality of various features.

4.7 Constraints

4.8 Assumptions and Dependencies

- Availability of machines and required infrastructure with various stakeholders/users reporting with data
- Availability of machines and required infrastructure with various stakeholders to view reports
- Dependency on the portal for receiving information through web portal.

5. SPECIFIC REQUIREMENTS

5.1 Software Product Features

5.1.1 Functional Requirement

FEAT ID		Feature Description
MF001 State(Master Data)	FN001	This features enables Actor to get and fill reports/details at District level
	FN002	This features enables Actor to drill down for fill and get the reports/details at Block level
	FN003	Local Body Code
	FN004	Location for issuing license
	FN005	Location for issuing Registration
	FN006	Office Type
	FN007	Office Details(Name ,Location)
	FN008	Designation of Authority
	FN009	Certificate Formats(RC, LC, QC&A ,Transit permit)
	FN010	Service wise fee criteria(Registration fee ,License fee ,Fee for fish seed growers)
	FN011	Home page information
	FN012	Infrastructure Details (Water Bodies, Fish landing Centers etc.)
	FN013	Certificate parameters for quality testing(Chlorempheniol ,nitrofuran metabolite-SEM ,nitrofuran metabolite-AOZ, nitrofuran metabolite-AMOZ, nitrofuran metabolite-AHD)
	FN014	Service Authority (Approving Authority)
	FN015	Registration Agencies
	FN016	Validity of Certificates
	FN017	License issuing agencies
	FN018	Fish seeds and type

	FN019	Product code (genus, species , family etc)
	FN020	Type of dealers (hatcheries, farms, labs, FL centers etc)
	FN021	Type of applicant (dealer/ farmer)
	FN022	Certificate Format
	FN023	Fee Criteria
	FN024	Fee Structure
	FN025	List of Document Service wise
	FN026	Purpose of lab testing samples(export/ issuing license/ registration etc)
	FN027	Lab test name
	FN028	Certified parameters for quality testing
	FN029	Purpose of issuing certificates
	FN030	Buyers & sellers for e-trade
	FN031	Welfare schemes & implementation guidelines
	FN032	List of registered, banned, restricted seeds
	FN033	List of designated inspectors for quality control
	FN034	List of Pathogens
	FN035	List of Species
	FN036	List of disease
	FN037	Advisory units
	FN038	Training courses
	FN039	Disease wise medicines, vaccines, treatment management
	FN040	View Inland Water Resource

	FN041	View Marine Fisheries Resource
	FN042	View State wise fish production
MF002 Registration	FN01	New registration
	FN02	Applicant Details
	FN03	Insurance Details
	FN04	Previous registration details
	FN05	Verification of application for registration
	FN06	Approval of application for registration
	FN07	Issue of new/ duplicate registration certificate
	FN08	Cancellation / Suspension of registration
	FN09	Application submission for registration renewal
	FN010	Documents Submitted
	FN011	Change of ownership
	FN012	Alteration affects RC
	FN013	Alteration does not affect RC
	FN014	Penalty fee for dealers RC
	FN015	Penalty fee for Fisherman RC
MF003 Licensing	FN001	online / offline submission of Application for new cases
	FN002	Verification of application
	FN003	Approval of application
	FN004	Certificate Printing

	FN005	Issue of new/ duplicate
	FN006	Application submission for Duplicate
	FN007	Application submission for renewal
	FN008	Cancellation / Suspension of certificate
	FN009	Documents Submitted
	FN010	Penalty fee for dealers LC
	FN011	Penalty fee for Fisherman LC
MF004 **Transit Permit**	FN001	online / offline submission of Application for new cases
	FN002	Verification of application
	FN003	Approval of application
	FN004	Certificate Printing
	FN005	Issue of new/ duplicate
	FN006	Application submission for Duplicate
	FN007	Application submission for renewal
	FN008	Cancellation / Suspension of certificate

	FN009	Documents Submitted
MF005 **Dealer (hatchery, farm) – stock consumption**	FN001	This functionality will provide the actor to stock consumption information of fish seeds
MF006 **Seeds procured from other Sources**	FN001	This feature enables the actor to get information of location from where fish seeds can be obtained
MF007 **Insurance claim**	FN001	This features enables Actor for Application Insurance claim

	FN002	This features enables Actor for Verification of insurance claim
	FN003	This features enables Actor for Approval of Insurance claim
MF008 Price details of fish seeds	FN001	This features enables Actor for get information of price details depending on the size of fish seeds
MF009 Testing of samples	FN001	This features enables Actor to get Collection Details
	FN002	This features enables Actor to see the report of Test Results
	FN003	This features enables Actor to see Recommendation details
	FN004	Issuing QC&A Certificate
MF010 Fish landing centers wise price details/Market Information	FN001	This features enables Actor for fetch the price details of fish on the basis of fish landing centers situated in different places

	FN002	This feature enables Actor to get the market information regarding fisheries.
MF011 Fish landing centre wise arrival details	FN001	This features enables Actor to get the information of arrival of fish statistics in different landing centers
MF012 Traders details (buyers, sellers)	FN001	This features enables Actor to get details/List of Traders their category, location etc.
MF013 Catch details	FN001	This features enables Actor for to get information about daily fish catch statistics at different fish landing centers
MF014 Welfare scheme /monitoring details	FN001	This features enables Actor to create welfare scheme and also provide the scheme monitoring Authority
	FN002	This features enables Actor to view scheme details
	FN003	This features enables Actor to view the beneficiary report and progress report regarding welfare schemes
MF015 Fish disease reporting details	FN001	This features enables Actor to report about disease to concern officer
	FN002	This feature facilitate the actor to view disease,location,Symptoms ,and samples

	FN003	This feature facilitate the actor to view disease report
	FN004	This feature facilitate the actor to send the samples to Testing labs
MF016 Export/Import details	FN001	This features enables Actor to access the information/report regarding species wise Export/Import,
MF017 Advisory system	FN001	This features enables Actor to get expert advisory depending on onsite observation
MF018 Grievance Redressal	FN001	This feature enables actor to get grievance of the user and able to manage the grievances and provide their solution
MF019 e-Alert	FN001	This features enables Actor to get alert message on mobile in advance regarding weather forecasting/Price details/market details etc.
MF020 Registration of Hatcheries	FN001	This features enables Actor to get the location plan issued by the village officer
	FN002	This features enables Actor to get infrastructure development plan in relation to proposed hatcheries or fish breeding facility approved by the local private Institution
	FN003	This features enables Actor to get proof of financing if hypothecated to financial institutions
	FN004	This features enables Actor to get necessary permission for water source if forms depends on external resources
	FN005	This features enables Actor to get details about demand draft , Cheque(Fee) submitted fishermen/Dealers
	FN006	This features enables Actor to get detailed project reports of proposed hatcheries or fish breeding facility which includes reports on environment impact, cost benefits ratio, cash flow statement etc. ,identifying proof of owner/manager/applicant ,land ownership document, ownership/lease document of hatcheries(minimum five years) copy of commercial registration if any, Income Tax clearance certificates
MF021 SMS pull/push	FN001	This features enables Actor to get and provide information to fishermen regarding ,market details ,price details ,about weather forecasting ,application submission approval ,application/certificate/sample test report status ,grievance status ,training details ,insurance claim release

		date ,amount etc
MF022 Administration	FN001	User Administration
	FN002	User Role
MF023 Help	FN001	This features enables Actor get Online Help(UM/ video tutorial)
	FN002	This features enables Actor to get online Feedback
MF024 RTI	FN001	This features enables Actor to get information regarding Right of Information
MF025 Training	FN001	This features enables Actor to create training schedule on fisheries
	FN002	This features enables Actor to view training details on fisheries
	FN003	This features facilitate Actor to apply for training
MF026 Advisory	FN001	This features enables Actor to view expert advisory
	FN002	This features enables Actor for expert advisory

5.1.2 Use Case Description

5.1.2.1 View Inland Water resource

Overview: This activity enables the actor to view Inland water resource
Scope: The actor can view species wise

- Inland Water Resource

Use Case ID:	UC_ F_01
Use Case Name:	View Inland Water resource
Feature ID	MF001>FN040

Actors:	Admin, Central Officers	
Stake Holder:		
Description:	The actor can view the details of total inland water resources of India. He/She will be presented with number of each type inland resources with compare to each state of India.	
Trigger:	View Desired Report	
Pre conditions:	Actor needs to login to the application	
Post conditions:	Actor will able to select the option to see the inland water resources	
Input:	▪ Select Inland Resource	
Output:	▪ Desired report will be shown.	
Normal Flow:	Actor Actions ▪ The actor clicks on link for Inland Resource	System Responses ▪ Page opens up with desired Report
Exceptional Flow:	Actor Actions ▪ Show not available report	▪ System will throw an error highlighting the fault
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The actor cannot drill down for inner level details he can only view the state wise consolidated report	
Special Requirements:	State Data ownership	
Assumptions:	▪	
Dependency:	▪	
Notes and Issues:	▪ State Data ownership .	

5.1.2.2 View Marine Fisheries resource

Overview: This activity enables the actor to view Marine fisheries resource
Scope: The actor can view species wise

- Marine Fisheries Resource

Use Case ID:	UC_ F_02
Use Case Name:	View Marine Fisheries resource
Feature ID	MF001>FN041

Actors:	Admin, Central Officers	
Stake Holder:		
Description:	The actor can view the details of total marine fisheries resources of India. He/She will be presented with the approx length of coast line for each states, number of landing centers, number of fishing villages etc.	
Trigger:	View Desired Report	
Pre conditions:	Actor needs to login to the application	
Post conditions:	Actor will able to select the Marine Fisheries Resource	
Input:	▪ Select Marine Fisheries resource	
Output:	▪ Desired report will be shown.	
Normal Flow:	Actor Actions ▪ The actor clicks on link for Inland Resource	System Responses ▪ Page opens up with desired Report
Exceptional Flow:	Actor Actions ▪ Show not available report	▪ System will throw an error highlighting the fault
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The actor cannot drill down for inner level details he can only view the state wise consolidated report	
Special Requirements:	▪	
Assumptions:	▪	
Dependency:	▪ The report depends on the desired value which will be entered from admin level.	
Notes and Issues:	▪ State Data ownership	

5.1.2.3 View State Wise Fish production Report

Overview: This activity enables the actor to view state wise fish production report.
Scope: The actor can view species wise

- State wise fish production details

Use Case ID:	UC_ F_03
Use Case Name:	View Fish production Report
Feature ID	MF001>FN042

Actors:	Admin, Central Officers	
Stake Holder:		
Description:	The actor can view the details report of fish production in a particular session for different states of India.	
Trigger:	View Desired Report	
Pre conditions:	Actor needs to login to the application	
Post conditions:		
Input:	▪ Select session from Dropdown	
Output:	▪ Desired report will be shown.	
Normal Flow:	Actor Actions ▪ The actor selects specified session from dropdown menu.	System Responses ▪ Page opens up with desired Report
Exceptional Flow:	Actor Actions ▪ Show not available report	▪ System will throw an error highlighting the fault
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The actor can drill down for inner level details he can view the state wise, District wise and Block wise consolidated report	
Special Requirements:	▪ When Actor will request for the report the report data fields will be accessed from the database and report will be generated.	
Assumptions:	▪	
Dependency:	▪ At state level report is generated with the help of block and district data.	
Notes and Issues:	▪ State Data ownership.	

5.1.2.4 View Fish Seed Production Report

Overview: This activity enables the actor to view Fish Seeds production report.
Scope: The actor can view species wise

- Fish seeds production report

Use Case ID:	UC_F_04
Use Case Name:	View Fish Seed production Report
Feature ID	

Actors:	Admin, Central Officers	
Stake Holder:		
Description:	The actor can view the details of seed production of every year.	
Trigger:	View Desired Report	
Pre conditions:	Actor needs to login to the application	
Post conditions:		
Input:	▪ On click Operations	
Output:	▪ Desired report will be shown.	
Normal Flow:	Actor Actions ▪ The actor clicks on link for Fish seed Report.	System Responses ▪ Page opens up with desired Report
Exceptional Flow:	▪ Actor tries to submit their request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The actor can drill down for inner level details he can view the state wise, District wise and Block wise consolidated report	
Special Requirements:	▪	
Assumptions:	▪	
Dependency:	▪ At state level report is generated with the help of block and district data.	
Notes and Issues:	▪ State Data ownership.	

5.1.2.5 Entry of Fishing vessel with owner details

Overview: This activity enables the actor to enter the details of vessels.
Scope: The actor can register fishing vessel online

- Fishing Vessel registration
- Enter details of vessel owner with name and address

Use Case ID:	UC_ F_05
Use Case Name:	Fishing Vessel Registration
Feature ID	MF002> FN01

Actors:	Admin, Fisherman (Marine)	
Stake Holder:		
Description:	▪ The actor can enter details information of his/her vessel.	
Trigger:	▪ Enter details will be saved into the database.	
Pre conditions:	▪ Actor will able to select the option for entering details of vessel with ownership	
Post conditions:	▪ Actor will enter all the details regarding his vessel with owner details	
Input:	▪ Submit information of Vessel Registration details	
Output:	▪ Details will be saved to database and a Thank you page will be shown.	
Normal Flow:	Actor Actions ▪ The actor submits buttons for vessel registration.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Owners details not verified	▪ Registration Certificate not issued
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Continuous	
Business Rules:	▪ All the details entered regarding vessel information and ownership will be saved into the database.	
Special Requirements:	▪ Report of vessel registration and ownership details is shown to concerned officer	

Assumptions:	▪
Dependency:	▪
Notes and Issues:	▪ Concerned officer can see the details of vessel whenever the details are required for the verification in marine area.

5.1.2.6 Issuing Online TR for Vessel

Overview: This activity enables the actor to issue Transit permission for vessel.
Scope: The actor can view the details of a vessel and can issue the transit permission for a vessel.
.

- Can view the details of a vessel and can issue the transit permission

Use Case ID:	UC_ F_6
Use Case Name:	Issuing Online TR for vessel
Feature ID	MF003> FN01

Actors:	Admin, Block and District level officers	
Stake Holder:	Block and District level officers	
Description:	Actor will view the details of vessel regarding its registration certificate and its validity and then will enter all the details regarding its transportation.	
Trigger:	Registration and license number will be verified from database and details of transportation will be entered.	
Pre conditions:	Need to Login.	
Post conditions:	A TR will generate	
Input:	▪ APPLICANT details, purpose of permit, permit for what , if it is related to water bodies , enter unit details	
Output:	▪ Issue TR	
Normal Flow:	Actor Actions Permit and transportation details	System Responses Issue TR for that vessel
Exceptional Flow:	▪ Validity of period Expire	▪ TR not issued
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	

Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Registration and License number will be verified for a vessel before issue TR.
Special Requirements:	▪ Verification details are to be send from concerned officer to their upper level of officer
Assumptions:	▪ License number and registration Number expires ▪ Weather report is bad
Dependency:	
Notes and Issues:	▪ Vessel details will be verified ▪ Vessel Owner details will be verified ▪ TR will be issued for a particular date range..

5.1.2.7 Entry of Fish Seed Grower/Fishermen (Inland)

Overview: This activity enables the actor to enter the details of vessels.
Scope: The actor can register online under any fishing co-operative society.

- Inland Seed Grower/Fishermen registration
- Inland Fishermen registration will be under any co-operative

Use Case ID:	UC_ F_07
Use Case Name:	Inland Seed Grower/Fishermen Registration
Feature ID	MF002> FN01

Actors:	Admin, Fishermen(Inland), Seed Grower)
Stake Holder:	Fisherman, State and District level officers
Description:	The actor has to enter details information for registration as inland fishermen or seed grower.
Trigger:	All values will be entered in database.
Pre conditions:	Need to create Co-operative of minimum 11 fisher man

Post conditions:	Registration will be done of each inland fisherman under any co-operative.	
Input:	▪ Submit information to register as Inland Fishermen/Seed Grower	
Output:	▪ Details will be saved to database and a Thank you page will be shown.	
Normal Flow:	Actor Actions Submit information to register as Inland Fishermen/Seed Grower	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Wrong Details will be provided	▪ System will generate an error message.
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ For Inland Fisherman registration, Fisherman needs to create a co-operative of at least 11 fisherman. Then the fisherman details can be enlisted in the database.	
Special Requirements:	Co-operative should be selected for a particular inland fisherman	
Assumptions:	▪	
Dependency:	Registration depends on Co-operative.	
Notes and Issues:	▪ Co-operative Society will be created or Fisherman needs to select any existing society. ▪ Registration will be completed on behalf of all valid data..	

5.1.2.8 Approval of registration process of Fish Seed Grower/Fishermen (Inland)

Overview: This activity enables the actor to approve registration request of a fisherman/seed grower.
Scope: The actor can approve registration request of a fisherman/seed grower.
.

- Approval of Seed Grower/Fishermen registration

Use Case ID:	UC_ F_07
Use Case Name:	Inland Seed Grower/Fishermen Registration
Feature ID	MF002 >FN06

Actors:	Admin, RDC, DACF Officers	
Stake Holder:	Co-operative society	
Description:	RDC officer will do Scrutiny and provide approval to DACF.	
Trigger:		
Pre conditions:	▪ Need to Login before and scrutiny all the information of applicant.	
Post conditions:	▪ Actor will view the filled registration form and will click on approved for approval.	
Input:	▪ Click on approve for a particular application	
Output:	▪ Applications will be treated as approve and fisherman registration process will complete.	
Normal Flow:	Actor Actions Click on approve for a particular application	System Responses Applications will be treated as approve and fisherman registration process will complete.
Exceptional Flow:	▪ Actor tries to submit their approval but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	

Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Details about the approval authority, date, etc information will be saved into the database.
Special Requirements:	▪ Detailed information about fisherman is needed before RC approval
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ The information about the fisherman can be accessed from the co-operative society. .

5.1.2.9 Registration process for Dealers

Overview: This activity enables the actor to register in the application as dealer for RC
Scope: The actor can register within the application as dealer
.

- User has to insert all the basic and detail information to complete the registration process as dealer within the application.

Use Case ID:	UC_ F_09
Use Case Name:	Registration Process for Dealers
Feature ID	MF002> FN01

Actors:	Admin, Dealers, Block Officers
Stake Holder:	Co-operative society
Description:	User can register within this application as Dealer by filling all the details in the registration form.
Trigger:	
Pre conditions:	The actor has to enter details information for registration as Dealer
Post conditions:	
Input:	▪ Actor needs to enter all the details as per the registration form

Output:	▪ After successful registration, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions ▪ The actor clicks on link for dealer registration.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit their registration details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The dealer's detailed information is submitted and stored into the database.	
Special Requirements:		
Assumptions:	▪	
Dependency:	▪ Detailed information about dealers	
Notes and Issues:	▪ Dealer's detailed information is verified first, after that he can get the approval.	

5.1.2.10 Renewal process For Dealers RC

Overview: This activity enables the actor to renewal the registration certificate for dealers
Scope: The actor can enter the RC details and can complete the process for renewal of dealer's registration certificate.
.

- Renewal process for dealers registration certificate

Use Case ID:	UC_ F_10
Use Case Name:	Renewal process for Dealer Registration Certificate
Feature ID	MF002> FN09

Actors:	Admin, Dealer, Block officers	
Stake Holder:		
Description:	Dealers, Admin and Block officers can open to this screen and can enter the details for renewal process of Dealers Registration Certificate.	
Trigger:	An application detail for renewal of RC is stored into the database.	
Pre conditions:	Need to Login.	
Post conditions:	Actor able to select the renewal option for apply the renewal of registration	
Input:	▪ Actor needs to enter all the details as per the renewal form - Reg.No and date ▪ System will populate all the details pertaining to this input and fills the validity period with fee details	
Output:	▪ After successful renewal, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button for renewal.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit their renewal request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ After filling the request for renewal of RC, the details are stored into the data base.	
Special Requirements:	▪ A previous details of RC	

Assumptions:	▪
Dependency:	▪ A previous RC detail is required first.
Notes and Issues:	▪ Previous details of RC will help to do the renewal of the RC requested by the fisherman

5.1.2.11 Duplicate RC generation For Dealers

Overview: This activity enables the actor to generate duplicate RC
Scope: The actor can create duplicate registration certificate for dealers
.

- Duplicate Registration certificate generation

Use Case ID:	UC_ F_11
Use Case Name:	Duplicate RC generation for dealers
Feature ID	MF002> FN07

Actors:	Admin, Block officers	
Stake Holder:		
Description:	Actor will be able to create duplicate registration certificate for dealers, if it is lost or damage from dealers.	
Trigger:	Duplicate RC request will be send to the concerned officer and data is stored into the database.	
Pre conditions:	Need to Login.	
Post conditions:	Actor is able to select the application submission option	
Input:	▪ Actor needs to enter all the details as per act - Reg.No , reason for applying duplicate RC ▪ System will populate all the details pertaining to this input and fills the validity period with fee details	
Output:	▪ After successful creation of duplicate registration certificate, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button to create the duplicate registration form.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit their duplicate RC request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		

UI: required/not required	Required
Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ After filling the request for duplicate of RC, the details are stored into the data base.
Special Requirements:	▪ Previous RC details is needed
Assumptions:	▪
Dependency:	▪ Previous RC details Data
Notes and Issues:	▪ Previous RC details are required so that the concerned officer verify the application on the basis of previous record.

5.1.2.12 Cancel registration process For Dealers RC

Overview: This activity enables the actor to cancel registration process for Dealers
Scope: The actor can cancel the registration certificate for dealers
.

- View of dealers registration certificate
- Cancel registration certificate for dealers

Use Case ID:	UC_ F_12
Use Case Name:	Cancel registration Certificate For Dealers
Feature ID	MF002> FN08

Actors:	Admin, Govt. Officers State level	
Stake Holder:		
Description:	Actor will be able to view the details of registration certificate of a dealer and then actor can cancel the registration.	
Trigger:	Cancellation request is saved into the database.	
Pre conditions:	Need to Login.	
Post conditions:	Actor can select the cancelation option from the list	
Input:	▪ Actor will click on cancel button for any particular dealer, enter the reason for cancellation with upload the documents	
Output:	▪ Dealers status will be changed to cancel	
Normal Flow:	Actor Actions Actor will click on cancel button for any particular dealer	System Responses Dealers status will be changed to cancel
Exceptional Flow:	▪ Actor tries to submit their cancellation of RC request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ After filling the request for cancellation of RC, the details are stored into the data base	

Special Requirements:	▪ Reason for cancellation of RC
Assumptions:	▪
Dependency:	▪ Precious RC Details
Notes and Issues:	▪ Cancellation of RC is done on the request of fisherman or when fisherman break the rule of fisheries act then cancellation of RC can be done by the authorized officer.

5.1.2.13 Ownership Changing application For Dealers RC

Overview: This activity enables the actor to change the ownership of dealer's organization
Scope: The actor can change the name of owner for a particular dealer's organization.
.

- View authenticated document
- Update document
- Change owner name

Use Case ID:	UC_ F_13
Use Case Name:	Change Owner Name of Dealer's organization
Feature ID	MF002> FN011

Actors:	Admin, Block and District level officers
Stake Holder:	
Description:	Actor will check all the necessary documents for the new owner and then update documents in the database server and then change the name of owner for a particular dealer's organization.
Trigger:	Ownership change request will be saved into the database
Pre conditions:	Need to Login.

Post conditions:	Actor select the ownership change option form the list of option and fill the details	
Input:	▪ Actor needs to enter - Reg.No and date ▪ System will populate all the details pertaining to this input with fee details ▪ Actor will change the name of the owner of a particular organization of a dealer and will update necessary documents for that owner in the database.	
Output:	▪ Owner name will be changes and other details will be saved to database.	
Normal Flow:	Actor Actions Upload necessary documents, change owner name and click on Save button	System Responses Changes will be saved and documents will be uploaded a thank You page will be shown.
Exceptional Flow:	▪ Actor tries to submit ownership change request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Details of ownership request saved into the database	
Special Requirements:	▪ Previous owner details is required	
Assumptions:	▪	
Dependency:	▪ Data of previous owner details	
Notes and Issues:	▪ Dealer can do the request about change of ownership; on the basis of request new owner can be added in place of old one.	

5.1.2.14 Penalty fees For Dealers RC

Overview: This activity enables the actor to enter the penalty details of a particular dealer
Scope: The actor can enter the amount of penalty and can enter penalty type

.

- Enter/Select Penalty Type
- Amount will be collected from dealer
- Save it to database

Use Case ID:	UC_ F_14
Use Case Name:	Penalty Fees For dealer
Feature ID	MF002> FN014

Actors:	Admin, Block and District level officers	
Stake Holder:	Dealer, Fisherman, Officials	
Description:	Actor can select penalty type and the amount of penalty will automatically generate from database and actor will put dealer registration information and save it to database.	
Trigger:	Penalty Value will be retrieved from database.	
Pre conditions:	Need to Login.	
Post conditions:	Amount must be collect from that dealer.	
Input:	▪ Penalty Type, Dealer Registration number	
Output:	▪ Penalty amount and date will be saved in the database for that particular dealer.	
Normal Flow:	Actor Actions Enter Registration Number of dealer and select Penalty type	System Responses Penalty amount and date will be saved in the database for that particular dealer.
Exceptional Flow:	▪ Actor tries to submit penalty fees but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Penalty will be taken as per the value from database. Actor can't enter any penalty at the time of taken penalty	
Special Requirements:	▪ Date of fee Submission details are required	

Assumptions:	▪
Dependency:	
Notes and Issues:	▪ Penalty type will be selected and value will be collected and the details will be saved at database. ▪ .

5.1.2.15 Registration process of Dealers for LC

Overview: This activity enables the actor to register in the application of dealer for RC
Scope: The actor can register within the application for the LC

.

- User has to insert all the detail information regarding his/her registration certificate to complete the registration process for LC within the application.

Use Case ID:	UC_ F_15
Use Case Name:	Registration Process of Dealers for LC
Feature ID	MF002> FN01

Actors:	Admin, Dealers, Block Officers	
Stake Holder:		
Description:	Dealers can apply for the LC.	
Trigger:	All values will be stored at database.	
Pre conditions:	The actor has to enter details information for LC registration.	
Post conditions:	A LC Registration form opens and actor will able to fill the details.	
Input:	▪ Actor needs to enter all the details as per the registration form	
Output:	▪ After successful entry, values will be inserted into the database and system will generate a thank you message for LC.	
Normal Flow:	Actor Actions ▪ The actors submit values for dealer LC registration.	System Responses Details LC Number and details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit LC registration request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	

Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Request of LC details is saves d into the database
Special Requirements:	▪ Dealers RC Information is required
Assumptions:	▪
Dependency:	▪ Dealers RC information
Notes and Issues:	▪ After the approval of the document RC is generated by the authorized officials.

5.1.2.16 Renewal process For Dealers LC

Overview: This activity enables the actor to renewal the License certificate for dealers
Scope: The actor can enter the details and can complete the process for renewal of dealer's license certificate.

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- Renewal process for dealers license certificate

Use Case ID:	UC_ F_16
Use Case Name:	Renewal process for Dealer License Certificate
Feature ID	MF003> FN07

Actors:	Admin, Dealer, Block officers
Stake Holder:	
Description:	Dealers, Admin and Block officers can open to this screen and can enter the details for renewal process of Dealers License Certificate.
Trigger:	Renewal request for Dealer LC is done by the actor and the request details is saved into the database
Pre conditions:	Need to Login.
Post conditions:	Select the renewal of dealer LC option from the web page

Input:	▪ Actor needs to enter all the details as per the renewal form - Reg.No and date ▪ System will populate all the details pertaining to this input and fills the validity period with fee details	
Output:	▪ After successful renewal, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button for renewal.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit request about dealer renewal of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Request of renewal of dealers LC details is saved into the database	
Special Requirements:	▪ Previous details of Dealers LC	
Assumptions:	▪	
Dependency:	▪ Data about Dealers LC	
Notes and Issues:	▪ Renewal of dealers LC is issued on the basis of dealers request and time period is increased/ expanded by the authorized officials.	

5.1.2.17 Duplicate LC generation For Dealers

Overview: This activity enables the actor to generate duplicate LC
Scope: The actor can create duplicate license certificate for dealers

.

- Duplicate License certificate generation

Use Case ID:	UC_ F_17
Use Case Name:	Duplicate LC generation for dealers
Feature ID	MF003> FN006

Actors:	Admin, Block officers	
Stake Holder:		
Description:	Actor will be able to create duplicate license certificate for dealers, if it is lost or damage from dealers.	
Trigger:	Actor do the request for the duplicate LC and the data is stored into the database.	
Pre conditions:	Need to Login.	
Post conditions:	Select the page for the request of duplicate LC	
Input:	▪ Actor needs to enter all the details as per the form - LC .No and date , reason ▪ System will populate all the details pertaining to this input and fills the validity period with fee details ▪ Actor needs to enter all the details to create and print the duplicate form for dealer's license certificate.	
Output:	▪ After successful creation of duplicate license certificate, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button to create the duplicate license certificate.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to submit request about duplicate dealer of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	

Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Duplicate dealers LC details is saved and stored into the database
Special Requirements:	▪ Reason for duplicate LC for dealers
Assumptions:	▪
Dependency:	▪ Previous Data about LC of dealers
Notes and Issues:	▪ Duplicate LC for dealer is issued on the basis of dealers request

5.1.2.18 Cancel license process For Dealers LC

Overview: This activity enables the actor to cancel license certificate for Dealers
Scope: The actor can cancel the license certificate for dealers

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- View of dealer's license certificate
- Cancel license certificate for dealers

Use Case ID:	UC_ F_18
Use Case Name:	Cancel license Certificate For Dealers
Feature ID	MF003> FN008

Actors:	Admin, Govt. Officers State level
Stake Holder:	
Description:	Actor will be able to view the details of license certificate of a dealer and then actor can cancel the license certificate.
Trigger:	Actor request for the cancellation of dealers LC and the data is saved into the database.
Pre conditions:	Need to Login.
Post conditions:	Actor select the option for cancellation of dealers LC

Input:	▪ Actor will click on cancel button for any particular dealer, enter reason and upload documents	
Output:	▪ Dealers status will be changed to cancel	
Normal Flow:	Actor Actions Actor will click on cancel button for any particular dealer	System Responses Dealers status will be changed to cancel
Exceptional Flow:	▪ Actor tries to submit cancellation request about dealer of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Cancellation request of dealers LC details is saved and stored into the database	
Special Requirements:	▪ Reason for the cancellation of Dealers LC	
Assumptions:	▪	
Dependency:	▪	
Notes and Issues:	▪ If the dealer found under any offence that breaks the fisheries act then the cancellation process can be applied on the dealers LC	

5.1.2.19 Penalty fees For Dealers LC

Overview: This activity enables the actor to enter the penalty details of a particular dealer
Scope: The actor can enter the amount of penalty and can enter penalty type

.

- Enter/Select Penalty Type
- Amount will be collected from dealer
- Save it to database

Use Case ID:	UC_ F_19
Use Case Name:	Penalty Fees For dealer LC
Feature ID	MF003>FN010

Actors:	Admin, Block and District level officers	
Stake Holder:		
Description:	Actor can select penalty type and the amount of penalty will automatically generate from database and actor will put dealer license certificate information and save it to database.	
Trigger:	Actor can be get the penalty details by click on Penalty option	
Pre conditions:	Need to Login.	
Post conditions:	Amount must be collect from that dealer.	
Input:	▪ Penalty Type, Dealer Registration number, License Number	
Output:	▪ Penalty amount and date will be saved in the database for that particular dealer.	
Normal Flow:	Actor Actions Enter Registration Number, License number of dealer and select Penalty type	System Responses Penalty amount and date will be saved in the database for that particular dealer.
Exceptional Flow:	▪ Actor tries to get penalty details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	

Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Penalty fees and rules information accessed from the database.
Special Requirements:	
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ Penalty on the dealers LC is issued due to late renewal of the LC and the dealers have to pay or that amount under the fisheries act.

5.1.2.20 Registration process of Farmer for LC

Overview: This activity enables the actor to register in the application as farmer for LC
Scope: The actor can register within the application as farmer for LC

.

- User has to insert all the basic and detail information to complete the registration process as farmer for LC within the application.

Use Case ID:	UC_ F_20
Use Case Name:	Registration Process of Farmer for LC
Feature ID	MF003> FN001

Actors:	Admin, Block Officers
Stake Holder:	
Description:	Actor can register within this application for LC as Farmer by filling all the details in the registration form.
Trigger:	Request for LC is received by the concerned officer and detail about user is stored into the database.
Pre conditions:	The actor has to enter details information for LC as fish farmer
Post conditions:	Actor is able to select the application form for LC and feed the details about himself
Input:	▪ Actor needs to enter all the details as per the registration form for LC as farmer

Output:	▪ After successful registration, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions ▪ The actor submits values for farmer LC registration.	System Responses Details LC Number and details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to apply for LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor apply for the LC with required details and details are stored into the database	
Special Requirements:	▪ Required previous LC details	
Assumptions:	▪	
Dependency:	▪ Data regarding fisherman RC	
Notes and Issues:	▪ Request for the LC is made by the fisherman. ▪ Authorized officer will scrutinized the document details and if the details is right then LC is issued by officer	

5.1.2.21 Renewal process For farmers LC

Overview: This activity enables the actor to renewal the License certificate for farmers

Scope: The actor can enter the details and can complete the process for renewal of farmer's license certificate.

.

- Renewal process for farmer's license certificate

Use Case ID:	UC_ F_21
Use Case Name:	Renewal process for Farmer License Certificate
Feature ID	MF003> FN007

Actors:	Admin, Block officers	
Stake Holder:		
Description:	Dealers, Admin and Block officers can open to this screen and can enter the details for renewal process of farmer's License Certificate.	
Trigger:	Actor request for the renewal of LC	
Pre conditions:	Need to Login.	
Post conditions:	An actor selects the page for the renewal of LC and fills the details and submits it.	
Input:	▪ Actor needs to enter all the details as per the renewal form - Reg.No and date ▪ System will populate all the details pertaining to this input and fills the validity period with fee details	
Output:	▪ After successful renewal, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button for renewal.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to apply for renewal of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	

Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Actor apply for the renewal of LC with required details and details are stored into the database
Special Requirements:	▪ Previous RC details of fisherman is required
Assumptions:	▪
Dependency:	▪ Previous record of LC details
Notes and Issues:	▪ Request for the renewal of LC is made by the fisherman. ▪ Authorized officer will scrutinized the document details and if the details are right then LC renewal is issued by officer.

5.1.2.22 Duplicate LC generation For Farmers

Overview: This activity enables the actor to generate duplicate LC
Scope: The actor can create duplicate license certificate for dealers

.

- Duplicate License certificate generation

Use Case ID:	UC_ F_22
Use Case Name:	Duplicate LC generation for farmers
Feature ID	MF006> FN006

Actors:	Admin, Block officers
Stake Holder:	
Description:	Actor will be able to create duplicate license certificate for farmers, if it is lost or damage from farmers.
Trigger:	Actor request for the duplicate LC and request detail is send to the concerned officer
Pre conditions:	Need to Login.
Post conditions:	Actor selects the duplicate LC request page and fills the records
Input:	▪ Actor needs to enter all the details of RC No. And reason to create and print the duplicate form for farmer's license certificate.

Output:	▪ After successful creation of duplicate license certificate for farmer, values will be inserted into the database and system will generate a thank you message.	
Normal Flow:	Actor Actions Click on Submit button to create the duplicate license certificate for farmers.	System Responses Details will be saved to database and a Thank you page will be shown.
Exceptional Flow:	▪ Actor tries to apply for duplicate of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ The input details regarding the request about duplicate LC is saved and stored into the database	
Special Requirements:	▪ Previous Details of fish farmer LC	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ Request for the duplicate of LC is made by the fisherman. ▪ Authorized officer will scrutinized the document details and if the details are right then duplicate LC is issued by officer.	

5.1.2.23 Cancel registration process For Farmers LC

Overview: This activity enables the actor to cancel license certificate for Farmers
Scope: The actor can cancel the license certificate for farmers

.

- View of farmer's license certificate
- Cancel license certificate for farmers

Use Case ID:	UC_ F_23
Use Case Name:	Cancel license Certificate For Dealers
Feature ID	MF003> FN008

Actors:	Admin, Govt. Officers State level	
Stake Holder:		
Description:	Actor will be able to view the details of license certificate of a farmer and then actor can cancel the license certificate.	
Trigger:	Actor request for the cancellation of farmer LC and request is received by the authorized officer	
Pre conditions:	Need to Login.	
Post conditions:	Actor Selects the cancellation page and fills the details	
Input:	▪ Actor will click on cancel button for any particular farmer	
Output:	▪ Farmers status will be changed to cancel	
Normal Flow:	Actor Actions Actor will click on cancel button for any particular farmer	System Responses Farmers status will be changed to cancel
Exceptional Flow:	▪ Actor tries to apply for cancellation of LC but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	

Business Rules:	▪ Details about the cancellation of LC is stored into the database
Special Requirements:	
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ If the fish farmer is found against the fisheries act then authorized officer can made a cancellation request against the fish farmer.

5.1.2.24 Penalty fees For Farmers LC

Overview: This activity enables the actor to enter the penalty details of a particular farmer
Scope: The actor can enter the amount of penalty and can enter penalty type
.

- Enter/Select Penalty Type
- Amount will be collected from farmer
- Save it to database

Use Case ID:	UC_ F_24
Use Case Name:	Penalty Fees For dealer LC
Feature ID	MF003>FN011

Actors:	Admin, Block and District level officers
Stake Holder:	
Description:	Actor can select penalty type and the amount of penalty will automatically generate from database and actor will put farmer license certificate information and save it to database.
Trigger:	Actor can get Penalty details, reason for penalty ,penalty amount when the LC validation date is expired and renewal of LC is not applied within the time period
Pre conditions:	Need to Login.
Post conditions:	Amount must be collect from that dealer.

Input:	▪ Penalty Type, Farmer License Number	
Output:	▪ Penalty amount and date will be saved in the database for that particular farmer.	
Normal Flow:	Actor Actions Enter Registration Number, License number of farmer and select Penalty type	System Responses Penalty amount and date will be saved in the database for that particular farmer.
Exceptional Flow:	▪ Actor tries to get the penalty details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Penalty details are stored into the database for further information.	
Special Requirements:		
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ When the LC validation is expired and the request for renewal of LC is not made by the fisherman within the due date then penalty is applied by the department.	

5.1.2.25 Insurance Claim

Overview: This activity enables the actor to claim the amount of insurance what he/she has done previously.
Scope: The actor can claim the amount of insurance.

- Actor needs to submit the details which are related to that particular insurance.

Use Case ID:	UC_ F_25
Use Case Name:	Insurance Claim
Feature ID	MF006> FN001

Actors:	Admin, Block and District level officers	
Stake Holder:	Insurance Officer	
Description:	Actor will enter insurance number or agency name to view particular insurance and then will enter all the details to claim that insurance.	
Trigger:	Actor applies for the insurance claim and the claim request is received by the insurance company.	
Pre conditions:	Need to Login. And then will search that particular insurance detail to submit the claim.	
Post conditions:	Submit details will be verified.	
Input:	▪ Actor needs to enter Insurance Number and then needs to put all the details to claim the insurance	
Output:	▪ Thank you message will be displayed and Insurance claim will be applied	
Normal Flow:	Actor Actions Enter all the details to apply for insurance claim	System Responses Insurance claim application will be applied and the related information will be saved to database.
Exceptional Flow:	▪ Actor tries to apply for the insurance claim but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't apply for insurance claim until all the related documents are submitted and verified.	

Special Requirements:	▪ Actor needs to update all related documents and need to check and verify it before submit it.
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ Fisherman request for the insurance claim request is received by the insurance company and a token number is automatically generated and send to applicant email-id for status checking.

5.1.2.26 View Insurance Details

Overview: This activity enables the actor to view insurance details of users
Scope: The actor can view the details of insurance

.

- General report of user's insurance

Use Case ID:	UC_ F_26
Use Case Name:	View Insurance Details
Feature ID	MF006> FN002

Actors:	Admin, Block and District level officers
Stake Holder:	
Description:	Insurance details of users will be viewed on this page.
Trigger:	Insurance details are accessed by the insurance company.
Pre conditions:	Need to Login.
Post conditions:	Actor is able to access the insurance claim details requested by the fisherman
Input:	▪ Search will be happened by Policy number, period, address, type of insurance
Output:	▪ Detailed report will be shown as per search criteria.

Normal Flow:	Actor Actions Enter Search Criteria and click on Search button	System Responses Detailed report will be shown as per search criteria.
Exceptional Flow:	▪ Actor tries to view insurance claim details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Details about the insurance claim are stored into the database.	
Special Requirements:		
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ After insurance claim made by the fisherman the claim is verified on the basis of submitted document after verification the claim amount is released for the applicant.	

5.1.2.27 Approval of Insurance Claim

Overview: This activity enables the actor to claim the amount of insurance what he/she has done previously.
Scope: The actor can claim the amount of insurance.

- Actor needs to submit the details which are related to that particular insurance.

Use Case ID:	UC_ F_27
Use Case Name:	Approval of Insurance Claim
Feature ID	MF007> FN002

Actors:	Admin, Block and District level officers
Stake Holder:	Insurance Agency

Description:	Actor will enter insurance number or agency name to view particular insurance and then will enter all the details to claim that insurance.	
Trigger:		
Pre conditions:	Need to Login. And then will search that particular insurance detail to submit the claim.	
Post conditions:	Submit details will be verified.	
Input:	▪ Actor needs to enter Insurance Number and then needs to put all the details to claim the insurance	
Output:	▪ Thank you message will be displayed and Insurance claim will be applied	
Normal Flow:	Actor Actions Enter all the details to apply for insurance claim	System Responses Insurance claim application will be applied and the related information will be saved to database.
Exceptional Flow:	▪ Actor tries to view insurance claim approval details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't apply for insurance claim until all the related documents are submitted and verified.	
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.	
Assumptions:	▪	
Dependency:	▪ Insurance claim document	
Notes and Issues:	▪ After insurance claim made by the fisherman the claim is verified on the basis of submitted document after verification the claim is approved by the agency	

5.1.2.28 Fish Seed Stock for Dealer

Overview: This activity enables the actor to view the stock of feed seed of a particular detail
Scope: The actor can view the total stock of fish seeds of any particular dealer

.

- Can view species name, quantity of seeds

Use Case ID:	UC_ F_28
Use Case Name:	Fish Seeds Stock For Dealer
Feature ID	MF005> FN001

Actors:	Admin, Block and District level officers, Dealers	
Stake Holder:		
Description:	Actor can enter dealer registration number or license number or seed registration number or name of the dealer with location to view the list of stock of seeds under any particular dealer.	
Trigger:	The request for the fish seed stock details is send to the database	
Pre conditions:	Need to Login.	
Post conditions:	Actor is able to select the option for access the fish seed stock details	
Input:	▪ Dealer registration number or license number or seed registration number	
Output:	▪ Fish seeds details and stock of that particular seed	
Normal Flow:	Actor Actions Enter Dealer Registration Type, License number or seed registration number	System Responses Fish seeds details and stock of that particular seed will be shown from database of any particular dealers
Exceptional Flow:	▪ Actor tries to view fish seed stock details but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		

UI: required/not required	Required
Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ The details input regarding fish seed is saved into the database.
Special Requirements:	
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ User can select the location, dealers to get the fish seed stock details in different location.

5.1.2.29 Application for fish seeds

Overview: This activity enables the actor to apply for fish seeds to local bodies of Block level.
Scope: The actor can apply for fish seeds through application form.

- Dealer can apply for fish seeds to local bodies(GP)

Use Case ID:	UC_ F_29
Use Case Name:	Application for fish seeds
Feature ID	MF001> FN001

Actors:	Admin, Dealer
Stake Holder:	Directorate of Fisheries & its sub offices
Description:	Actor will enter all the details in application form and can apply for fish seeds to local bodies (GP).
Trigger:	Application request is made by the fisherman for fish seed
Pre conditions:	Need to Login as Dealer

Post conditions:	Registration and License certificate will be verified	
Input:	▪ Actor needs to enter all the details in the application form.	
Output:	▪ Thank you message will be displayed and fish seeds application will be applied	
Normal Flow:	Actor Actions Enter all the details to apply for fish seeds	System Responses Thank you message will be displayed and fish seeds application will be applied
Exceptional Flow:	▪ Dealer registration validation Fail	▪ Dealer Can't apply and error message will generate
Includes: other use case id	3.1.2.30	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't apply for fish seeds if application date over or actor validity within the system expire	
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ Fisherman apply for the fish seed to the district fisheries officer ▪ After the observation, on the basis of water area DFO collects the fee and provide the fish seed.	

5.1.2.30 Approval of Application of Dealer and distribution for fish seeds

Overview: This activity enables the actor to approve the application of dealer and distribute fish seeds.
Scope: The actor can approve the application.

- Actor can approve the application of the dealer.
- Actor can distribute fish seeds to the applicant

Use Case ID:	UC_ F_30
Use Case Name:	Approval of Application of Dealer and distribute fish Seeds
Feature ID	MF004> FN003

Actors:	Admin, Block and District level officers	
Stake Holder:	Directorate of Fisheries & its sub offices	
Description:	Actor can approve the application of dealer and distribute fish seeds to the applicant.	
Trigger:	After the approval for the fish seed the approval details is send to the concerned officer.	
Pre conditions:	Need to Login. Need to verify the application details.	
Post conditions:	Fish seeds quantity should be updated in database.	
Input:	▪ Actor needs to verify the application and will approve it and after that actor will enter fish seeds details	
Output:	▪ Thank you message will be displayed and fish seeds will be distributed	
Normal Flow:	Actor Actions Actor will approve as per application and will enter related values to distribute fish seeds	System Responses Thank You message will be displayed and fish seeds will be distributed to that particular dealer
Exceptional Flow:	▪ Application rejected	▪ Cause of rejection will be emailed to applicant's email
Includes: other use case id	3.2.1.29	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't approve or distribute fish seeds without proper application details and documents and verification.	

Special Requirements:	▪ Actor needs to update all related documents and need to check and verify it before submit it.
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ After the approval, on the basis of water area DFO collects the fee and provide the fish seed

5.1.2.31 Application for fish seeds of farmer

Overview: This activity enables the actor to apply for fish seeds to local bodies of Block level.
Scope: The actor can apply for fish seeds through application form.

- Farmer can apply for fish seeds to local bodies(GP)

Use Case ID:	UC_ F_31
Use Case Name:	Application for fish seeds of Farmers
Feature ID	FN001 >. MF001

Actors:	Admin, Farmer
Stake Holder:	Directorate of Fisheries & its sub offices
Description:	Actor will enter all the details in application form and can apply for fish seeds to local bodies (GP).
Trigger:	Application request is made by the fisherman for fish seed
Pre conditions:	Need to Login as Farmer
Post conditions:	License certificate will be verified

Input:	▪ Actor needs to enter all the details in the application form.	
Output:	▪ Thank you message will be displayed and fish seeds application will be applied	
Normal Flow:	Actor Actions Enter all the details to apply for fish seeds	System Responses Thank you message will be displayed and fish seeds application will be applied
Exceptional Flow:	▪ Farmer registration number validation Fail	▪ Famer Can't apply and error message will generate
Includes: other use case id	3.1.2.32	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't apply for fish seeds if application date over or actor validity within the system expire	
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.	
Assumptions:	▪	
Dependency:	System will check the application form is from a valid user or not.	
Notes and Issues:	▪ Actor can't be applied without any valid registration number. ▪ .	

5.1.2.32 Approval of Application of Farmer and distribution for fish seeds

Overview: This activity enables the actor to approve the application of farmer and distribute fish seeds.
Scope: The actor can approve the application.

- Actor can approve the application of the farmer.
- Actor can distribute fish seeds to the applicant

Use Case ID:	UC_ F_32
Use Case Name:	Approval of Application of Farmer and distribute fish Seeds
Feature ID	FN003> MF005

Actors:	Admin, Block and District level officers	
Stake Holder:	Directorate of Fisheries & its sub offices	
Description:	Actor can approve the application of farmer and distribute fish seeds to the applicant.	
Trigger:	After the approval for the fish seed the approval details is send to the concerned officer.	
Pre conditions:	Need to Login. Need to verify the application details.	
Post conditions:	Fish seeds quantity should be updated in database.	
Input:	▪ Actor needs to verify the application and will approve it and after that actor will enter fish seeds details	
Output:	▪ Thank you message will be displayed and fish seeds will be distributed	
Normal Flow:	Actor Actions Actor will approve as per application and will enter related values to distribute fish seeds	System Responses Thank You message will be displayed and fish seeds will be distributed to that particular dealer
Exceptional Flow:	▪ Application rejected	▪ Cause of rejection will be emailed to applicant's email
Includes: other use case id	3.2.1.31	

UI: required/not required	Required
Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Actor can't approve or distribute fish seeds without proper application details and documents and verification.
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.
Assumptions:	▪
Dependency:	
Notes and Issues:	▪ After the approval for the fish seed the approval details is send to the concerned officer. ▪ .Concerned authority collects the fee and provides the fish seed.

5.1.2.33 Create Training on Fishery

Overview: This activity enables the actor to create a new training course regarding fishery.
Scope: The actor can create new training course in fishery under the authority of any state.

- Actor can create training course on fishery after filling all the details of it.
- Actor can select agency who is imparting the training.

Use Case ID:	UC_ F_33
Use Case Name:	Create Training on Fishery
Feature ID	MF025>FN001

Actors:	Admin, Block and District level officers
Stake Holder:	Directorate of Fisheries & its sub offices
Description:	Actor can create a training course and an agency name will be denoted for imparting the training.

Trigger:		
Pre conditions:	Need to Login. Need to verify the agency who is imparting the training	
Post conditions:	Training details will be displayed in the website.	
Input:	▪ Actor needs to verify the agency details that is imparting training and then will put all the details of training.	
Output:	▪ Thank you message will be displayed and training on fishery will be created and details will be stored in the database.	
Normal Flow:	Actor Actions Actor will select agency name and then insert all the details of training.	System Responses Thank you message will be displayed and training on fishery will be created and details will be stored in the database.
Exceptional Flow:	▪ Agency registration validation expires.	▪ System will ask for another agency otherwise course will not be created.
Includes: other use case id	3.2.1.34	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't create training without proper verification of agency and each details regarding course will be essential.	
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ Training details and training schedule is made by the authorized officer and uploaded on the web as the information.	

5.1.2.34 View Training details on Fishery

Overview: This activity enables the actor to view training course regarding fishery in the application.
Scope: The actor can view training course in fishery under the authority of any state.

- Actor can view training course on fishery after filling all the details of it.
- Actor can select agency who is imparting the training.

Use Case ID:	UC_ F_34
Use Case Name:	View Training on Fishery
Feature ID	

Actors:	Admin, Farmer, Fisherman, Dealer
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer
Description:	Actor can view training course in details.
Trigger:	Particular training name will be triggered to database and retrieved the full details of training.
Pre conditions:	User don't need to login. User need to select any particular training course to view the details for it.
Post conditions:	
Input:	▪ Actor needs to click on any particular training to view the details of that.
Output:	▪ All details will be displayed regarding that training. • Training Course Name • Training Duration • Training Place • Training Start Date • Training fees • Training Capacity • Training Subject • Training for whom

Normal Flow:	Actor Actions Actor will select particular training and will click to view the details of training.	System Responses All details will be displayed regarding that training.
Exceptional Flow:	▪ User select on any particular training which is already expires	▪ System will generate the message that the particular training has already been expired.
Includes: other use case id	3.2.1.33	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Particular Training Name will be selected by the user and system will retrieve all respective values for that training course from database. System will check whether the training name is valid or not.	
Special Requirements:		
Assumptions:	▪	
Dependency:	Result depends on the training name which has been selected by the user.	
Notes and Issues:	▪ Necessary details will be presented to actors for any particular training ▪ Actor can also be view any training details which is not related to him ▪ .	

5.1.2.35 Application of Training on Fishery

Overview: This activity enables the actor to apply online on a fishery training course. **Scope**: The actor can apply on a training course in fishery under the authority of any state.

- Actor can apply on training course on fishery after filling all the details of it.

Use Case ID:	UC_ F_35
Use Case Name:	Application of Training on Fishery
Feature ID	

Actors:	Admin, Farmer, Fisherman, Dealer	
Stake Holder:	Fisherman, Fish Farmer, Dealer	
Description:	Actor can apply on a training course.	
Trigger:	Application made for the training is received by the authorized officer so that he can manage it	
Pre conditions:	Need to Login. Need to check course details. Need to fill partial details	
Post conditions:	Thank You message will be displayed in the website.	
Input:	▪ Actor needs to verify the course details and then fill the partial details	
Output:	▪ Thank you message will be displayed and application details will be stored in the database.	
Normal Flow:	Actor Actions Actor will click to apply for that particular training.	System Responses Thank you message will be displayed and application details will be stored in the database.
Exceptional Flow:	▪ Actor validation expires.	▪ System will display an error message.
Includes: other use case id	3.2.1.35	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't apply for a training course without proper verification of each details regarding course will be essential.	
Special Requirements:	Actor needs to update all related documents and need to check and verify it before submit it.	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ Fishermen do the application for the training on the particular subject. ▪ After submitting the fee he is eligible to join the training.	

5.1.2.36 Approval of Application of Training on Fishery

Overview: This activity enables the actor to approve or deselect application for fishery training course.
Scope: The actor can view lists of applications and can approve or disapprove the application.

- Actor can view lists of applications
- Actor can approve or disapprove the application.

Use Case ID:	UC_ F_36
Use Case Name:	Approval of Application of Training on Fishery
Feature ID	FN003 > MF004

Actors:	Admin, State level Officer
Stake Holder:	Fisherman, Fish Farmer, Dealer
Description:	• Actor can view lists of applications • Actor can approve or disapprove the application.
Trigger:	Retrieve data from database and can set the status for approval.
Pre conditions:	Need to Login. Need to check applicant's details. Need to verify all the documents.
Post conditions:	After approval of selection for applicant's all the data will be stored in the database.
Input:	▪ Actor will approve the applications.
Output:	▪ Thank you message will be displayed and application details will be approved and stored in the database.

Normal Flow:	Actor Actions Actor will approve the applications.	System Responses Thank you message will be displayed and application details will be approved and stored in the database.
Exceptional Flow:	▪ Applicant's details and documents are not approved.	▪ System will display an error message.
Includes: other use case id	3.2.1.35	
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't approve applicant's application for a training course without proper verification of each details regarding course will be essential.	
Special Requirements:	Actor needs to verify all related documents and need to check and verify it before approve it.	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ There will be seat limitation for each training. ▪ Administrator can't approve application more than limit.	

5.1.2.37 Retrieve Scheme Details For Fishery Welfare

Overview: This activity enables the actor to retrieve scheme details from Service 8. When user will request this to the server and then server request will go to Service 8 portal through Web Service and then response will back to this portal with all information.

- Actor will send request to the server.
- Request will go to Service8 Portal through Web service.
- Response will come from that portal and user will be presented with all details.

Use Case ID:	UC_ F_37
Use Case Name:	Retrieve Scheme Details
Feature ID	FN001 > MF014

Actors:	Admin, State level Officer, Central Officer
Stake Holder:	Fisherman, Fish Farmer, Dealer, Administrator
Description:	• Actor will send request to the server. • Request will go to Service8 Portal through Web service. • Response will come from that portal and user will be presented with all details. .
Trigger:	Retrieve scheme details from Service 8
Pre conditions:	Don't Need to Login.
Post conditions:	After creation of the scheme it will be listed under scheme lists.
Input:	• Actor will send request to the server. • Request will go to Service8 Portal through Web service.
Output:	• Response will come from that portal and user will be presented with all details. .

Normal Flow:	Actor Actions Actor will send request to the portal Service 8	System Responses Response will come from that portal and user will be presented with all details.
Exceptional Flow:	▪ Actor request for any previous scheme or the Inter connection is too slow to grab the information from the other portal	▪ System will display an error message.
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Actor can't send request to the other portal for any non fishery related scheme.	
Special Requirements:	Actor needs to request for a valid scheme..	
Assumptions:	▪	
Dependency:		
Notes and Issues:	▪ There must be specific users for each scheme. ▪ Actor can request to view state specific and fishery related scheme.	

5.1.2.38 View Scheme Expenditure details on Fishery

Overview: This activity enables the actor to view expenditure details regarding any particular scheme for fishery welfare in the application.
Scope: The actor can view expenditure details regarding any particular scheme which is under the authentication for any particular state or for any particular user.

- Actor can view scheme name and its short details.
- Actor can view total expenditure list of any particular scheme.

Use Case ID:	UC_ F_38
Use Case Name:	View scheme expenditure details
Feature ID	

Actors:	Admin, state and Central officials
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer
Description:	Actor can view total expenditure details of scheme and can view for which state it has been authorized and how much amount they have already invested for users.
Trigger:	Scheme name will be selected and as per the scheme name full progress details will be retrieved from the database.
Pre conditions:	Actor needs to login and must have administrator level authority.
Post conditions:	
Input:	▪ Actor needs to click on any particular scheme to view its progress details and its total expenditure.
Output:	▪ Actor will presented with the following details • Associated State name • Funds Available • Funds Allocated • Scheme Sanction date • Process Status • Sponsor name

Normal Flow:	Actor Actions Actor will select particular scheme and will click to view the details of its progress.	System Responses All details will be displayed regarding that scheme.
Exceptional Flow:	▪ Actor Actions • Actor Click to view details but the actor has not any authentication to view the flow.	▪ System Responses • System will generate error message.
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ System will check that the requested user has authenticated or not. If actor authentication is true then it will generate all values to the front end.	
Special Requirements:	Actor should be state, central level officers or Administrators	
Assumptions:	▪	
Dependency:	Actor needs to authenticate before he clicks on the progress details for any scheme.	
Notes and Issues:	▪ Actor Role verification ▪ Session verification ▪ Scheme name verification ▪ .	

5.1.2.39 Submit Ticket for Disease

Overview: This activity enables the actor to submit a message to respective block or District Officers regarding any suspicious disease.

Scope: The actor can submit a message to the respective block or district officers.

- Actor can send message regarding any suspicious disease of fish in a hatchery or firm to the respective block or district officers.
- Blog officers can view the message and can pass it to State level

Use Case ID:	UC_ F_39
Use Case Name:	Submit Ticket for Disease
Feature ID	MF015 > FN001

Actors:	Admin, Farmer, Fisherman, Dealer	
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer	
Description:	The actor can submit a message or generate a ticket to the respective block or district officers if they find any suspicious disease in fish.	
Trigger:	New Ticket will generate and will store into the database.	
Pre conditions:	Actor needs to login and will enter proper details.	
Post conditions:	A new Ticket will submit and the report will be viewed by District and Block level officers	
Input:	▪ Actor needs to enter details to generate a ticket for reporting of any suspicious disease.	
Output:	▪ Ticket will be created and will be displayed in the website.	
Normal Flow:	Actor Actions Actor will enter details to generate a ticket for reporting of any suspicious disease.	System Responses Ticket will be created and will be displayed in the website.
Exceptional Flow:	▪ Actor tries to submit ticket but session of Browser has gone.	▪ It will redirect to the login page
Includes: other use case id		

UI: required/not required	Required
Priority: Low/medium/high	High
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent
Business Rules:	▪ Proper details of any suspicious disease will only be reported and the details of the reported user will be stored in the database.
Special Requirements:	Actor must needs to know the original behavior of fish and why he suspects.
Assumptions:	▪
Dependency:	
Notes and Issues:	• Actor can send message regarding any suspicious disease of fish in a hatchery or firm to the respective block or district officers. • Blog officers can view the message and can pass it to State level

5.1.2.40 Send Samples to testing lab

Overview: This activity enables the actor to submit/send disease report and samples to respective Testing Lab regarding suspicious disease test.

Scope: The actor can submit disease sample to the respective Testing Lab.

- Actor can send the disease sample to testing lab for testing the disease.
- Concerned officers can view the status of report done by testing lab

Use Case ID:	UC_ F_40
Use Case Name:	Send Samples to Testing Lab
Feature ID	MF015 > FN004

Actors:	Admin, State, Central officials
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer ,Testing Labs

Description:	The actor can submit the fish disease samples to concerned Testing Lab and wait for the report.	
Trigger:	Now Testing report Status No./Testing report No. will generate and will store into the database.	
Pre conditions:	Actor needs to login and will enter test report no. details.	
Post conditions:	A Test Report No. will submit and the report will be viewed by Authorized officers	
Input:	▪ Actor needs to enter details to view the testing lab report result.	
Output:	▪ Testing lab report would be generated and will be displayed in the website to authorized officials.	
Normal Flow:	Actor Actions Actor will enter details to generate lab testing report of any submitted disease samples.	System Responses Testing lab result report will be created and will be displayed in the website only to the authorized officials.
Exceptional Flow:	▪ Actor tries to submit report no. but session of Browser has gone.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Proper details of disease samples will be reported to testing Lab and the details of the report and samples will be stored in the database.	
Special Requirements:	The Testing Lab reports only should be seen to the Authorized officials	
Assumptions:	▪	
Dependency:	▪ On Disease Report/Samples submitted by fisherman	
Notes and Issues:	• Actor can send the disease samples to concerned Testing Labs for testing of disease report. • Only Authorized officials can view the testing lab report no other have access permission to disease testing report	

5.1.2.41 Testing Lab Report

Overview: This activity enables the actor to submit the sample test report submitted by the authorized officials.

Scope: The actor can submit their test report to the respective authorized officers.

- Actor can send report regarding submitted disease samples to testing labs.
- Only Authorized officers can view the disease report submitted by the testing labs.

Use Case ID:	UC_ F_41
Use Case Name:	Testing Lab Report
Feature ID	MF009 > FN002

Actors:	Admin, Authorized central officials, Authorized central officials	
Stake Holder:	Directorate of Fisheries & its sub offices, Testing Labs	
Description:	The actor is able to submit disease sample test report to authorized officials.	
Trigger:	The test report will generate and stored into the database.	
Pre conditions:	Actor needs to login and enter test samples number or id to get details.	
Post conditions:	Authorized official will submit the sample_id and the report will be viewed by officials	
Input:	▪ Actor needs to enter details of submitting samples to generate test report submitted by testing labs	
Output:	▪ Test report would be generated on the website and can only be viewed by the authorized officials.	
Normal Flow:	Actor Actions Actor will enter details to generate a test report.	System Responses Report details will be submitted by the testing labs and will be displayed in the website only by the authorized person.
Exceptional Flow:	▪ Actor tries to submit report but session of Browser has ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Proper detailed testing report of disease will be submitted by the testing lab and stored in the database.	

Special Requirements:	Actor should submit their test report to authorized officials within time period.
Assumptions:	▪
Dependency:	▪ On samples.
Notes and Issues:	• Actor can submit test report to authorized officials. • Authorized officers can view the test report and forward the information to their high level officer.

5.1.2.42 Grivance Mangement

Overview: This activity enables the actor to submit their grievance to concerned officer and get the solution from them.

Scope: The actor could be able to submit grievance to the respective block or district level officers.

- Actor can submit their grievance regarding RC, LC, and Schemes etc to respective block or district level officials.
- Concerned officer can view the grievance of fisherman and if the grievance is on his level then he provide the solution of that otherwise forward to his upper level officer

Use Case ID:	UC_ F_42
Use Case Name:	Grievance Management
Feature ID	MF018 > FN001

Actors:	Admin, Farmer, Fisherman, Dealer, Central officials, state officials
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer
Description:	The actor can submit grievance with their email-id, name, address, date, and Reg. no. to concerned officer and at the meanwhile a grievance-id is auto generated and received by the fisherman for access the grievance status in future.
Trigger:	Grievance id will be generated and stored in the database for further status.
Pre conditions:	Actor needs to login and enter/view their grievance

Post conditions:	Submit grievance and an auto generated grievance id is received by fisherman	
Input:	▪ Actor needs to enter their Reg. No.,name,mobile no.,Email-id,date and grievance	
Output:	▪ An automatic grievance id is generated and received by the fisherman on his email and grievance is received by the concerned officer.	
Normal Flow:	Actor Actions Actor will enter their grievance to concerned officer	System Responses An automated grievance id is generated and received by the fisherman and grievance is received by the concerned officer
Exceptional Flow:	▪ Actor tries to submit their grievance but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	
Business Rules:	▪ Grievance is submitted by the user and user details will be stored in the database.	
Special Requirements:	▪ Actor needs to submit their grievance to concerned officer only.	
Assumptions:	▪	
Dependency:		
Notes and Issues:	• Actor can submit grievance to concerned officer. • Concerned officers can view the grievance and provide solution.	

5.1.2.43 Expert Advisory

Overview: This activity enables the actor to submit request for expert advisory

Scope: The actor can submit their request to respective block or district officers.

- Actor can send the topic on which the expert advisory is needed.
- Blog officers can view the advisory request and pass it to domain expert.

Use Case ID:	UC_ F_43
Use Case Name:	Expert Advisory
Feature ID	MF017 > FN001

Actors:	Admin, Farmer, Fisherman, Dealer, Domain expert, Central officials, state officials	
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer	
Description:	The actor can submit request to fisheries officer for expert advisory and he send the request to domain expert, after onsite observation domain expert provide the advisory on specific topic.	
Trigger:	Advisory request and details are stored into the database.	
Pre conditions:	Actor needs to login and submit their request for expert advisory.	
Post conditions:	An advisory id is generated automatically and received by the fisherman meanwhile the advisory request is received by the concerned officer.	
Input:	▪ Actor needs to enter their Reg. No., name ,email-id, location, topic of advisory, date	
Output:	▪ Advisory request will be received by concerned officer on his mail and advisory id is received by the fisherman	
Normal Flow:	Actor Actions Actor will enter advisory request to respective officer	System Responses Advisory request will be received by concerned officer on his mail and advisory id is received by the fisherman
Exceptional Flow:	▪ Actor tries to submit advisory request but session of Browser ended.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	

Business Rules:	▪ Request for the expert advisory is made by the fisherman and the details of the requested user will be stored in the database.
Special Requirements:	Domain expert need to go for onsite observation after that he provide the expert advisory
Assumptions:	▪
Dependency:	
Notes and Issues:	• Actor can send their advisory request to respective officer and get the expert advisory by the domain expert. • Blog officers can view the advisory request and can pass it to domain expert.

5.1.2.44 Market Information

Overview: This activity enables the actor to get the market information as price details, daily catch of fish species wise, arrival of fish, import/export of fish.

Scope: The actor can get market information regarding fish catch, price, import/export etc.

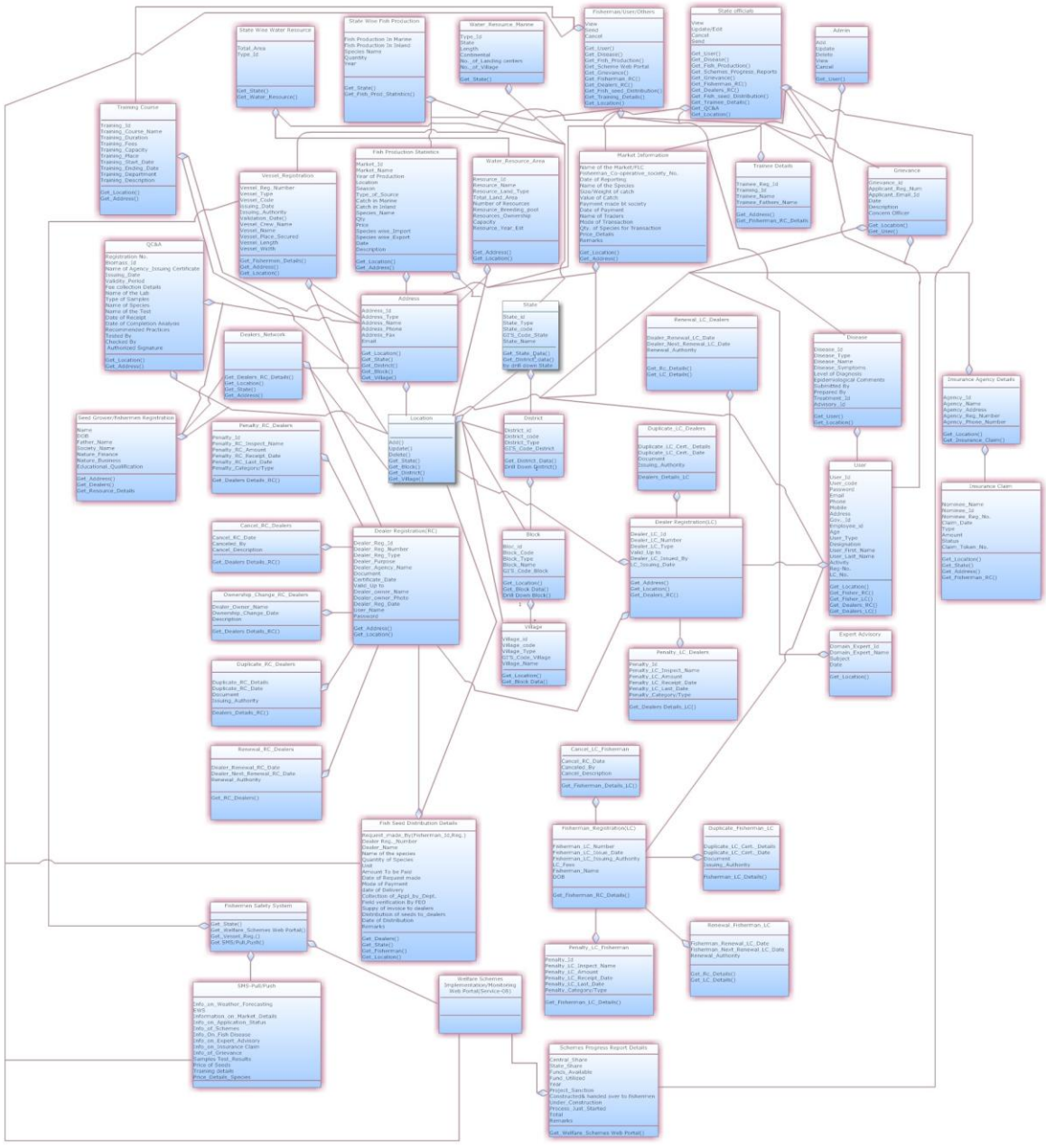
- Actor can get all the information regarding fish market.

Use Case ID:	UC_ F_44
Use Case Name:	Market Information
Feature ID	MF010 > FN002

Actors:	Admin, Farmer, Fisherman, Dealer, State officials, central officials	
Stake Holder:	Directorate of Fisheries & its sub offices, Fisherman, Fish Farmer, Dealer	
Description:	Actor selects the state, district, block and market name to get the market details of a particular market.	
Trigger:	The required field is accessed from the database and details are displayed.	
Pre conditions:	Actor needs to login and will enter details to get market information.	
Post conditions:	After entering the required details the market information is displayed with respective fields	
Input:	▪ Actor needs to select state name, district name, block, market name, species name, price details ,date	
Output:	▪ The required details are displayed on the screen.	
Normal Flow:	Actor Actions Actor will enter required details to get the market information	System Responses Generate the requested report about market information
Exceptional Flow:	▪ Actor tries to get market information but session of Browser has abandon.	▪ It will redirect to the login page
Includes: other use case id		
UI: required/not required	Required	
Priority: Low/medium/high	High	
Frequency of Use: Continuous/ frequent/ medium/ less/ rare	Frequent	

Business Rules:	▪ The requested details are accessed by the user from the website.
Special Requirements:	
Assumptions:	▪
Dependency:	
Notes and Issues:	• Actor can get the market information of the different location and be in the better position for bargaining.

5.1.3 Class Diagram



5.2 Performance Requirements

Specify static and dynamic numerical requirements placed on the software or on human interaction with the software.

Static numerical requirements may include the number of terminals to be supported, the number of simultaneous users to be supported, and the amount and type of information to be handled.

Dynamic numerical requirements may include the number of transactions and tasks and the amount of data to be processed within certain time period for both normal and peak workload conditions.

All of these requirements should be stated in measurable form.

5.3 Design Constraints

Specify requirements imposed by standards, hardware limitations, etc.

5.4 Software System Attributes

The following items provide a partial list of system attributes that can serve as requirements that should be objectively verified.

5.4.1 Reliability

The system's reliability is dependent on various factors like ensuring proper validations for each field and form in the system, ensuring a seamless transition in between different forms, displaying proper alerts for errors, ensuring no 404 errors or system based errors are displayed and ensuring that proper markings are done for mandatory and non mandatory fields in the system, so as to ensure consistent output for saving or updating the data.

5.4.2 Availability

The proposed application is to be hosted at NIC data center servers to ensure that the application is available 24 X 7 to all authentic users.

5.4.3 Security

The proposed system will be deployed at NIC datacenter and will use NIC's Internet Security Setup. Each user will be assigned unique login and password. The users will have different functional options.

5.4.4 Maintainability

Modules shall be designed to group logically related methods in order to facilitate the maintenance. This enhances maintainability and modification of the system through simple redefinitions of policies and requirements.

5.4.5 Portability

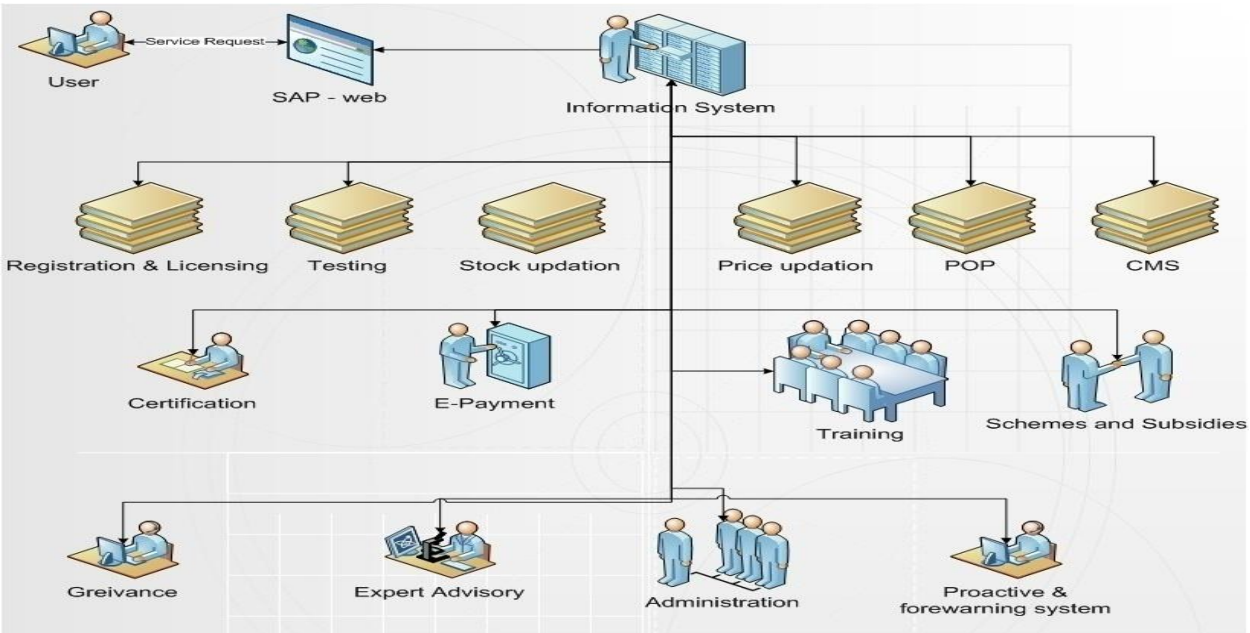
The software uses the standard database to store the online data information. The data can be ported easily into other databases. Though it is presumed that application will keep running in the same environment throughout its life cycle, but in future if there is any change in the operational environment, the s/w and the database can be easily modified for the new environment.

5.5 Logical Database Requirements

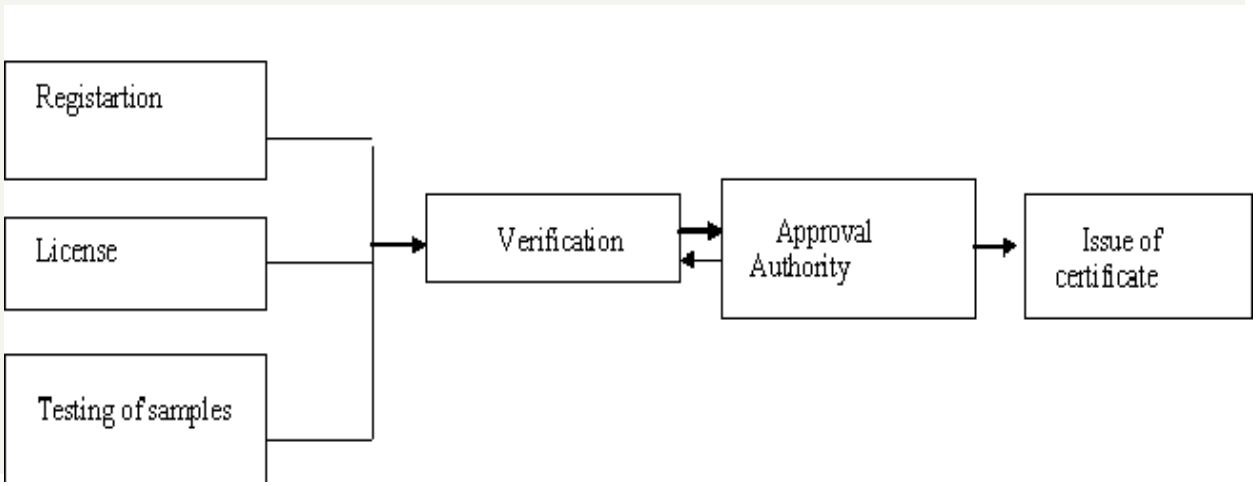
Specify the requirements for any information that is to be placed into a database, including

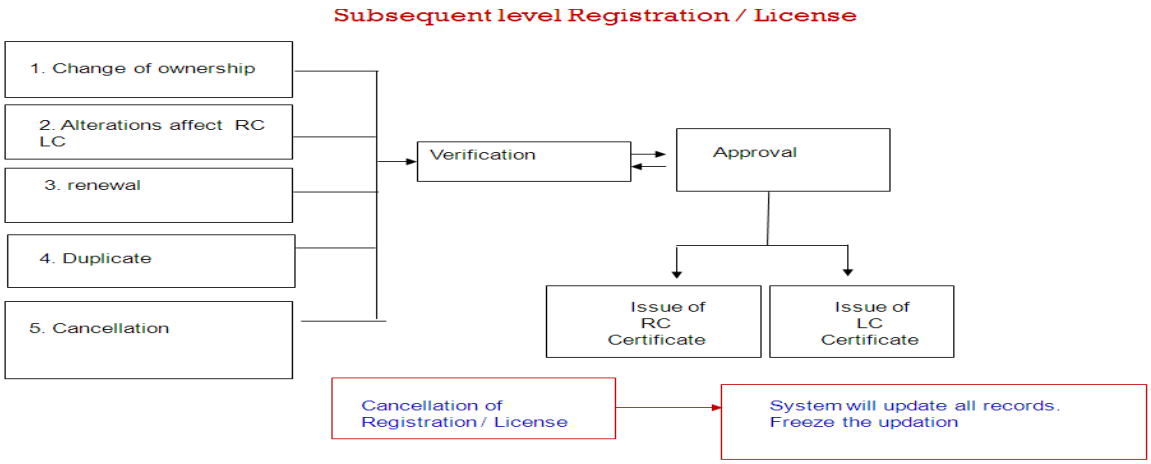
- types of information used by various functions
- frequency of use
- accessing capabilities
- data entities and their relationships
- integrity constraints
- data retention requirements

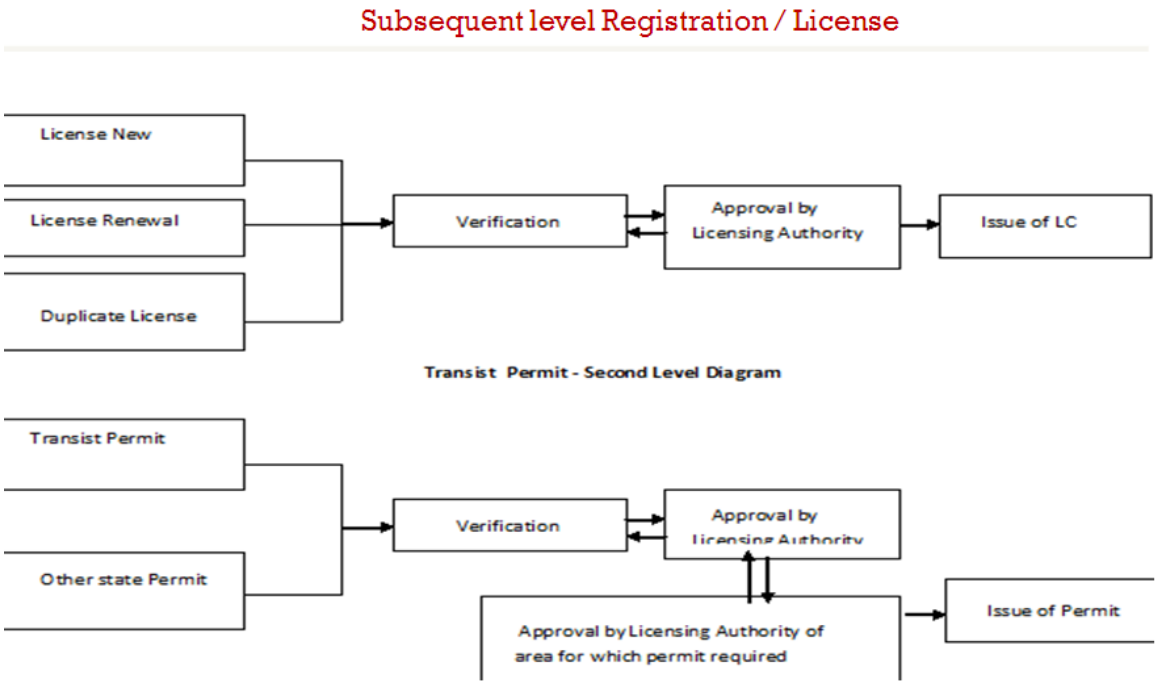
5.6 Functionality of the system



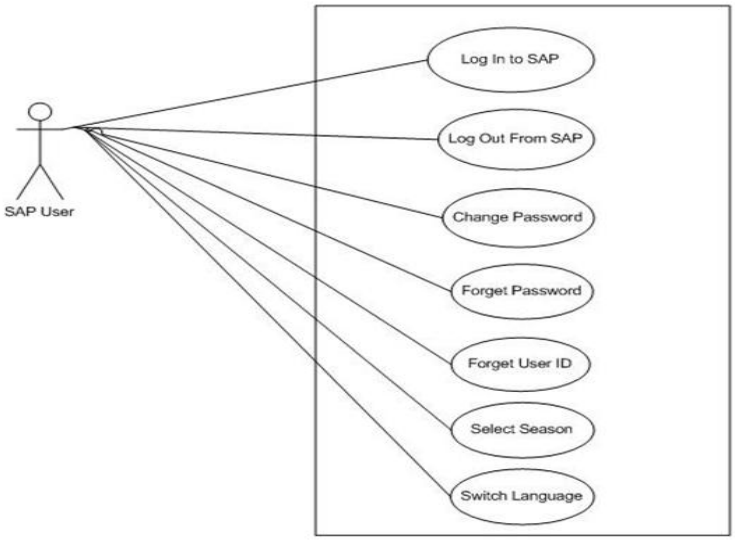
5.6.1 Menu level flow diagram



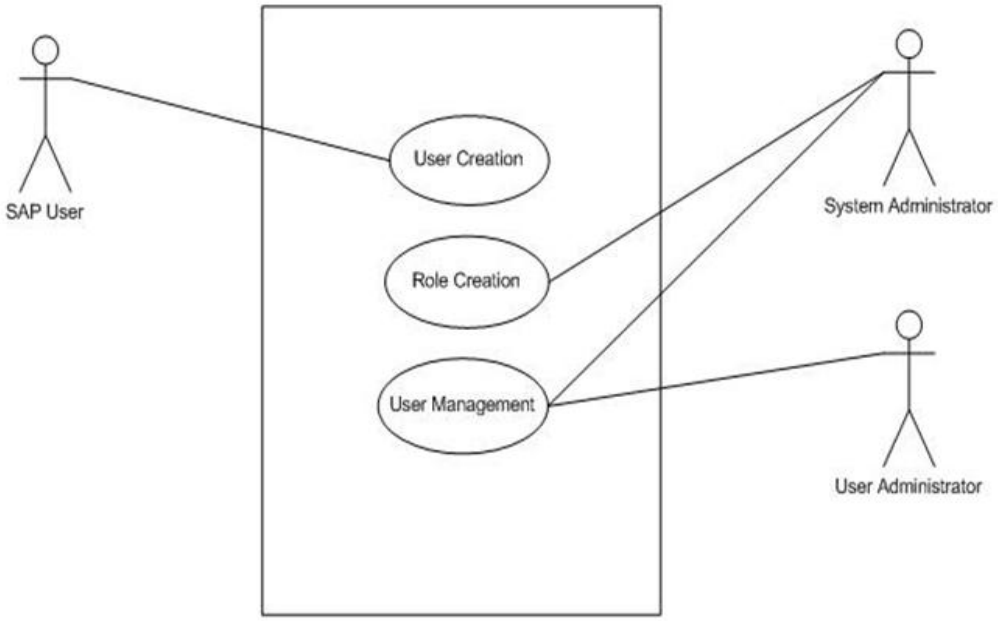




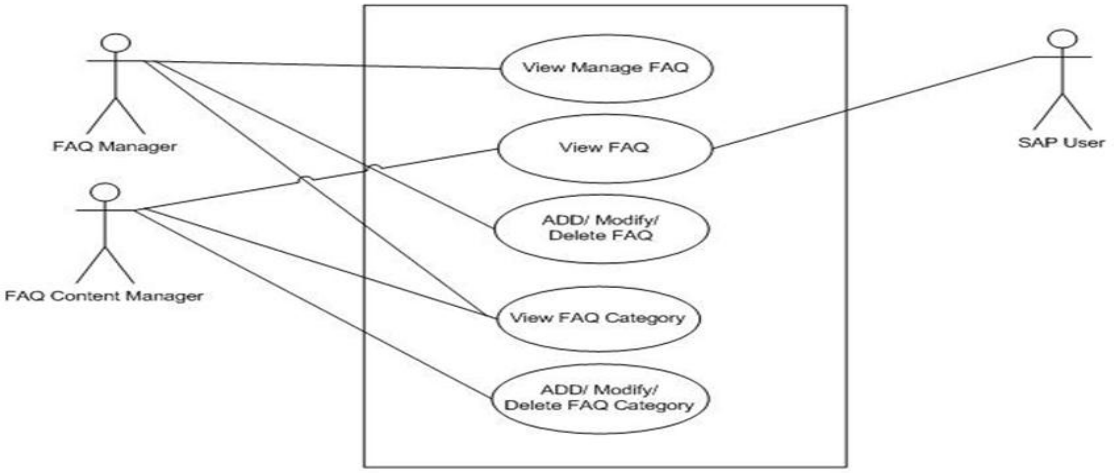
USE CASE for login



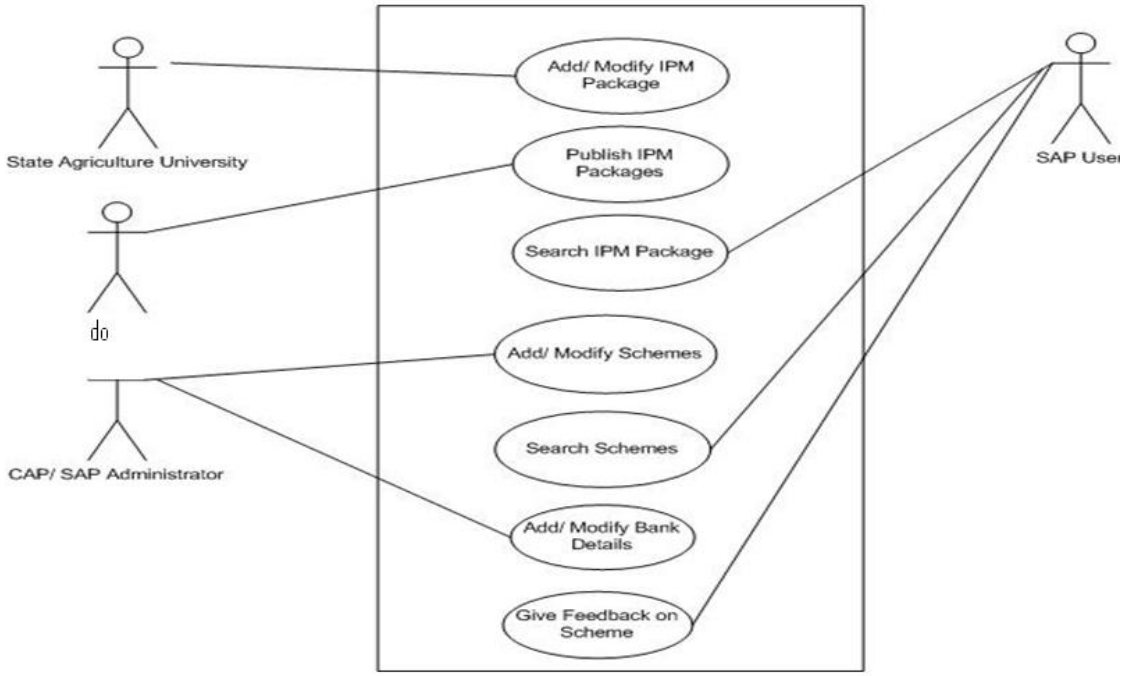
USE CASE for **User Management/System Administration**



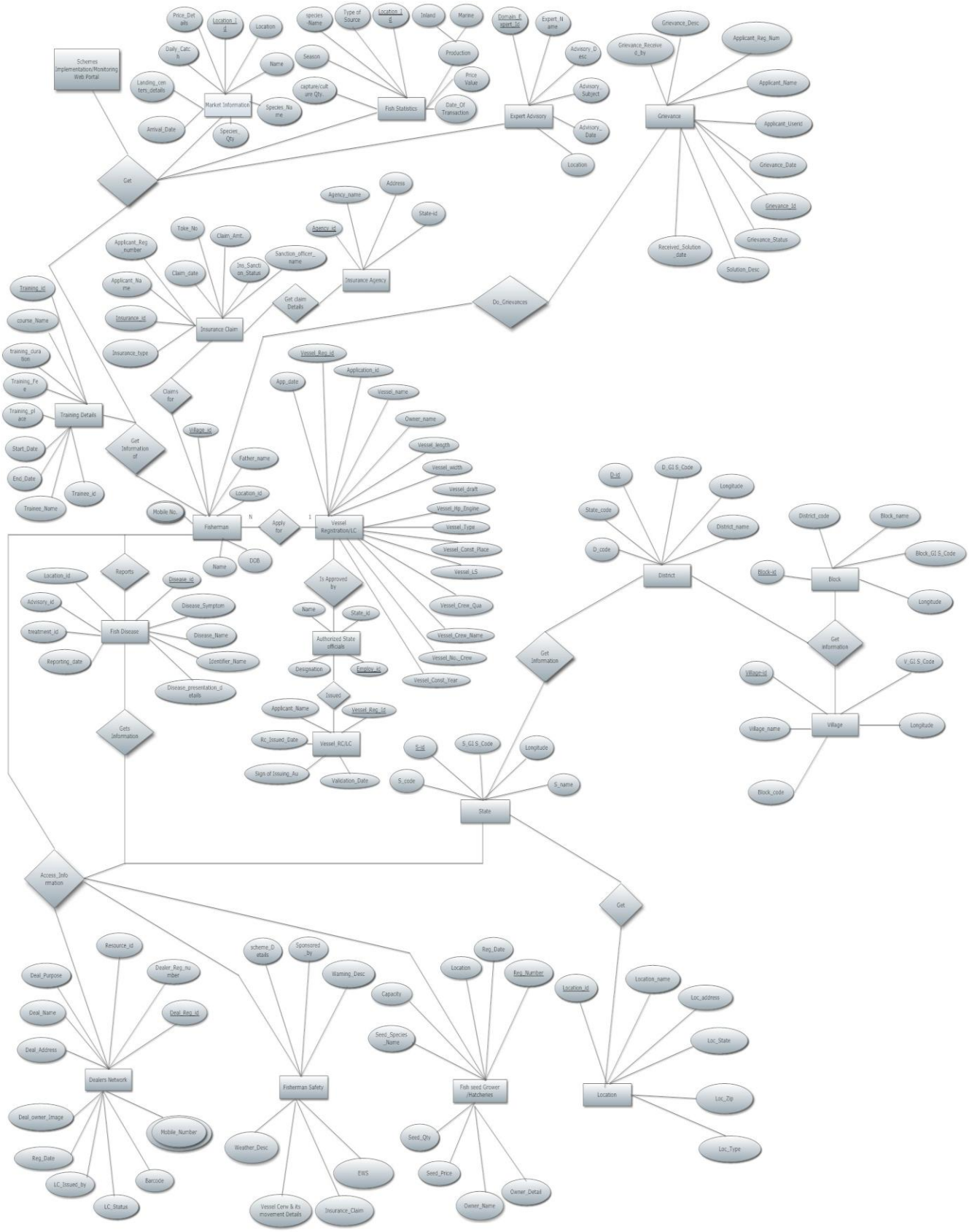
USE CASE for updating CM -FAQ



USE CASE for updating best packages



5.6.2 Entity Relationship Diagram



5.7 Other Requirements

5.7.1 Backup

The software is being operated from NIC in Storage Area Network (SAN) environment, where the backup is maintained on daily basis and kept on backup devices based on the back up facilities available.

5.7.2 Recovery

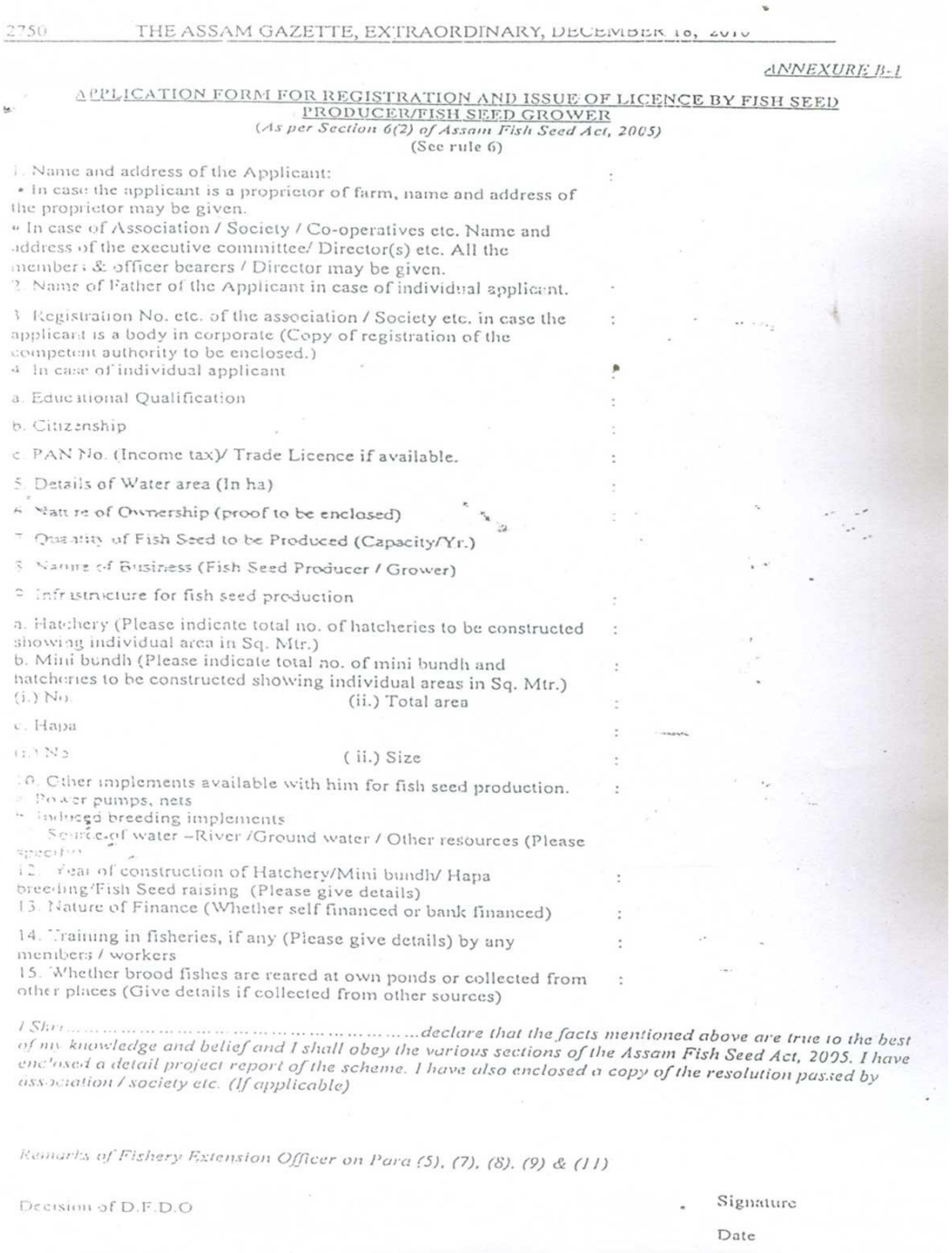
Recovery of data will be the sole responsibility of NIC.

5.7.3 User Training

Initial user level training will be given by implementation agency to NIC officials along with the e-learning material, which will be used in Training programmers, which will be conducted by other agencies to create awareness about the system.

6. ANNEXURE

6.1 Application form for Registration



2750 THE ASSAM GAZETTE, EXTRAORDINARY, DECEMBER 18, 2010

ANNEXURE B-1

APPLICATION FORM FOR REGISTRATION AND ISSUE OF LICENCE BY FISH SEED PRODUCER/FISH SEED GROWER

(As per Section 6(2) of Assam Fish Seed Act, 2005)

(See rule 6)

1. Name and address of the Applicant: :
* In case the applicant is a proprietor of farm, name and address of the proprietor may be given.
* In case of Association / Society / Co-operatives etc. Name and address of the executive committee/ Director(s) etc. All the members & officer bearers / Director may be given.
2. Name of Father of the Applicant in case of individual applicant.
3. Registration No. etc. of the association / Society etc. in case the applicant is a body in corporate (Copy of registration of the competent authority to be enclosed.) :
4. In case of individual applicant
a. Educational Qualification :
b. Citizenship :
c. PAN No. (Income tax)/ Trade Licence if available. :
5. Details of Water area (In ha) :
6. Nature of Ownership (proof to be enclosed) :
7. Quantity of Fish Seed to be Produced (Capacity/Yr.)
8. Nature of Business (Fish Seed Producer / Grower)
9. Infrastructure for fish seed production :
a. Hatchery (Please indicate total no. of hatcheries to be constructed showing individual area in Sq. Mtr.) :
b. Mini bundh (Please indicate total no. of mini bundh and hatcheries to be constructed showing individual areas in Sq. Mtr.) :
(i.) No. (ii.) Total area :
c. Hapa :
(i.) No. (ii.) Size :
10. Other implements available with him for fish seed production. :
* Power pumps, nets
* Induced breeding implements
Source of water –River /Ground water / Other resources (Please specify)
12. Year of construction of Hatchery/Mini bundh/ Hapa breeding/Fish Seed raising (Please give details) :
13. Nature of Finance (Whether self financed or bank financed) :
14. Training in fisheries, if any (Please give details) by any members / workers :
15. Whether brood fishes are reared at own ponds or collected from other places (Give details if collected from other sources) :

I Shri .....declare that the facts mentioned above are true to the best of my knowledge and belief and I shall obey the various sections of the Assam Fish Seed Act, 2005. I have enclosed a detail project report of the scheme. I have also enclosed a copy of the resolution passed by association / society etc. (If applicable)

Remarks of Fishery Extension Officer on Para (5), (7), (8), (9) & (11)

Decision of D.F.D.O Signature

Date

ANNEXURE E-1

APPLICATION FORM FOR RENEWAL OF REGISTRATION AND ISSUE OF LICENCE BY FISH SEED PRODUCER/FISH SEED GROWER

(As per Section 8(2) of Assam Fish Seed Act, 2005)

(See rule 8)

1. Name and address of the Applicant: :
   - In case the applicant is a proprietor of farm, name and address of the proprietor may be given.
   - In case of Association / Society / Co-operatives etc. Name and address of the executive committee/ Director(s) etc. All the members & officer bearers / Director may be given.
2. Name of Father of the Applicant in case of individual applicant. :
3. Registration No. etc. of the association / Society etc. in case the applicant is a body in corporate (Copy of registration of the competent authority to be enclosed.) :
4. Registration No. of previous year :
5. In case of individual applicant :
   a. Educational Qualification :
   b. Citizenship :
   c. PAN No. (Income tax)/ Trade Licence if available. :
   d. Particulars of Trade licence, if any. :
6. Details of Water area (In ha) :
7. Nature of Ownership (proof to be enclosed) :
8. Quantity of Fish Seed to be Produced (Capacity/Yr.) :
9. Nature of Business (Fish Seed Producer / Grower) :
10. Infrastructure for fish seed production :
    a. Hatchery (Please indicate total no. of hatcheries to be constructed showing individual area in Sq. Mtr.) :
    b. Mini bundh (Please indicate total no. of mini bundh and hatcheries to be constructed showing individual areas in Sq. Mtr.) :
    (i.) No. (ii.) Total area :
    c. Hapa :
    (i.) No. (ii.) Size :
11. Other impjements available with him for fish seed production. :
    a. Power pumps, nets
    b. Induced breeding implements
12. Source of water –River /Ground water / Other resources (Please specify)
13. Year of construction of Hatchery/Mini bundh/ Hapa breeding/Fish Seed raising (Please give details) :
14. Nature of Finance (Whether self financed or bank financed) :
15. Training in fisheries, if any (Please give details) by any members / workers :
16. Whether brood fishes are reared at own ponds or collected from other places (Give details if collected from other sources) :

I Shri.....declare that the facts mentioned above are true to the best of my knowledge and belief and I shall obey the various sections of the Assam Fish Seed Act, 2005. I have enclosed a detail project report of the scheme. I have also enclosed a copy of the resolution passed by association / society etc. (If applicable)

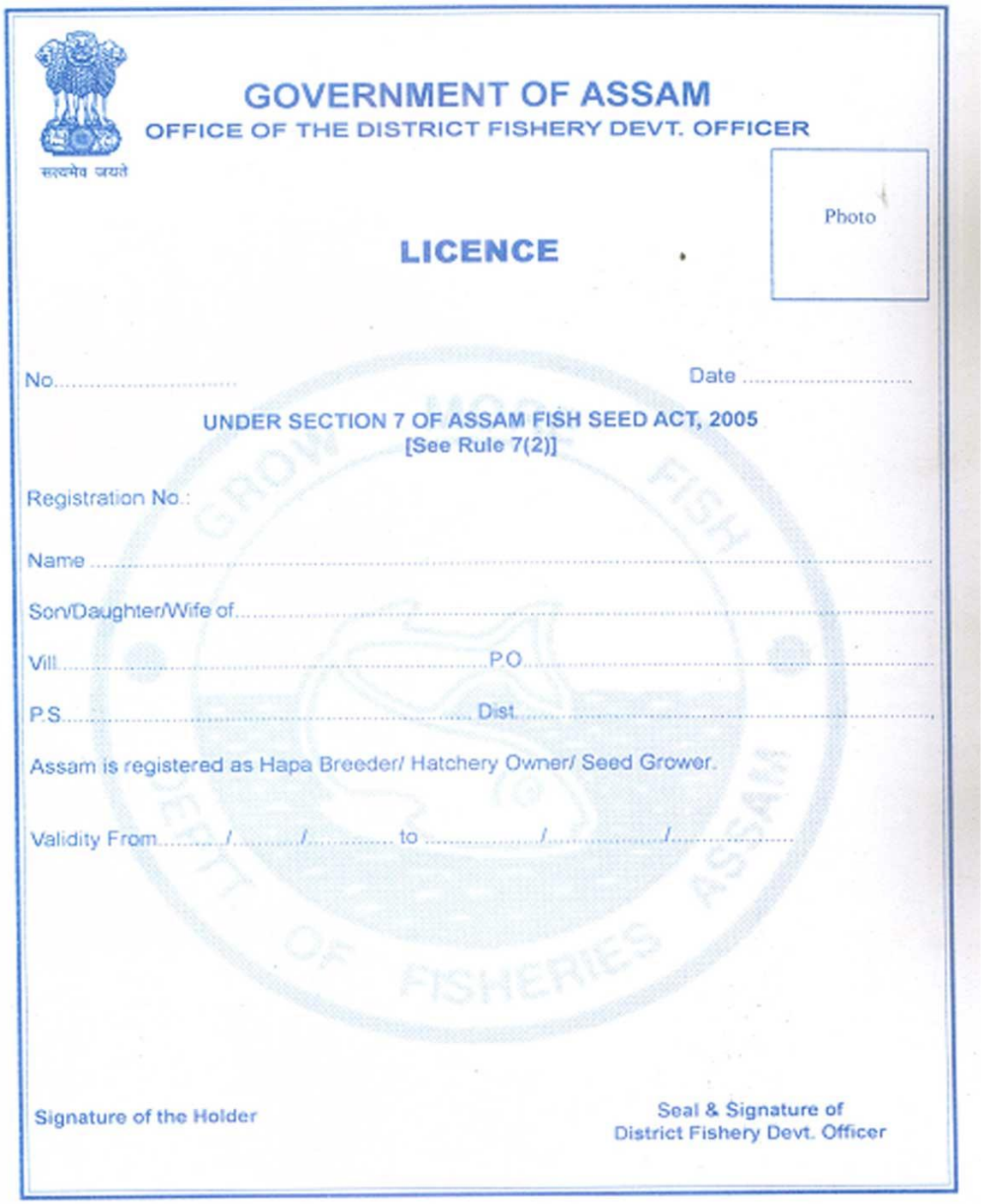
Remarks of Fishery Extension Officer on Para (6), (8), (9), (10) & (12)

Decision of D.F.D.O

Signature
Date

Contd.

6.2 LC for Fish Seed Grower/Hatcheries



सत्यमेव जयते

GOVERNMENT OF ASSAM

OFFICE OF THE DISTRICT FISHERY DEVT. OFFICER

Photo

LICENCE

No..... Date .....

UNDER SECTION 7 OF ASSAM FISH SEED ACT, 2005
[See Rule 7(2)]

Registration No.:

Name .....

Son/Daughter/Wife of.....

Vill..... P.O.....

P.S..... Dist.....

Assam is registered as Hapa Breeder/ Hatchery Owner/ Seed Grower.

Validity From...../...../..... to ...../...../.....

Signature of the Holder

Seal & Signature of
District Fishery Devt. Officer

6.3 LC for Seller/Importer/Exporter

GOVERNMENT OF ASSAM
OFFICE OF THE DISTRICT FISHERY DEVT. OFFICER

सत्यमेव जयते

LICENCE

Photo

No..... Date .....

UNDER SECTION ASSAM FISH SEED ACT, 2005
[See Rule 7(2)]

Registration No.....

Name:.....

Son/Daughter/Wife of.....

Vill.....P.O.....

P.S.....Dist.....

Assam is licenced as Seller/ Importer/ Exporter to operate throughout Assam.

Validity From...../...../..... to ...../...../.....

Signature of the Holder

Seal & Signature of
District Fishery Devt. Officer

6.4 Renewal form for LC

सत्यमेव जयते

CERTIFICATE OF REGISTRATION

ASSAM

UNDER SECTION 7 OF ASSAM FISH SEED ACT, 2005

[See rule 9 (2)]

Registration No. :

Date of Renewal of Registration :

Name of registered owner.....

Son/Daughter/Wife of.....

Vill.....P.O.....

Sub-Div.....P.S.....

Dist....., Assam is registered as Hapa Breeder/ Hatchery Owner/ Trader/Fish Seed Producer/Importer/Exporter.

I. Period of Registration

II. Capacity Allowed

Issue No.....Date.....

Seal & Signature of Issuing Authority
(District Fishery Devt. Officer)

6.5 Agreement Form for Pond

AACP: Agreement_BDC_140806

Agreement Form for Development of ..... Beel, ...
through Community Participation under AACP

Articles of Agreement

1. This deed of agreement made in the form of agreement on..... between the District Fishery Development Officer, ... , the authorized representative of the Department of Fisheries (herein after referred to as the **First Party**) and ..... Beel Development Committee(BDC) of Village: ....., P.O.: ....., Block ..... , District , (herein after referred to as the **Second Party**) , to execute the civil work& culture aspect for development of ..... Beel on the following terms and conditions.

2. **Cost of Contract:**
2.1.The total cost of the **civil work** works as **Rs**.. ..... (Rupees .....) only & Out of the total cost, an amount of **Rs**.....(Rupees .....) equivalent to 30% of the total cost would be borne by the second party either by cash or by kinds/labour during execution. Remaining 70% of the cost will be borne by the by the First Party.

2.2.The total cost of the **Inputs** as **Rs**. .....(Rupees .....) only & Out of the total cost, an amount of **Rs**.....(Rupees .....) equivalent to 30% of the total cost would be borne by the second party. Remaining 70% of the cost will be borne by the by the First Party.

3. **Disbursement of funds:**
3.1.Funds for **civil work** shall be released to the BDCs in trenches by the DFDO (Referred as the first party) as detailed below.

3.1.1st Installment: After the BDC reports completion of 5% of the BDC share of Civil Work jointly with ES/JE, FEO & NNGO. DFDO will release 25% cost of the AACP share of civil work through account payee cheque or Demand Draft to the BDC as First Installment.

3.1.2.2nd Installment: After the BDC submits a joint reports through ES/JE,FEO & NNGO for completion of 15% of the BDC share &20% of AACP share against the first installment (para ***3.1.1***above) ,DFDO will release the another 25% of the AACP share. *The BDC shall submit the expenditure statement & UC for 15% BDC share and 40% of total AACP share of the civil work (i.e.40% out of 50% amount as received against first two installment above) supported by copies of vouchers to DFDO jointly with ES/JE, FEO & NNGO for enabling DFDO to release the third installment. The Economic & Social Audit Committee members of the BDC shall sign the statement.*

3.1.3.3rd Installment: After the BDC submits a joint reports through ES/JE,FEO & NNGO for completion of 20% of the BDC share &20% of AACP share against the second installment (para ***3.1.2*** above) ,DFDO will release the another 25% of the AACP share. *The BDC shall submit the expenditure statement & UC for 20% BDC share and 70% of total AACP share of the civil work (i.e.70% out of 75% amount as received against first three installment above) supported by copies of vouchers to DFDO jointly with ES/JE, FEO & NNGO for enabling DFDO to release the fourth and last installment. The Economic & Social Audit Committee members of the BDC shall sign the statement.*

3.1.4.3rd Installment: After the BDC submits a joint reports through ES/JE,FEO & NNGO for completion of 30% of the BDC share &20% of AACP share against the third installment (para ***3.1.3*** above) ,DFDO will release the last 25% of the AACP share. *The BDC shall submit the expenditure statement & UC for 30% BDC share and 100% of total AACP share of the civil work supported by copies of vouchers to DFDO jointly with ES/JE, FEO & NNGO for enabling*

Page 1 of 3

DFDO to submit the APR &Vouchers to the DOF for reimbursement as per AACP norms. The Economic & Social Audit Committee members of the BDC shall sign the statement.

3.2.Funds for ***Culture Inputs*** *shall be released to the BDCs in one installment by the DFDO (Referred as the first party) as detailed below.*

3.2.1. As per approved planned estimate of culture inputs, the BDC shall decide after consulting with the DFDO on the materials and inputs required for completing the project. The technical specification of the materials and inputs shall be specified by the DFDO. BDC will then procure the material &the inputs against the lowest rate approved and recommended by the Executive Body based on the rate quoted by the three local quotationers who themselves opt for the whole inputs tendering process under BDC. Economic Committee of the BDC can take the final decision as per discussion with the DFDO on the brand/source and rate of the input to be procured. Based on the actual requirement of fund for inputs, DFDO will release the fund (70% of the total estimated cost) as earmarked for the AACP share for **input** procurement by the DBC.

4.0Maintenance of Accounts

The second party shall maintain separate accounts for all the expenditures incurred out of the payments made by the first party from time to time for execution of the work to develop the beel. Such accounts shall be available for inspection by the first party or any other visiting team deputed for the purpose. In the event of any misuse of funds, the first party shall have the right to freeze the Bank account of the sub-project after such inquiry as may be deemed necessary.

5.0Completion time

The civil works part should be completed in **three months** from the date of this Agreement. While the **culture aspect** will have to complete as per the Sub Project Cycle as informed and directed by the department. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

6.0Duties and responsibilities of the first party

- The first party shall be responsible for providing regular and frequent supervision and guidance for checking quality of inputs material and construction of the water retaining structure, other civil work as per the approved plan and estimate to ensure that it is as per the norms to the second party for carrying out the works as per specifications as well as BDC Guide line. Thus, the work will be done as per the Guide line of the First Party which must be obeyed by the second party.
- The first party shall supply one set of BDC guidelines&Agreement, Engineering drawing/estimate of the beel, input specifications to the second party for the proposed works.
- The first party shall have the right to instruct to stop or suspend the construction at any stage if there is any deviation from the specification or violation of any of the terms of this Agreement and demand reimbursement of its payments.
- The first party will release the fund based on Agreed and approved estimated amount to the second party. Excess of any amount must be born by the second party for effective completion of the work. Proper justification of more fund for effective completion of the estimated work must be brought to the notice to the PCU immediately by the DFDO after obtaining the field situation report as reported by the BDC, *ES/JE, FEO & NNGO.*

7.0Duties and responsibilities of the second party

- The second party shall take up the works and arrange for its completion within the agreed time period by engaging members of the BDC &some suitable skilled persons, if required, to carry out the works;
- Make community payment as per schedule of labour payment for different items of work as stated in the approved estimate;
- Abide by the technical suggestions/direction of supervisory personnel as authorized under AACP.
- Ensure that the work is carried out in accordance with specifications, drawings and also within the total sanctioned amount without any cost escalation;
- Ensure that there is no mis-utilization of the money/materials during work execution;
- Second party can make no claim for payment, which is more than that of estimated amount, even though such excess amount is actually required for completion of the works as agreed. However, that will be decided by the PCU once it receives such proposal from the DFDO through the DOF only as a special case.

8.0Dispute Settlement

If over the works, any dispute arises between the two parties, relating to any aspects of this Agreement, the parties shall first attempt to settle the dispute through mutual and amicable consultation. If the dispute is not settled through such consultation, the matter may be referred for arbitration to the Dy. Commissioner of the District being the DACC Chairman.

Signed and delivered by Sri. _____,the Secretary/President of the BDC in the presence of:

i)

ii)

Signed and delivered by Sri. _____District Fisheries Development Officer of _____District in the presence of:

i)

ii)

6.6 Agreement Form for Hatcheries

Annexure B

Agreement Form for Construction of Mini Hatchery through Beneficiary on direct contracting basis

Articles of Agreement

This deed of agreement made in the form of agreement on _____ between DFDO,---------- or his/her authorized representative (*hereinafter referred to a the **first party***) and the Sri/Srimati ----------,Village _____, Block _____, District _____ , (*hereinafter referred to as the **second party***), to execute the work of construction of **Improved Mini Hatchery** (*hereinafter referred to as **works***) on the following terms and conditions.

Cost of Contract

(a) The total cost of the civil works is Rs. _____, &Out of the total cost, an amount of Rs. _____ equivalent to 30% of the total project cost would be borne by ---------- ----------(name of the beneficiary) & the remaining 70% of the total project cost is AACP share, would be borne by the DFDO,----------.

(b) The total cost of the inputs is Rs. _____, &Out of the total input cost, an amount of Rs. _____ equivalent to 10% of the total inputs cost would be borne by ---------- ----------(name of the beneficiary) & the remaining 90% of the total input cost is AACP share, would be borne by the DFDO,----------.

Disbursement of funds

The second party shall have a bank account opened in his/her name as directed by the DFDO,---------- which should be pre-agreed with the branch of a nationalized/ Gramin Cooperative Bank as soon as this Agreement has been signed and shall provide its Bank account number to the first party. The account will be used only for the AACP activities.

The fist party will release payment to the second party for the construction work in the following manner:

First Installment:

DFDO will release the **25%** of the total AACP share to the beneficiaries on completion of his/her(beneficiaries) **10%** of the total share on estimated work and the same is duly verified jointly by the cluster in charge &JE, with proper recorded in the MB by the JE/AE/ES of the

DFDO establishment. However, before releasing the fund, DFDO may physically verify the progress of the activities.

Second Installment:

DFDO will release another **25%** of the AACP share to the beneficiary upon submission of utilization of **45%** of total estimated work (20%beneficiaries share out of the total 30% beneficiary share +25%AACP share of first installment) by the beneficiary with a countersignature from the cluster in-charge, departmental engineering staff as engaged. However, before releasing the fund, DFDO may physically verify the progress of the activities.

Third Installment:

DFDO will release the remaining **20%** of the AACP share to the beneficiary upon submission of utilization report of **80%** of total estimated work (30%beneficiaries share +50%AACP share from previous installment) by the beneficiary with a countersignature from the cluster in-charge, departmental engineering staff as engaged. However, before releasing the fund, DFDO may physically verify the progress of the activities.

Maintenance of Accounts

The second party shall maintain separate accounts for all the expenditures incurred out of the payments made by the first party from time to time for execution of the work. Such accounts shall be available for inspection by the first party or any other visiting team deputed for the purpose. In the event of any misuse of funds, the first party shall have the right to freeze the Bank Account as operated by the second party after such inquiry as may be deemed necessary.

Completion time

The works should be completed in **three months** from the date of this Agreement. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

Duties and responsibilities of the first party

- The first party shall be responsible for providing regular and frequent supervision and guidance for checking quality of material and construction to ensure that it is as per the norms to the second party for carrying out the works as per specifications. The work will be done as per the Guideline of the First Party that must be obeyed by the second party.

- The first party shall supply one set of drawing for civil work, detail specifications of input and civil work and guidelines to the second party for the proposed activities.
- The first party shall have the right to instruct to stop or suspend the construction at any stage if there is any deviation from the specification or violation of any of the terms of this Agreement and demand reimbursement of its payments.
- The first party will release the fund (Both civil work and inputs) based on estimated amount to the second party. Excess of any amount must be born by the second party for effective completion of the work/activities as beneficiary share.

Duties and responsibilities of the second party

- The second party shall take up the works and arrange for its completion within the agreed time period by employing suitable skilled persons to carry out the works;
- Make labour payment as per schedule of labour payment for different items of work;
- Abide by the technical suggestions/direction of supervisory personnel as authorized under AACP.
- Ensure that the work is carried out in accordance with specifications, drawings and also within the total sanctioned amount without any cost escalation;
- Ensure that there is no miss-utilization of the money/materials during construction;
- Second party cannot make any claim more than the estimated amount once such excess amount is actually required for completion of the works as agreed.

Dispute Settlement

If over the works, any dispute arises between the two parties, relating to any aspects of this Agreement, the parties shall first attempt to settle the dispute through mutual and amicable consultation. If the dispute is not settled through such consultation, the matter may be referred for arbitration to the Dy. Commissioner of the District being the DACC Chairman.

Signed and delivered by Sri. _____, the beneficiary as selected under AACP by the DACC in the presence of:

i)

ii)

Signed and delivered by Sri. _____ District Fisheries Development Officer of _____ District in the presence of:

i)

ii)

6.7 Insurance Claim Form

THE ORIENTAL INSURANCE CO. LTD
DIVISION NO. X, 15/16 SCINDIA HOUSE, K.G. MARG, NEW DWLHI-110 001
TEL NO. 23357301,23310371, FAX- 23310829

CHECK LIST FOR SUBMISSION OF DOCUMENTS:
(PLEASE ☑ THE APPROPRIATE BOX)

1. CLAIM INTIMATION YES ☐ NO ☐

2. Claim FORM YES ☐ NO ☐

3. F.I.R. YES ☐ NO ☐

(Original or duly attested copy. In case of F.I.R. in local language-Duly attested translated copy in English alongwith the original copy)

4. FINAL POLICE REPORT/CHARGE SHEET/INQUEST REPORT:YES ☐ NO ☐

(Original or duly attested copy. In case of F.I.R. in local language-Duly attested translated copy in English alongwith the original copy)
This is must in case of murder, personal enemity, family feud cases

5. POST MORTEM REPORT: YES ☐ NO ☐

(Original or duly attested copy. In case of P.M.R in local language-Duly attested translated copy in English alongwith the original copy)

6. DEATH CERTIFICATE: YES ☐ NO ☐

(Original copy. In case of Death Certificate in local language-Duly attested translated copy in English alongwith the original)

7. LEGAL HEIR CERTIFICATE: YES ☐ NO ☐

8. PHOTO COPY OF MEMBERSHIP ADMISSION REGISTER YES ☐ NO ☐

(Date of Membership should be duly incorporated)

9. INDEMNITY BOND: YES ☐ NO ☐
(In missing cases only)

10. ANY OTHER SUPPORTING DOCUMENT YES ☐ NO ☐
(e.g. Medical papers in case of continued treatment, Statement of witness. Any resolution passed by the Cooperative body etc., Driving License if the deceased was driving the vehicle which met with the accident)
If answer to 10 is Yes, give details: i .....
ii.....
iii.....
iv.....
v .....

Authorized Signatory
Name of the cooperative Body:
Place / Date:

6.8 Claim Intimation under JPA form

Annexure-1

From (Name & Address of the sponsoring Agency)
_____
_____
_____
_____

To
The Managing Director,
National Federation of Fishermen's Co-operatives Ltd.
7, Sarita Vihar Institutional Area
New Delhi- 110 076

Subject: Claim Intimation under Group Janta Personal Accident Policy
A/C_____

This is to inform you that Sri/Smt/Km_____ of Village_____ PO _____ District_____ State Himachal Pradesh, who was insured under the Fishermen Accident Insurance as a member of (*Name & full address of the Society*)

_____
_____
_____
_____

died / disabled on account of accident on _____

We are enclosing the claim form along with the necessary enclosures as per the checklist duly completed and signed by the certifying authority who was nominated by the State Government.

We would request you that a sum of Rs. _____ being the capital sum insured under the policy may be kindly sent through a crossed cheque in favour of Sri/Smt/Km._____ (insured person/ nominee of the insured person) for disbursement as per the provision of the rules framed in this behalf.

The original receipt of the amount disbursed to the insured/ nominee would be sent to you with in a fortnight of its receipt.

Thanking you,

Yours faithfully,

(Signature)
Name_____
Designation _____
Seal _____

Date _____

6.9 Training Note Submission Form

Annexure-XVI

Format for submission of training note by the officers/official attending training at the training Institute:-

1. Name of the Training Institute:-
2. Name of the officer:-
3. Designation:-
4. Title of the training Programme:
5. Duration of the training:
6. Training Methodology adopted during training session:-
7. Relevance of the training for enhancing & communication skills:-
8. Relevance of the training for enhancing technical skills/ knowledge:-
9. Brief note on training attended and suggestions for further improvement, if any:-

6.10 Form for fisherman relief fund

APPENDIX-1

APPLICATION FORM FOR ASSISTANCE FROM FISHERMEN'S RELIEF FUND (AS PER RULE OF RULES GRANTING SUCH ASSISTANCE)

1. Name and address of victim fisherman/membership No. and his fishing license number and date

2. Name of fisheries cooperative Society to which he belong

3. Date, Place and details of natural calamity

4. Nature of loss for which assistance is required (full details of loss be given)

5. Annual income of claimant from all sources (Certificate be attached)

Signature of applicant

Certified that Sh._____ is the member of the Fishermen Cooperative Society_____ was holding a fishing license No._____ dated _____for the year _____

Signature of
President of Fishermen's Cooperative Society

6.11 Claim Disbursement Form

ANNEXURE- 3

THE ORIENTAL INSURANCE CO. LTD
DIVISION NO. X, 15/16 SCINDIA HOUSE, K.G. MARG, NEW DWLHI-110 001
TEL NO. 23357301,23310371, FAX- 23310829
(Regd. Office: Oriental House, P.B. No. 7037, A-25/27, Asif Ali Road, New Delhi-2)

CLAIM DISBURSEMENT VOUCHER

Received from The Oriental Insurance Co. Ltd a sum of Rs. _____ only (Rs. _____) towards full and final settlement of Claim No. _____ under Policy No. _____ arising out of accident on _____

1._____

2. _____

3. _____

4. _____

(Signature/ L.T.I. of Insured Member/Nominee on a Revenue Stamp)

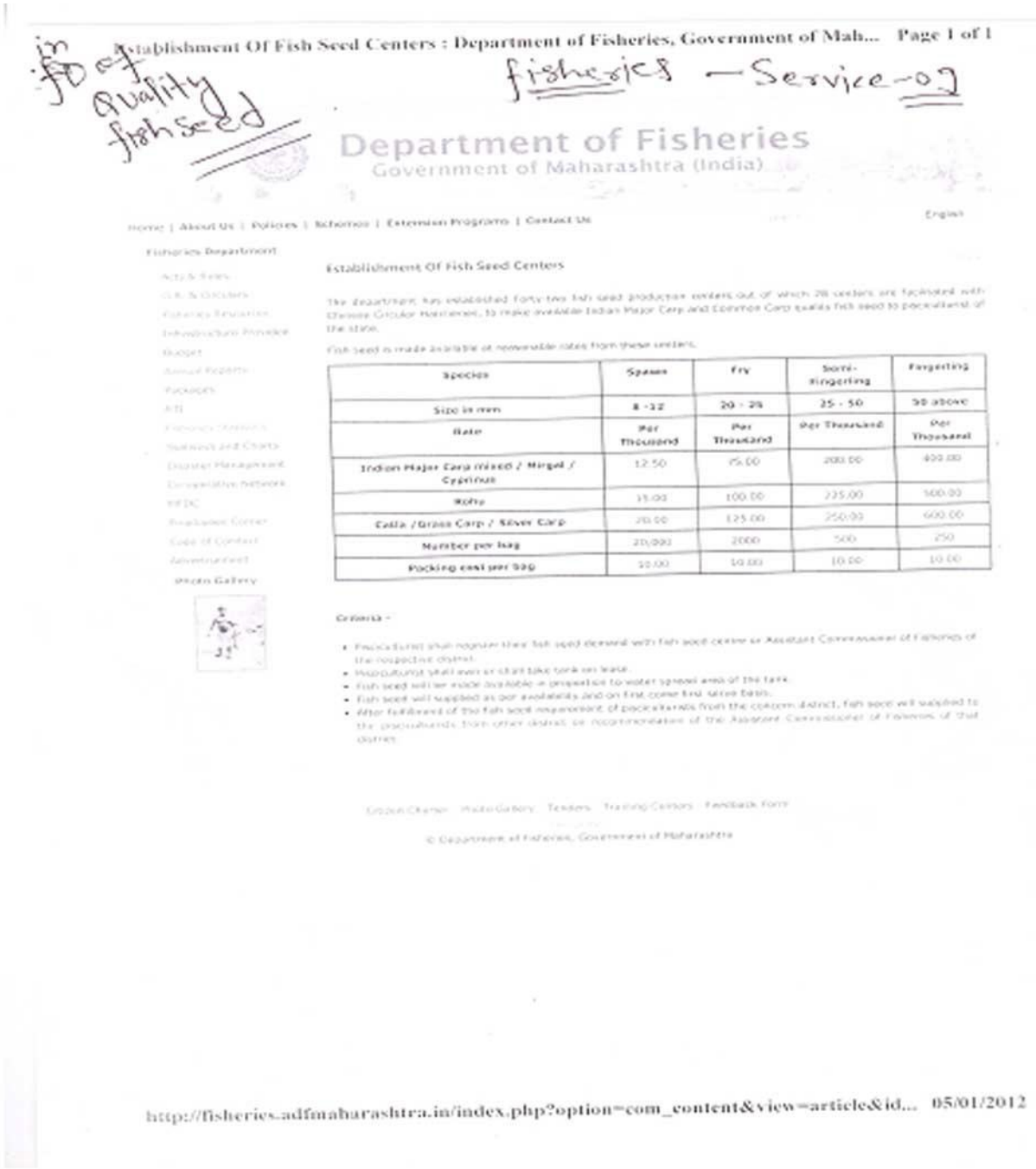
Signature/ L.T.I. Attested of Insured Member/Nominee

(Signature)

Name & Address of the Certifying Authority_____

(Affix official Stamp)

6.12 Quality Fish Seed Rate



Establishment Of Fish Seed Centers : Department of Fisheries, Government of Mah... Page 1 of 1

fisheries — Service-09

Department of Fisheries
Government of Maharashtra (India)

Establishment Of Fish Seed Centers

Species	Spawn	Fry	Semi-fingerling	Fingerling
Size in mm	8 -12	20 - 25	25 - 50	50 above
Rate	Per Thousand	Per Thousand	Per Thousand	Per Thousand
Indian Major Carp (Mixed / Mirgal / Cyprinus	12.50	75.00	200.00	400.00
Rohu	15.00	100.00	225.00	500.00
Catla / Gross Carp / Silver Carp	20.00	125.00	250.00	600.00
Number per bag	20,000	2000	500	250
Packing cost per bag	10.00	10.00	10.00	10.00

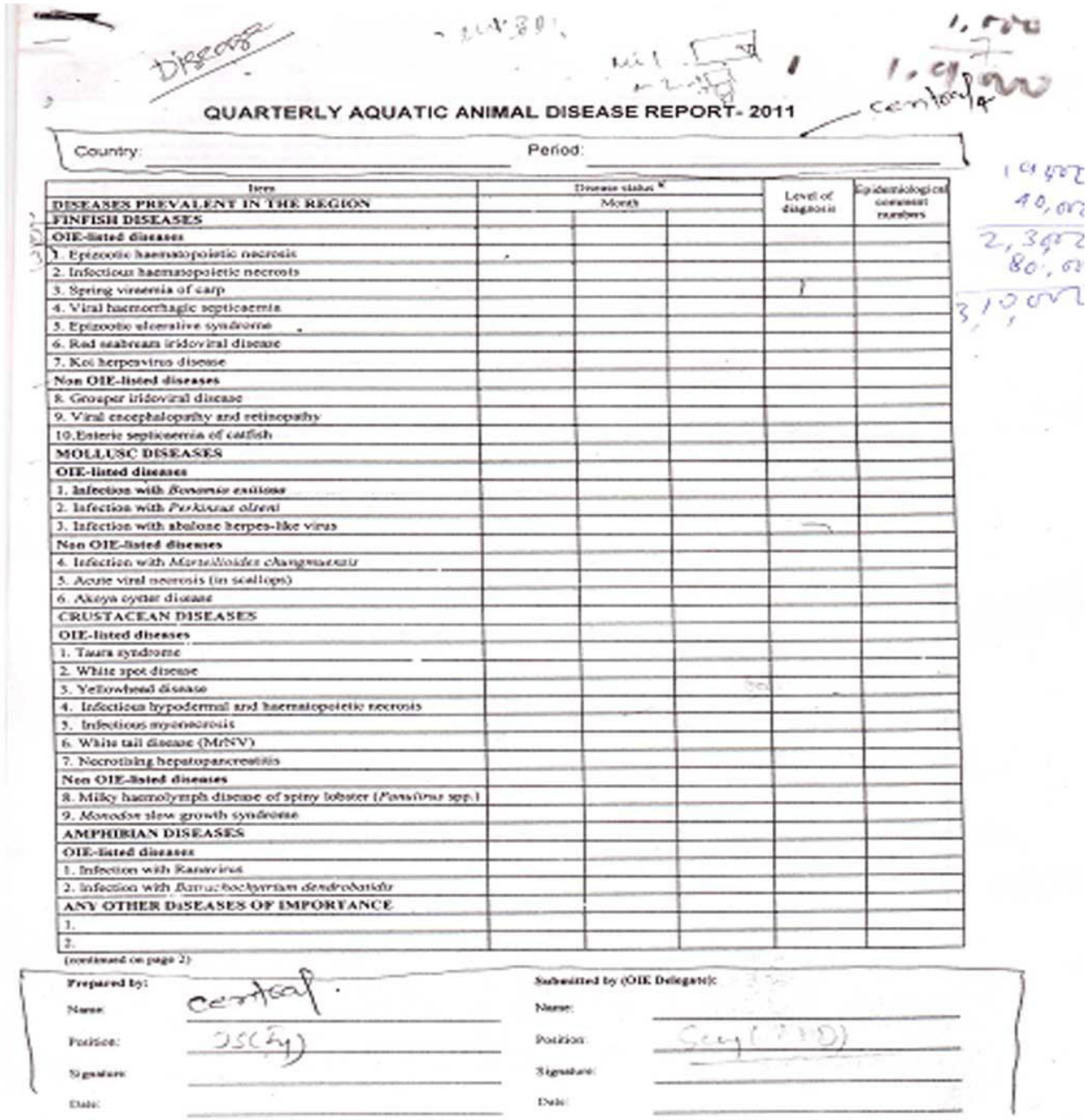
Criteria -

- Fish seed will be made available in proportion to water spread area of the farm.
- Fish seed will be supplied as per availability and on first come first serve basis.

© Department of Fisheries, Government of Maharashtra

http://fisheries.adfmaharashtra.in/index.php?option=com_content&view=article&id... 05/01/2012

6.13 Disease Report



QUARTERLY AQUATIC ANIMAL DISEASE REPORT- 2011

Country: Period:

Item	Disease status * Month			Level of diagnosis	Epidemiological comment number
DISEASES PREVALENT IN THE REGION					
FINFISH DISEASES					
OIE-listed diseases					
1. Epizootic haematopoietic necrosis					
2. Infectious haematopoietic necrosis					
3. Spring viraemia of carp					
4. Viral haemorrhagic septicaemia					
5. Epizootic ulcerative syndrome					
6. Red seabream iridoviral disease					
7. Koi herpesvirus disease					
Non OIE-listed diseases					
8. Grouper iridoviral disease					
9. Viral encephalopathy and retinopathy					
10. Enteric septicaemia of catfish					
MOLLUSC DISEASES					
OIE-listed diseases					
1. Infection with *Bonamia exitiosa*					
2. Infection with *Perkinsus olseni*					
3. Infection with abalone herpes-like virus					
Non OIE-listed diseases					
4. Infection with *Marteilioides chungmuensis*					
5. Acute viral necrosis (in scallops)					
6. *Akoya oyster* disease					
CRUSTACEAN DISEASES					
OIE-listed diseases					
1. Taura syndrome					
2. White spot disease					
3. Yellowhead disease					
4. Infectious hypodermal and haematopoietic necrosis					
5. Infectious myonecrosis					
6. White tail disease (MrNV)					
7. Necrotising hepatopancreatitis					
Non OIE-listed diseases					
8. Milky haemolymph disease of spiny lobster (*Panulirus* spp.)					
9. *Monodon* slow growth syndrome					
AMPHIBIAN DISEASES					
OIE-listed diseases					
1. Infection with Ranavirus					
2. Infection with *Batrachochytrium dendrobatidis*					
ANY OTHER DISEASES OF IMPORTANCE					
1.					
2.					

(continued on page 2)

Prepared by:
Name:
Position:
Signature:
Date:

Submitted by (OIE Delegate):
Name:
Position:
Signature:
Date:

6.14 Fish Species

SCIENTIFIC, ENGLISH AND LOCAL NAME OF FISH SPECIES FOUND IN MAHARASHTRA STATE

Sr. No.*	Scientific Group Name	Common English Name	Local Name in Marathi
1	2	3	4
7	Anchovielia	Golden Anchovye	Mandeli
19	Black Pomfrets	Black Pomfrets	Halwa
23	Bregmaceros Macclelendi /	Unicorn cod.	Tendali
25	Carangids Small	Other Carangids	Kokari, Toki
17	Caranx	Horse Mackerel	Kharba Bangada
3	Cat Fishes	Cat Fish	Shingada
32	Cephalopoda	Cuttle Fish	Mhakul
4	Chirocentrus	Silver bar/Walf Herring	Karli & Datali
2	Eels	Eels	Wam
1	Elasmobranchs	Shark & Rays	Mushi & Pakat
10	Harpodon Nehereus	Bombay Duck	Bombil
6	Hilsa Ilisha / Toli	Hilsa Shad & Giant Herrings	Bhing &Palla
31	Lactarius	Big-Jawed Jumper	Soundala
26	Leiognathus	Pony Fish	Khap
30	Lobsters	Lobster	Shewand
20	Mackerel	Indian Mackerel	Bangada
29	Non-Penacid Prawns	Shrimp	Jawala, Karandi
9	Other Clupeids	White Sardines	Bhiljee,Khavali,Paturdi
15	Otolithes species	Cracker	Dhoma, dhodi
28	Penaid Prawns	Prawn	Kolambi
11	Perches	Groupers	Karkara,Khajura,Heum,Gobra
13	Polynomids	Thread Fins	Dadha & Rawas
18	Pomfrets	Pomfret	Saranga
12	Red Snapper	Red Snapper	Tamb
16	Ribbon Fishes	Ribbon Fish	Bala & Wakti
5	Sardines	Sardines and Oil Sardines	Pedwa,Pedi & Tarali
14	Sciaenids	Jew Fish & Dori	Ghol & Koth
21	Seer Fishes	Seer Fish	Surmai, Towar
24	Soles	Solas	Lep,Bhakas
8	Thrissocles	Mustached Anchovy	Kati
22	Tunnies	Tuna	Gedar, Kupa
27	Upenaids Sp.	Goat Fish	Chiras, Rane
33	Miscellaneous	Miscellaneous (Others)	Sankirna (Itar)

* Sr. no. as shown in the various TABLES

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6.15 Fish Production

TABLE NO. –15.

DISTRICTWISE & REGIONWISE INLAND FISH PRODUCTION

(InTonne)

Sr. No.	Name of the District	2005-06	2006 – 07	2007-08	2008-09	2009-10
1	2	3	4	5	6	7
1	Thane	2088	3100	2505	2750	3200
2	Mumbai	790	810	825	800	---
3	Raigad	1250	1000	1500	1875	846
4	Ratnagiri	456	460	495	480	47
5	Sindhudurg	13	9	16	12	9
KONKAN Region		**4597**	**5379**	**5341**	**5917**	**4102**
6	Nasik	2957	3424	4280	4060	3900
7	Dhule	1560	1590	1650	1803	1855
8	Jalgaon	3640	4700	4510	4950	4470
9	Nandurbar	770	660	725	702	815
10	Ahmednagar	1907	1955	2211	2160	2225
Nashik Region		**10834**	**12329**	**13376**	**13675**	**13265**
11	Pune	4450	4200	5030	5295	5500
12	Satara	4120	2320	2615	2900	2511
13	Sangli	2600	2500	2600	2727	3020
14	Solapur	1930	1805	2060	2282	2325
15	Kolhapur	2211	2803	2928	3210	3550
Pune Region		**15311**	**13628**	**15233**	**16414**	**16906**
16	Aurangabad	3542	4113	4437	3916	4781
17	Jalna	2037	2310	1800	1555	1770
18	Hingoli	1300	1300	1716	1161	1052
19	Parbhani	1200	1200	1476	1347	900
20	Nanded	4930	5229	5453	6159	3757
21	Beed	3468	4000	3276	3752	4000
22	Latur	2248	3367	3819	4512	3564
23	Osmanabad	1800	2019	2000	1950	1750
Aurangabad Region		**20525**	**23538**	**23977**	**24352**	**21574**
24	Buldhana	6656	6426	6775	3619	3590
25	Akola	1765	1767	1764	1334	1450
26	Vashim	3026	3051	3020	2359	2717
27	Amravati	4293	3712	3599	2826	3713
28	Yavatmal	4400	4450	4500	3463	3300
Amravati Region		**20140**	**19406**	**19658**	**13601**	**14770**
29	Wardha	2800	3000	3200	2720	3200
30	Nagpur	8210	8680	9289	11239	10900
31	Bhandara	15660	15125	15645	12410	11065
32	Gondia	19075	15628	15971	15043	15766
33	Chandrapur	14469	14306	15843	15577	7354
34	Gadchiroli	4080	4120	4340	4569	3685
NAGPUR REGION		**64294**	**60859**	**64388**	**61558**	**51970**
TOTAL		**135701**	**135139**	**141973**	**135517**	**122587**

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6.16 Fish production

TABLE No. --13

MARINE & INLAND FISH PRODUCTION WITH ITS VALUE IN MAHARASHTRA

FROM 1980-81TO 2008-09 (QUANTITY In Tonne) (VALUE Rs. in Lakh)

Sr. No.	YEAR	MARINE		INLAND		TOTAL	
		QUANTITY	VALUE	QUANTITY	VALUE	QUANTITY	VALUE
1	2	3	4	5	6	7	8
1	1980-81	374160	12625.05	24601	1230.05	398761	13855.10
2	1981-82	288865	11554.31	26647	1332.35	315512	12886.66
3	1982-83	282256	12028.67	27012	1351.60	309268	13380.87
4	1983-84	310059	14811.72	27829	1669.74	337888	16481.46
5	1884-85	360222	14298.57	30021	1801.26	390243	16099.85
6	1985-86	377352	15033.87	32000	2560.00	409352	17593.07
7	1986-87	332407	16320.33	32162	2572.98	364569	18893.29
8	1987-88	293571	14974.14	47672	4290.48	341243	19264.62
9	1988-89	345848	19225.91	50448	5044.80	396296	24270.71
10	1989-90	402592	21469.00	49652	4962.20	452244	26431.20
11	1990-91	342323	27689.65	72481	13046.58	414804	40736.23
12	1991-92	344536	33373.27	58100	11620.00	402636	44993.27
13	1992-93	419581	44046.34	78736	15774.20	498317	59820.54
14	1993-94	353926	50558.73	88724	22181.00	442650	72739.73
15	1994-95	332934	61008.91	36420	13952.40	396354	74961.31
16	1995-96	423985	80526.79	84191	21047.75	508176	101574.54
17	1996-97	480964	93503.17	125000	31250.00	605954	124753.17
18	1997-98	453712	88000.66	126642	34193.34	580354	122193.89
19	1998-99	394883	70908.86	125496	36393.84	520379	107302.70
20	1999-00	397901	69074.12	135390	39601.58	533291	108675.70
21	2000-01	402769	87744.59	123266	37259.61	526035	105004.20
22	2001-02	414268	91867.27	122785	34724.83	537053	126592.10
23	2002-03	386680	101216.13	127236	38458.63	513916	139675.76
24	2003-04	420077	108979.72	125120	46294.40	545197	155274.12
25	2004-05	417854	110269.92	121180	54531.00	539034	164800.92
26	2005-06	445343	124557.19	135204	63545.88	580547	188103.07
27	2006 - 07	464090	142307.98	131848	62191.38	595938	204499.36
28	2007-08	418815	150604.86	139632	75523.34	558447	226128.20
29	2008-09	395963	157232.24	129600	60397.49	525563	217629.73
30	2009-10	415767	187281.32	122587	61587.48	538354	248868.80

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6.17 Fish disease

Input forms

Department of Fish Health and Environment
COLLEGE OF FISHERIES
CENTRAL AGRICULTURAL UNIVERSITY
Lembucherra, Tripura 799 210

Proforma for Recording the Case History /Past History of the Stock

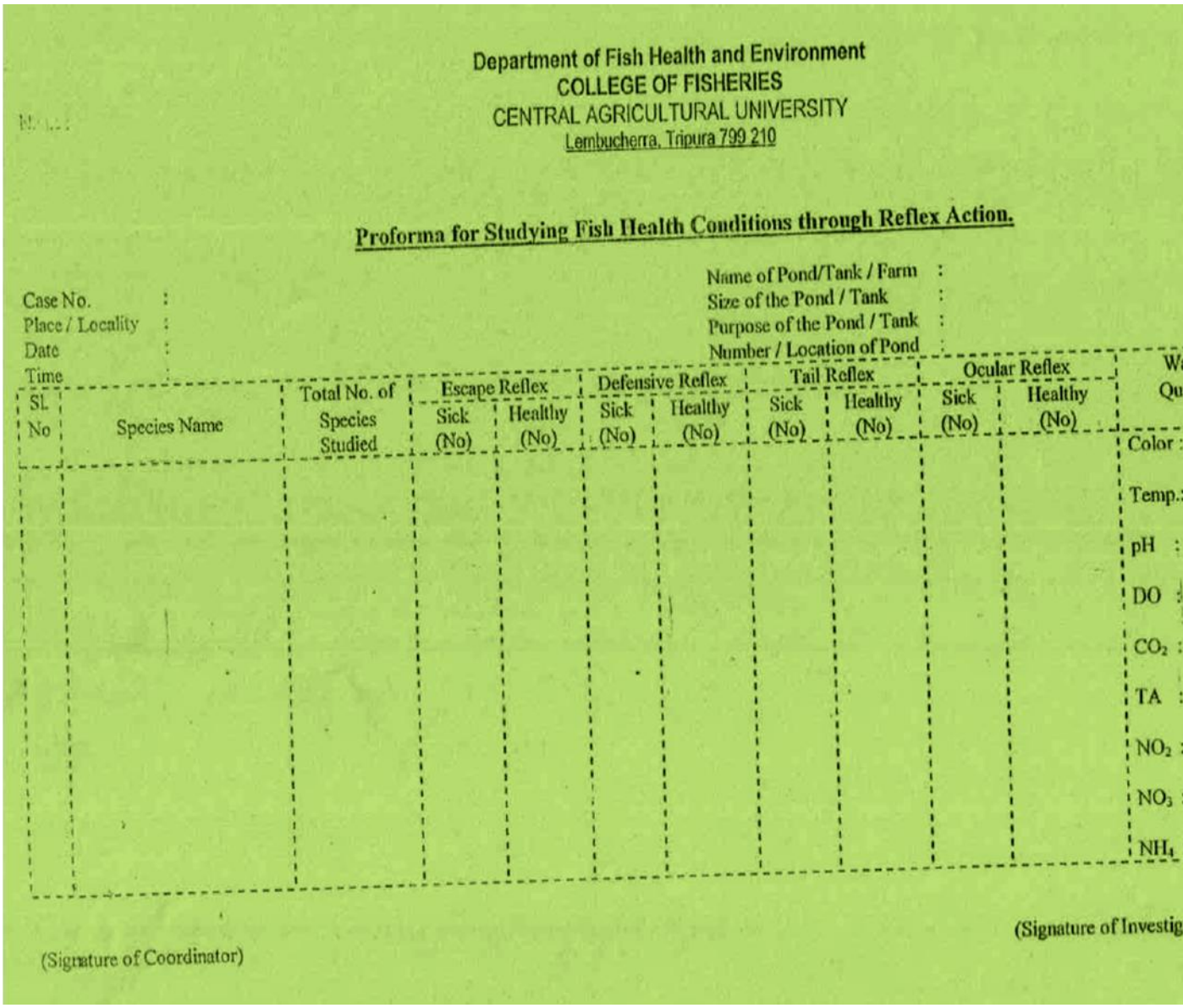
Case No. :
Place / Locality :
Date :
Time :
Name of the interviewed person(s) :

Name of Pond/Tank / Farm :
Size of the Pond / Tank :
Purpose of the Pond / Tank :
Number / Location of Pond :

Sl. No	Species Stocked	Density (No)	Maintenance				Condition / Symptom / Behaviour / Damage.	Progress of Disease				Remarks
			Feeding	Fertilizer	Therapeutic/ prophylaxis	Water Quality		Observed Stress condition	Period of Severity	Earlier observation	Eventual Causes	

(Signature of Coordinator)

(Signature of Investigator)



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Lembucherra, Tripura 799 210

Proforma for Studying Fish Health Conditions through Reflex Action.

Case No. :
Place / Locality :
Date :
Time :

Name of Pond/Tank / Farm :
Size of the Pond / Tank :
Purpose of the Pond / Tank :
Number / Location of Pond :

Sl. No	Species Name	Total No. of Species Studied	Escape Reflex		Defensive Reflex		Tail Reflex		Ocular Reflex		W Qu
			Sick (No)	Healthy (No)	Sick (No)	Healthy (No)	Sick (No)	Healthy (No)	Sick (No)	Healthy (No)	
											Color :
											Temp.
											pH :
											DO :
											CO_2 :
											TA :
											NO_2 :
											NO_3 :
											NH_4

(Signature of Coordinator)

(Signature of Investig

Department of Fish Health and Environment
COLLEGE OF FISHERIES
CENTRAL AGRICULTURAL UNIVERSITY
Lembucherra, Tripura 799 210

Fin Fish / Shellfish Disease Diagnosis Form

Date. . . . . Case No. . . . . .
Name: . . . . . .
Address: . . . . . .
. . . . . .
Phone: . . . . . .

HISTORY

- Freshwater
  (a) System Type:
  Culture system: Village Pond / Community Pond / Govt. Pond / Private Pond
  Lake / Reservoir

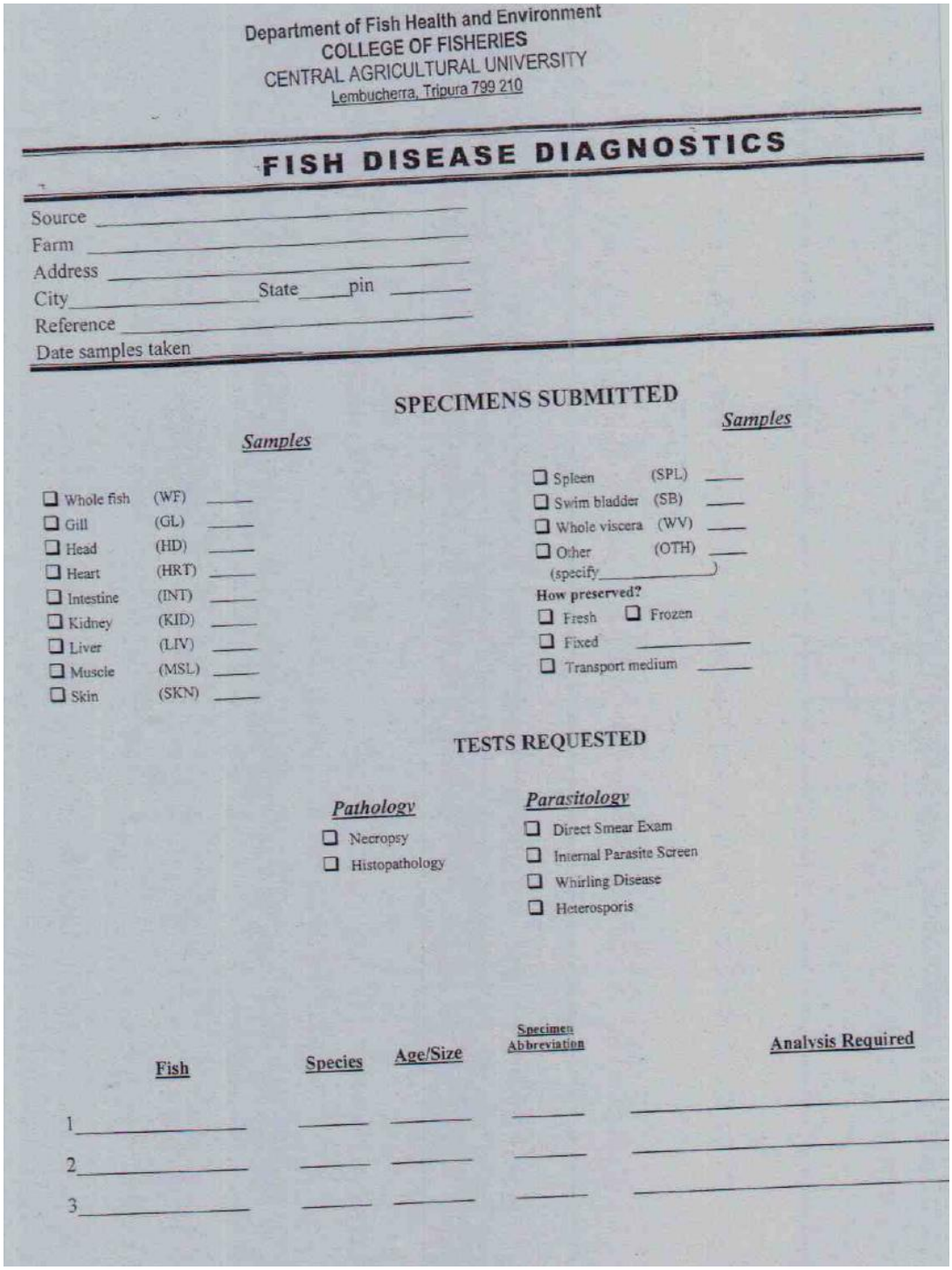
  (b) System Size: . . . . . Kani / ha / acre.
- Species affected . . . . . .
- Species in System . . . . . .
- No. of Fish in System . . . . . .
- No. of Fish & % affected . . . . . Nos. & . . . . . %
- Average affected Fish Size . . . . . cm . . . . . gm
- Age(s) of Affected Fish . . . . . .
- When Morbidity Started. . . . . .
- When Mortality Started . . . . . .
- When Morbidity Ended . . . . . .
- When Mortality Ended . . . . . .
- How long has system been set up? . . . . . .
- Types of life support present . . . . . .
- Any new introduction? Y. . . . . N . . . . . if yes, when & what? . . . . . .
- Water source . . . . . .
- Pipes: metal. . . . . Plastic. . . . . .
- Water appearance (Cloudy, Coloured?). . . . . .
- Air temperature . . . . . ^{0}C, Water temperature . . . . . ^{0}C.
- History of routine maintenance, including water changes & water quality checks:
  . . . . . .
  . . . . . .
  . . . . . .
  . . . . . .
- Behavioural changes? Y. . . . . N . . . . . .
- Describe: . . . . . .
- Respiratory rates: (Normal . . . . Faster . . . . . slower . . . . .).
- Appearance of Fish: . . . . . .
- Appetite (Normal . . . . . Less. . . . More . .): . . . . . .
- Other clinical signs: . . . . . .
  . . . . . .
  . . . . . .

(Supervisor's Signature)

Name . . . . . .
Designation . . . . . .

(Investigator's Signature)

Name . . . . . .
Designation . . . . . .



Department of Fish Health and Environment
COLLEGE OF FISHERIES
CENTRAL AGRICULTURAL UNIVERSITY
Lembucherra, Tripura 799 210

FISH DISEASE DIAGNOSTICS

Source _____
Farm _____
Address _____
City _____ State ____ pin _____
Reference _____
Date samples taken _____

SPECIMENS SUBMITTED

Samples

- ☐ Whole fish (WF) ____
- ☐ Gill (GL) ____
- ☐ Head (HD) ____
- ☐ Heart (HRT) ____
- ☐ Intestine (INT) ____
- ☐ Kidney (KID) ____
- ☐ Liver (LIV) ____
- ☐ Muscle (MSL) ____
- ☐ Skin (SKN) ____

Samples

- ☐ Spleen (SPL) ____
- ☐ Swim bladder (SB) ____
- ☐ Whole viscera (WV) ____
- ☐ Other (OTH) ____
  (specify_____)

How preserved?

- ☐ Fresh ☐ Frozen
- ☐ Fixed _____
- ☐ Transport medium _____

TESTS REQUESTED

Pathology

- ☐ Necropsy
- ☐ Histopathology

Parasitology

- ☐ Direct Smear Exam
- ☐ Internal Parasite Screen
- ☐ Whirling Disease
- ☐ Heterosporis

Fish	Species	Age/Size	Specimen Abbreviation	Analysis Required
1				
2				
3				

7. ANNEXURE1

7.1 Fish diseases

a. Epizootic haematopoietic necrosis
b. Infectious haematopoietic necrosis
c. Spring viraemia of carp
d. Viral haemorrhagic septicaemia
e. Infectious pancreatic necrosis
f. Infectious salmon anaemia
g. Epizootic ulcerative syndrome
h. Bacterial kidney disease (Renibacterium salmoninarum)
i. Gyrodactylosis (Gyrodactylus salaris)
j. Red sea bream iridoviral disease

7.2 Mollusc diseases

a. Infection with Bonamia ostreae
b. Infection with Bonamia exitiosa
c. Infection with Marteilia refringens
d. Infection with Mikrocytos mackini
e. Infection with Perkinsus marinus
f. Infection with Perkinsus olseni
g. Infection with Xenohaliotis californiensis

7.3 Crustacean diseases

a. Taura syndrome
b. White spot disease
c. Yellowhead disease
d. Tetrahedral baculovirosis (Baculovirus penaei)
e. Spherical baculovirosis (Penaeus monodon-type baculovirus)
f. Infectious hypodermal and haematopoietic necrosis
g. Crayfish plague (Aphanomyces astaci)

NOTE: Many fish diseases are not treatable - either is no known cure or the cure may jeopardize the fish. Some fish die from internal parasites that are undiagnosed and therefore untreated. Do your best to help your system and it's fish, but remember that we cannot do ever...

7.4 Sample outputs

Eg – Test Results

Sl.No	Parameter	Result (Pg/kg)	Test method	Limit of detection (pg/kg)	MBL If specified (pg/kg)	Conformity
1	Chloramphenicol	0.68	LC MASS SPECTROMETRY	0.25	0.3(MRPL)	POSITIVE
2	Nitrofuron Metobolite - SEM	N.D	LC MASS SPECTROMETRY	0.5	1.0(MRPL)	WITHIN LIMIT
3	Nitrofuron Metobolite - AOZ	211.45	LC MASS SPECTROMETRY	0.5	1.0(MRPL)	POSITIVE
4	Nitrofuron Metobolite - AMOZ	N.D	LC MASS SPECTROMETRY	0.5	1.0(MRPL)	WITHIN LIMIT
5	Nitrofuron Metobolite - AHD	N.D	LC MASS SPECTROMETRY	0.5	1.0(MRPL)	WITHIN LIMIT

Behaviour or part of body affected by disease

(Source from http://www.fao.org/docrep/field/003/V3185E/V3185E00.htm)

body shape	yes	no	viscera	yes	no
skin or fins	yes	no	heart	yes	no
gills	yes	no	brain	yes	no
eyes	yes	no	swimming behaviour	yes	no
belly	yes	no	other behaviour	yes	no
anus	yes	no	other symptoms	yes	no

BODY SHAPE

kyphosis	skoliosis	lordosis
spiral	pin-head	shrunken
deformity (mouth, operculum, fin)		

SKIN AND/OR FINS

Aberrant colour	yes	No
Aberrant coating	yes	No
Aberrant mucus production	yes	No

Symptoms		**Colour**		**Position**				
spots	yes	white	head	yes	no	dorsal fin	yes	no
	no	red	trunk	yes	no	anal fin	yes	no
		dark	tail	yes	no	caudal fin	yes	no
		other	dorsal	yes	no	paired fins	yes	no
			ventral	yes	no			
blotches	yes	white	head	yes	no	dorsal fin	yes	no
	no	red	trunk	yes	no	anal fin	yes	no
		dark	tail	yes	no	caudal fin	Yes	no
		other	dorsal	yes	no	paired fins	yes	no
			ventral	yes	no			

boils	Yes	white	head	yes	no	dorsal fin	yes	no
	No	red	trunk	yes	no	anal fin	yes	no
		dark	tail	yes	no	caudal fin	yes	no
		other	dorsal	yes	no	paired fins	yes	no
			ventral	yes	no			
ulcer	yes	white	head	yes	no	dorsal fin	yes	no
	no	red	trunk	yes	no	anal fin	yes	no
		Dark	tail	yes	no	caudal fin	yes	no
		□ other	dorsal	yes	no	paired fins	yes	no
			ventral	yes	no			
objects	no		head	yes	no	dorsal fin	yes	no
	disc-like		trunk	yes	no	anal fin	yes	no
	elongated		tail	yes	no	caudal fin	yes	no
	cotton-like		dorsal	yes	no	paired fins	yes	no
	other objects		ventral	yes	no			
fins	more or less normal					dorsal fin	yes	no
	frayed					anal fin	yes	no
	red base					caudal fin	yes	no
	red base and frayed					paired fin	yes	no
	white margin and frayed							

GILLS

Aberrant colour	Blotches	Spots
None	None	None
Red	Red	Red
Pale/whitish	Dark	Dark
Other	Other	Other
knots	coating	gills frayed
None	None	None
Red	Red	Red
Dark	Dark	Dark
Other	Other	Other
objects		
None		
Disc-like		
Elongated		
Other objects		

EYES

Milky Colour (whole)	Milky colour (lens only)	Spots
Yes	Yes	None
No	No	Red
		Black
		White

ANUS

Anus protruding	Anus red	Objects	Exudates unusual
Yes not	Yes no	None	yes no
		Filament like	

BELLY

Shape of belly	Lumen with fluid	Worms
Not Striking	Yes No	None
Distended		Flat worms
Collapsed		Round worms
		Other

VISCERA

Organ affected		Size	Appearance	Blotches	Colour	Knots	Colour
liver	Yes	Enlarged	□ pale	No	Red/bloody	No	Red/bloody
	No	Reduced	Other	Yes	Light	Yes	Light
		Normal			Dark		Dark
					Other		Other
spleen	Yes	Enlarged	□ pale	No	Red/bloody	No	Red/bloody
	No	Reduced	Dark	Yes	Light	Yes	Light
		Normal	Other		Dark		Dark
					Other		Other
kidney	Yes	Enlarged	□ pale	No	Red/bloody	No	Red/bloody
	No	Reduced	Other	Yes	Light	□ yes	Light
		Normal			Dark		Dark
					Other		Other
swim bladder	Yes	Enlarged	□ pale	No	Red/bloody	No	Red/bloody
	No	Reduced	Other	Yes	Light	Yes	Light
		Normal			Dark		Dark
					Other		Other
intestine	Yes	Enlarged	□ inflamed	No	Red/bloody	No	Red/bloody
	No	Reduced	□ flat worms	Yes	Light	Yes	Light
		Normal	□ round worms		Dark		Dark
			Other		Other		Other
other organs	Yes	Enlarged		No	Red/bloody	No	Red/bloody
	No	Reduced		Yes	light	Yes	Light
		Normal			Dark		Dark

					Other		Other
all organs	Yes	Pasted					
	No	Reduced					
		Other					

HEART

□ ventricle	□ auricle	□ arterial bulb	□ haemorrhage	□ white spot
□ red spot	□ nodule			
BRAIN				
□ olfactory lobe	□ optic lobe	□ cerebrum	□ cerebellum	□ medulla oblongata
□ haemorrhage	□ white spot	□ red spot	□ nodule	

SWIMMING BEHAVIOUR

Unusual activity	**loss of balance**	**unusual swimming motions**
□ yes □ no	□ yes □ no	□ yes □ no
□ restless		□ swaying
□ sluggish/lethargic		□ rotating
□ activity alternates with lethargy		□ jerky
		□ tumbling
		□ other
head pointing up or down	scraping on objects	jumping out of water
□ yes □ no	□ yes □ no	□ yes □ no

OTHER BEHAVIOUR

fins clamped or stretched	□ yes	□ no				
fish near bottom	□ yes	□ no				
fish near surface	□ yes	□ no				

fish near inlet or outlet	□ yes	□ no				
loss of appetite	□ yes	□ no				
operculum spread	□ yes	□ no				
unusual ventilation	□ yes	□ no	□ fast	□ slow	□ flat	□ heavy
gasping at surface	□ yes	□ no				

OTHER SYMPTOMS

scales bristling	□ yes	□ no
loss of scales	□ yes	□ no
skeleton deformation	□ yes	□ no
reduced growth rate	□ yes	□ no
loss of weight	□ yes	□ no

MORTALITY AND SEASONALITY

Mortality	**Seasonality**		
□ low (less than 10%)	spring	□ yes	□ no
□ medium (10–30%)	summer	□ yes	□ no
□ high (30–60%)	autumn	□ yes	□ no
□ catastrophic (more than 80%)	winter	□ yes	□ no

Fish affected:

Symptoms:

Treatment:

Prophylaxis:

Treatment methods