

# Stakeholder Engagement on Aquatic Animal Health and Private Sector

## Communication Strategies

Workshop on enhancing aquatic animal health and biosecurity

26-29 October 2025, Jeddah, Saudi Arabia

Dr. Tariq Khan

Saudi Aquaculture Society (SAS)  
Kingdom of Saudi Arabia



World  
Organisation  
for Animal  
Health

Organisation  
mondiale  
de la santé  
animale

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Mundial  
de Sanidad  
Animal



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Ministry of Environment Water & Agriculture

Kingdom of Saudi Arabia المملكة العربية السعودية

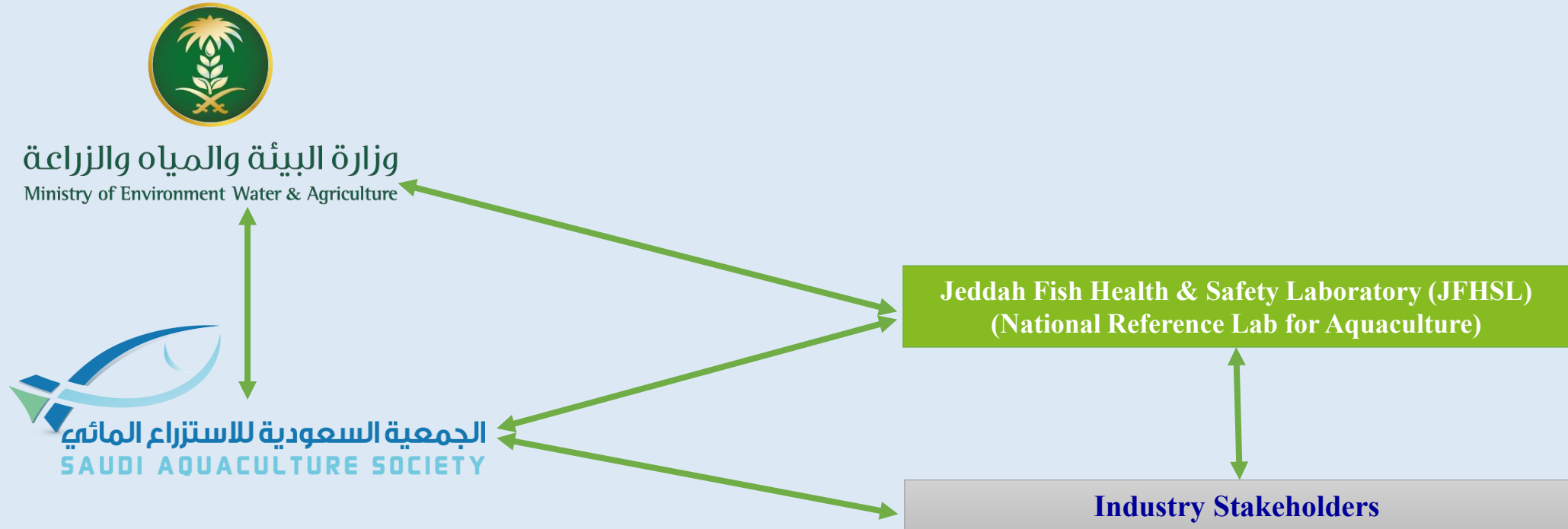


## Introduction:

- The SAUDI AQUACULTURE SOCIETY (SAS) is a non-profit organization, formed by Saudi Cabinet Decree number 73 on 06.02.2013.
- SAS represents the aquaculture industry in the Kingdom of Saudi Arabia, and operates under the supervision of the **Ministry of Environment, Water and Agriculture (MEWA)**.



## Public Private Partnership (PPP)





# Stakeholder Engagement on Aquatic Animal Health



Under the patronage of the General Directorate of Aquaculture, Ministry of Environment, Water & Agriculture (GDA-MEWA), Saudi Aquaculture Society has the mandate to organize national level Aquaculture Biosecurity Workshops.

- International Experts
- Academic & Research institutions
- Biosecurity presentations from individual aquaculture projects
- SAS Biosecurity status update
- Quarterly sample analysis data from JFHSL
- Interactive QA sessions





## Stakeholders:

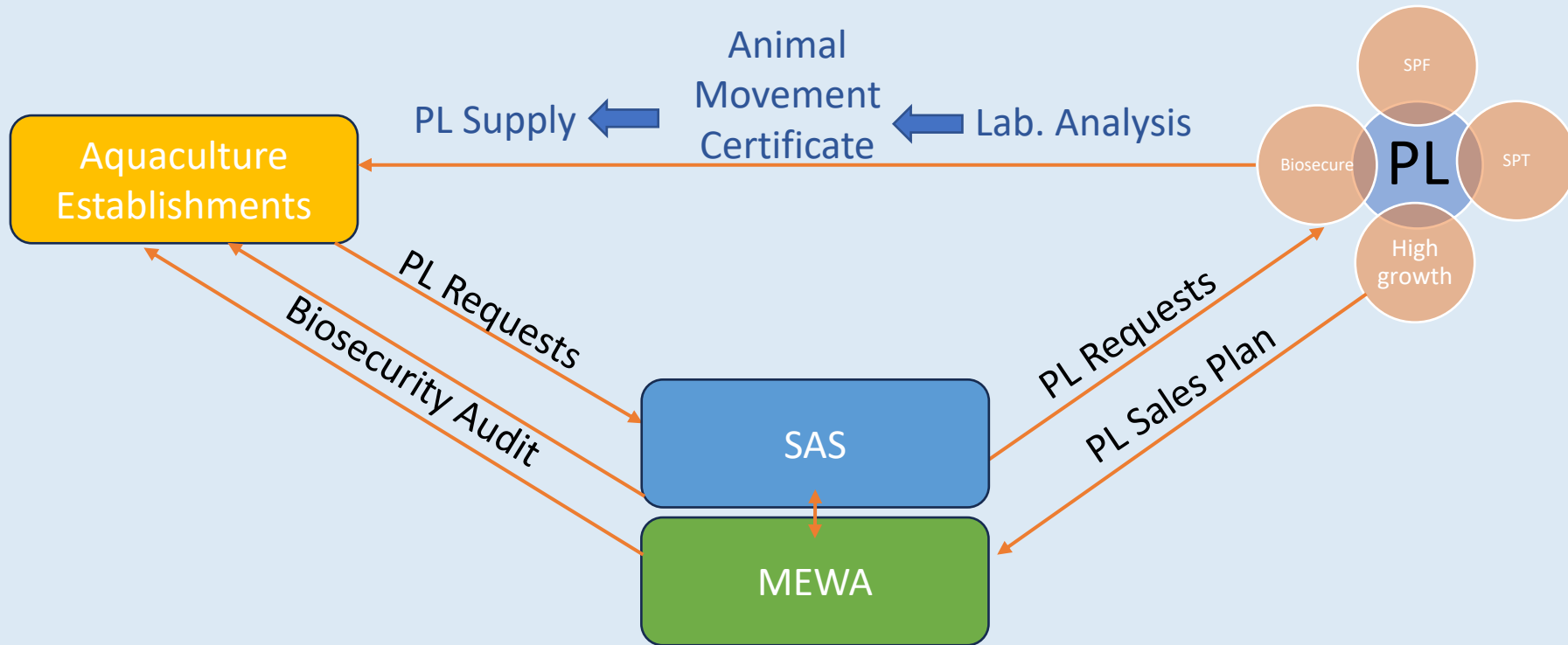
All industry stakeholders including members from the Competent Authority, Company owners, Biosecurity / Technical managers, Aquaculture specialists and Technical advisors.

## Objectives:

- Provides a platform for aquaculture companies to voice **operational challenges**
- Facilitates the collection of **suggestions** from SABTG members for submission to the High-Level Committee for review and action.
- Consolidates industry feedback and forward strategic **recommendations** to MEWA.
- Supports continuous **improvement** of the aquatic animal health through stakeholder engagement and collaborative input.



- Only approved species by the Competent Authority are allowed to culture in the Kingdom.
- Strict controls on imports to safeguard local industry
- A single biosecure source of PLs to all projects after biosecurity audit approval of the requesting establishment.



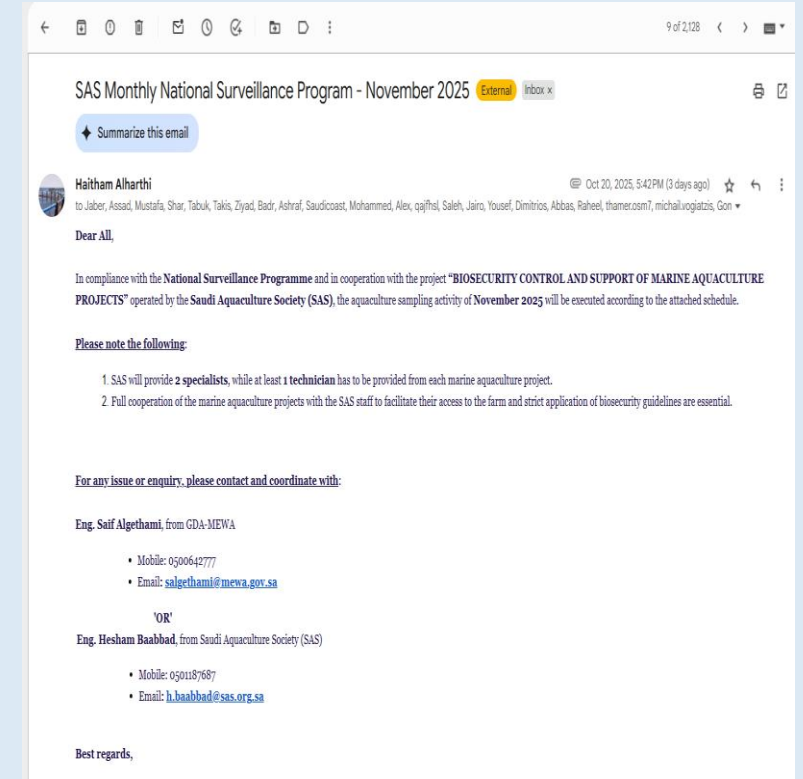


# Private Sector Communication Strategies

Monthly sampling schedule is shared with the aquaculture companies. Samples are collected from;

- Local & commodity markets
- Aquaculture projects
- Processing Plants
- Imports
- Wild

Contact details of MEWA and SAS focal persons have been shared to facilitate seamless communication as needed.





# Monthly Surveillance and Biosecurity Audit



## BIOSECURITY CONTROL OF AQUACULTURE PROJECTS



**FISH BIOSECURITY SURVEILLANCE PROGRAM November - 2025**

| Number of Samples and Analysis |              |               |                   |                                      |                   |                          |                                         |                          |                                              | Sampling Sites & dates |            |           |            |            |            |            |            |            |            |
|--------------------------------|--------------|---------------|-------------------|--------------------------------------|-------------------|--------------------------|-----------------------------------------|--------------------------|----------------------------------------------|------------------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|
|                                |              |               |                   |                                      |                   |                          |                                         |                          |                                              | Mon 17 Nov             | Thu 20 Nov |           | Tue 04 Nov | Wed 05 Nov | Thu 06 Nov | Mon 24 Nov | Sun 09 Nov | Mon 10 Nov | Sun 02 Nov |
| Production facilities          | Animal stage | Target sample | Diganostic method | Target pathogen                      | Frequency         | Min targetted prevalence | No of animals per PCR reaction          | # of tanks/ ponds/ cages | No. of animals / sample                      | Company A              | Company B  | Company C | Company D  | Company E  | Company F  | Company G  | Company H  | Company I  | Company J  |
| Quarantine                     | Juveniles    | Routine       | PCR               | VNN/VER, Iridovirus                  | Once per shipment | 2%                       | 10                                      | Per shipment             | 150                                          | *                      | *          | *         | -          | -          | *          | *          | *          | *          | *          |
|                                |              |               | Histology         | All                                  | Once per shipment | 10%                      | NA                                      | Per shipment             | 30                                           | *                      | *          | *         | -          | -          | *          | *          | *          | *          | *          |
|                                | Broodstock   | Routine       | PCR               | VNN/VER, Iridovirus + TiLV (Tilapia) | Once per shipment | -                        | 1 for lethal, 5 pooled (faeces) for BBS | Per shipment             | 3 for lethal sampling, 100% for BBS (faeces) | *                      | *          | *         | -          | -          | *          | *          | *          | *          | *          |
|                                |              |               | Histology         | All                                  | Once per shipment | -                        | NA                                      | Per shipment             | 3                                            | *                      | *          | *         | -          | -          | *          | *          | *          | *          | *          |
| Hatchery                       | Larvae       | Routine       | PCR               | VNN/VER, Iridovirus + TiLV (Tilapia) | Monthly           | 2%                       | 50                                      | 1                        | 150                                          | NA                     | *          | ✓         | ✓          | -          | ✓          | *          | *          | ✓          | ✓          |
|                                |              |               | Histology         | All                                  |                   | 5%                       | NA                                      | 1                        | 60                                           | NA                     | *          | ✓         | ✓          | -          | ✓          | *          | *          | ✓          | ✓          |
| Nursery                        | Juvenile     | Routine       | PCR               | VNN/VER, Iridovirus + TiLV (Tilapia) | Monthly           | 5%                       | 30                                      | 2                        | 60                                           | *                      | *          | ✓         | ✓          | -          | ✓          | *          | *          | ✓          | ✓          |
|                                |              |               | Histology         | All                                  |                   | 10%                      | NA                                      | 2                        | 30                                           | *                      | *          | ✓         | ✓          | -          | ✓          | *          | *          | ✓          | ✓          |
| Pre growout                    | Sub adult    | Routine       | PCR               | VNN/VER, Iridovirus + TiLV (Tilapia) | Monthly           | 10%                      | 30                                      | 3                        | 30                                           | *                      | *          | NA        | ✓          | -          | NA         | NA         | *          | NA         | ✓          |
|                                |              |               | Histology         | All                                  |                   |                          | NA                                      | 3                        | 10                                           | *                      | *          | NA        | ✓          | -          | NA         | NA         | *          | NA         | ✓          |
| Off shore cages/Grow out       | Adult        | Routine       | PCR               | VNN/VER, Iridovirus + TiLV (Tilapia) | Monthly           | -                        | 10                                      | 3                        | 10                                           | ✓                      | ✓          | NA        | -          | ✓          | NA         | NA         | ✓          | ✓          | NA         |
|                                |              |               | Histology         | All                                  |                   | -                        | NA                                      | 3                        | 5                                            | ✓                      | ✓          | NA        | -          | ✓          | NA         | NA         | ✓          | ✓          | NA         |

|                    |                                                                                                                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOTES /<br>REMARKS | Fish samples for analysis other than PCR and/or histology need to be transported to JFRC as follows:                                                                                                                                                                          |
|                    | <ul style="list-style-type: none"> <li>a) Live fish in water inside oxygenated plastic bag, with proper labeling and kept in polystyrene boxes at low temperature.</li> <li>b) Dead fish in plastic bag with proper labeling and kept in ice in polystyrene boxes.</li> </ul> |

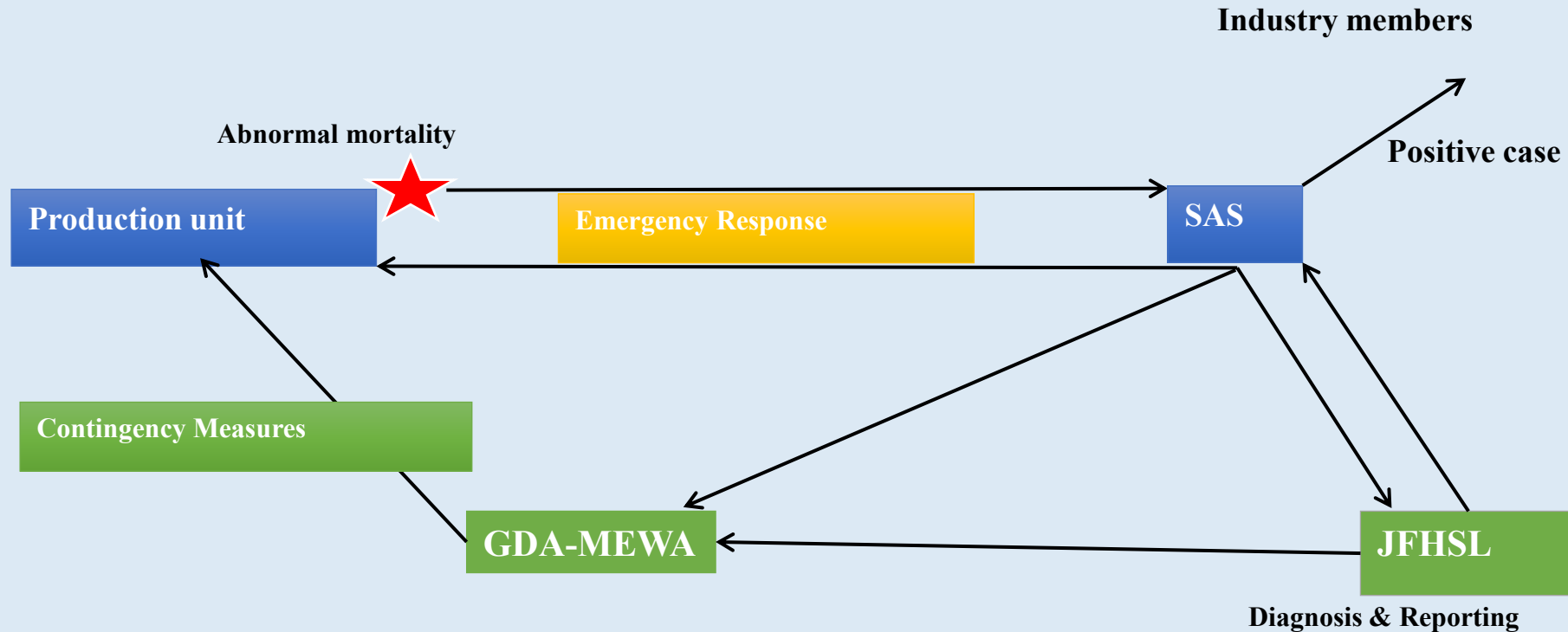
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BIOSECURITY CONTROL OF AQUACULTURE PROJECTS

SHRIMP BIOSECURITY SURVEILLANCE PROGRAM   November - 2025

| Number of Samples and Analysis |                                                                                                                                                                                                                          |                |                               |                                                                              |                    |                          |                                 |                               |                         | Sampling Sites and dates |            |           |                               |            |            |            |            |           |            |            |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------|------------------------------------------------------------------------------|--------------------|--------------------------|---------------------------------|-------------------------------|-------------------------|--------------------------|------------|-----------|-------------------------------|------------|------------|------------|------------|-----------|------------|------------|
|                                |                                                                                                                                                                                                                          |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          | Mon 03 Nov |           | Mon 24 Nov                    | Sun 09 Nov | Mon 10 Nov | Tue 11 Nov | Wed 12 Nov |           | Sun 23 Nov | Wed 26 Nov |
| Production facilities          | Animal stage                                                                                                                                                                                                             | Culture Period | Diganostic method             | Target pathogen                                                              | Frequency          | Min targetted prevalence | No. of animals per PCR reaction | # of tanks/ ponds/site        | No. of animals / sample | Company A                | Company B  | Company C | Company D                     | Company E  | Company F  | Company G  | Company H  | Company I | Company J  | Company K  |
| Broodstock facility            | Broodstock                                                                                                                                                                                                               | NA             | PCR                           | WOAH listed pathogens + EHP and DIV1                                         | Quarterly          | 10%                      | 5                               | 5                             | 30                      | ✓                        | -          | ✓         | ✓                             | NA         | NA         | NA         | NA         | NA        | -          | NA         |
|                                |                                                                                                                                                                                                                          |                | Histology                     | All                                                                          |                    |                          | NA                              | 5                             | 10                      | ✓                        | -          | ✓         | ✓                             | NA         | NA         | NA         | NA         | NA        | -          | NA         |
| Nursery / Pre-growout          | Juvenile                                                                                                                                                                                                                 | Summer         | PCR                           | WOAH listed pathogens + EHP and DIV1                                         | Monthly            | 10%                      | 30                              | 5                             | 30                      | -                        | ✓          | NA        | NA                            | *          | NA         | *          | NA         | NA        | ✓          | *          |
|                                |                                                                                                                                                                                                                          |                | Histology                     | All                                                                          |                    |                          | NA                              | 5                             | 10                      | -                        | ✓          | NA        | NA                            | *          | NA         | *          | NA         | NA        | ✓          | *          |
|                                |                                                                                                                                                                                                                          | Winter         | PCR                           | WSSV                                                                         | Fortnightly**      | 10%                      | 30                              | 5                             | 30                      | -                        | -          | NA        | NA                            | -          | NA         | -          | NA         | NA        | -          | -          |
|                                |                                                                                                                                                                                                                          |                | Histology                     | WSSV                                                                         |                    |                          | NA                              | 5                             | 10                      | -                        | -          | NA        | NA                            | -          | NA         | -          | NA         | NA        | -          | -          |
| Grow out / Indoor Culture      | Adult                                                                                                                                                                                                                    | Summer         | PCR                           | WOAH listed pathogens + EHP and DIV1                                         | Monthly            | 10%                      | 30                              | 5                             | 30                      | -                        | ✓          | NA        | NA                            | ✓          | ✓          | ✓          | ✓          | ✓         | ✓          | ✓          |
|                                |                                                                                                                                                                                                                          |                | Histology                     | All                                                                          |                    |                          | NA                              | 5                             | 10                      | -                        | ✓          | NA        | NA                            | ✓          | ✓          | ✓          | ✓          | ✓         | ✓          | ✓          |
|                                |                                                                                                                                                                                                                          | Winter         | PCR                           | WSSV                                                                         | Fortnightly**      | 10%                      | 30                              | 5                             | 30                      | -                        | -          | NA        | NA                            | -          | -          | -          | -          | -         | -          | -          |
|                                |                                                                                                                                                                                                                          |                | Histology                     | WSSV                                                                         |                    |                          | NA                              | 5                             | 10                      | -                        | -          | NA        | NA                            | -          | -          | -          | -          | -         | -          | -          |
| Wild                           | Crustacean and Plankton                                                                                                                                                                                                  | NA             | PCR                           | WSSV (Crabs and zooplankton), WOAH listed pathogens + EHP and DIV1 (Shrimps) | Monthly            |                          | 5                               | 5                             | 5                       | -                        | ✓          | -         | -                             | ✓          | ✓          | ✓          | ✓          | NA        | -          | -          |
| NOTES / REMARKS                | "**" If available; "NA" Non Applicable; "***" 2nd sampling for WSSV only; "-" No Sampling                                                                                                                                |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          |            |           |                               |            |            |            |            |           |            |            |
|                                | The sampling flow should start from BBC to NPU to Grow-out and then to Wild Population.                                                                                                                                  |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          |            |           |                               |            |            |            |            |           |            |            |
|                                | For other farms (other than NAQUA) the broodstock is treated as one sampling section.                                                                                                                                    |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          |            |           |                               |            |            |            |            |           |            |            |
|                                | Wild samples and plankton samples will continue as before.<br>Fresh feed samples (for broodstock and grow-out) including polychaete, artemia, squid and clams will be taken and analyzed for AHPND/EMS, where applicable |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          |            |           |                               |            |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                |                               |                                                                              |                    |                          |                                 |                               |                         |                          |            |           |                               |            |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                | SAS BIOSECURITY SAMPLING TEAM |                                                                              |                    |                          |                                 | SAS BIOSECURITY SAMPLING TEAM |                         |                          |            |           | SAS BIOSECURITY SAMPLING TEAM |            |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                | Aquaculture Specialist        | Name                                                                         | Mr. Saleh Bahasan  |                          |                                 | Aquaculture Specialist        | Name                    | Mr. Majdi Alroqi         |            |           | Aquaculture Specialist        | Name       |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                |                               | Mobile                                                                       | 0554839243         |                          |                                 |                               | Mobile                  | 0508064057               |            |           |                               | Mobile     |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                | Biosecurity Specialist        | Name                                                                         | Mr. Thamer Almalki |                          |                                 | Aquaculture Specialist        | Name                    | Mr. Abdulrahman Alharbi  |            |           | Aquaculture Specialist        | Name       |            |            |            |           |            |            |
|                                |                                                                                                                                                                                                                          |                |                               | Mobile                                                                       | 0557748431         |                          |                                 |                               | Mobile                  | 0546620229               |            |           |                               | Mobile     |            |            |            |           |            |            |

- Emergency response is initiated by the aquaculture establishment
- SAS is responsible for the collection and analysis of emergency samples.
- Concerned teams are mobilized to collect suitable samples and assess the production conditions





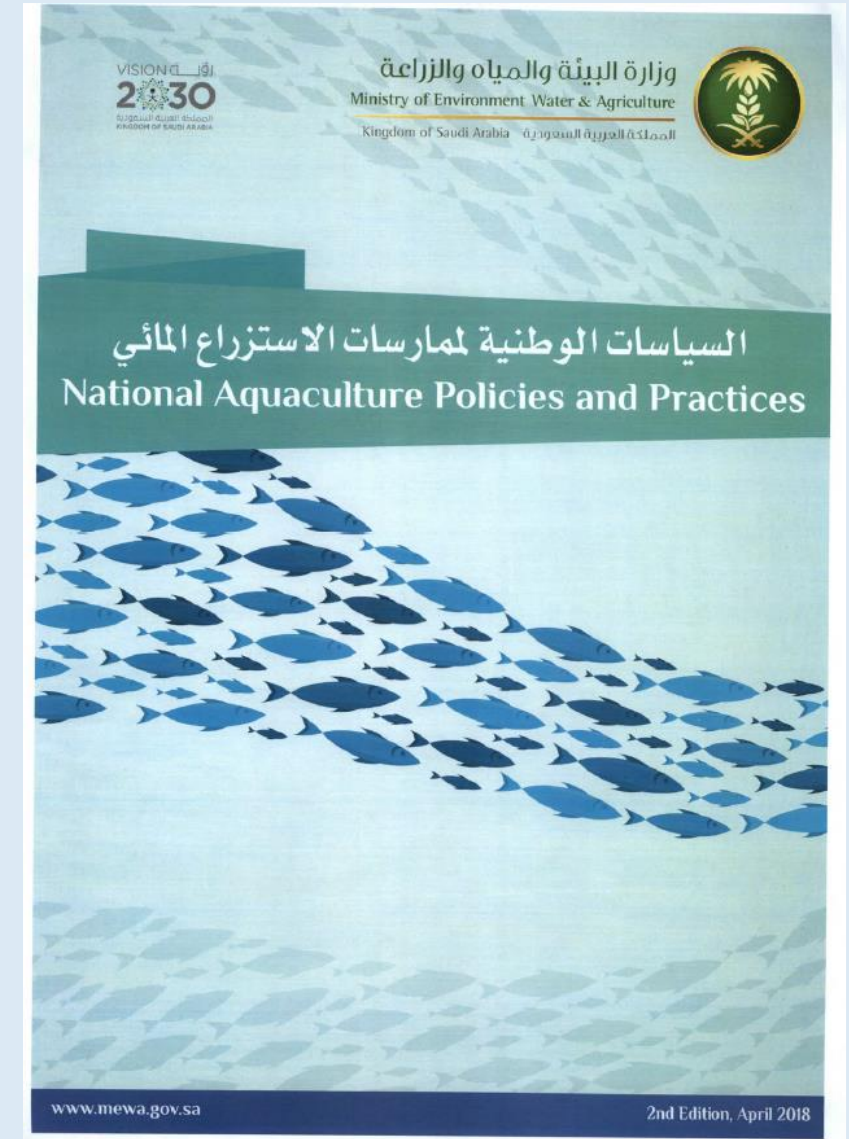
# Aquaculture Regulations

## Aquaculture Regulations in the Kingdom

- National Aquaculture Policies and Practices
- National Aquaculture Import Manual
- National Biosecurity Manual for Shrimp Culture
- National Fish Biosecurity Manual
- National Aquaculture Product Export Manual
- Regulation on Commercial Fisheries



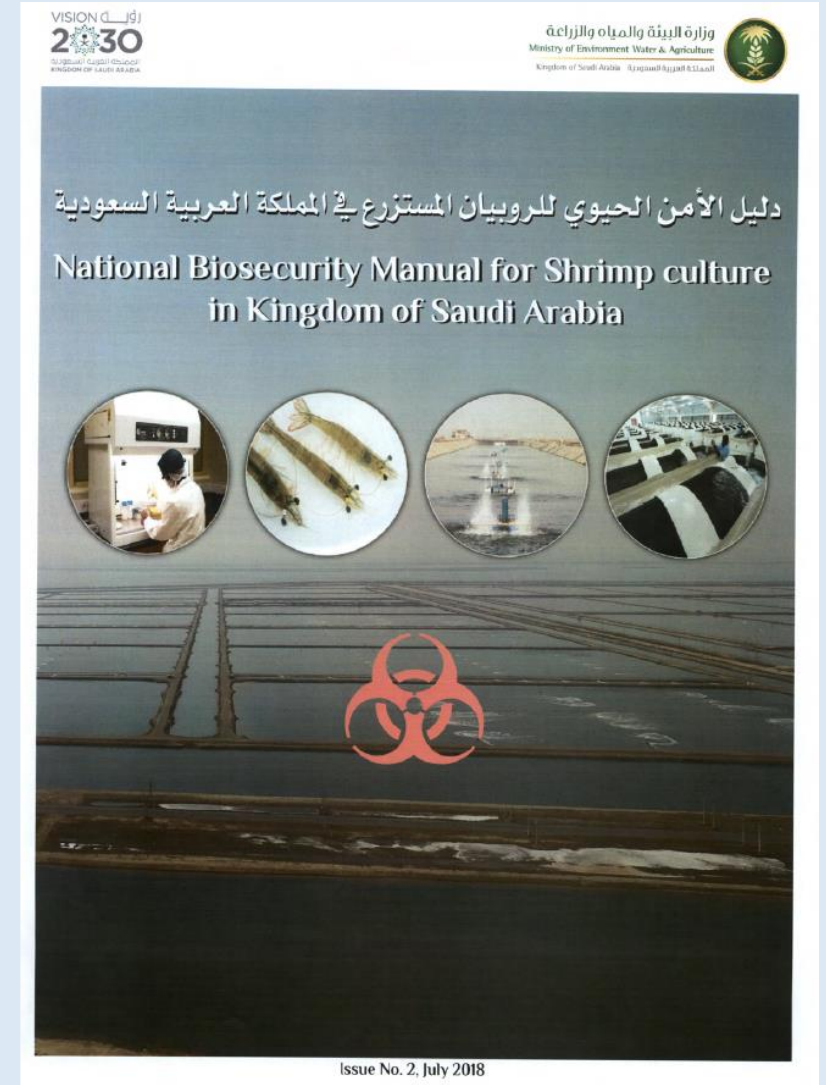
- Facilities infrastructure
- Aquaculture Policy including environment protection, licensing and monitoring of aquaculture units, Biodiversity and genetic conservation policy, movement control, aquaculture drug policy, research and development policy and policy on legal action on violations
- Responsible Aquaculture Practices ( Code of Conduct)
- National Aquaculture Drug Control Program
- National Residue Monitoring & Control Program etc.





# National Aquaculture Biosecurity Plan

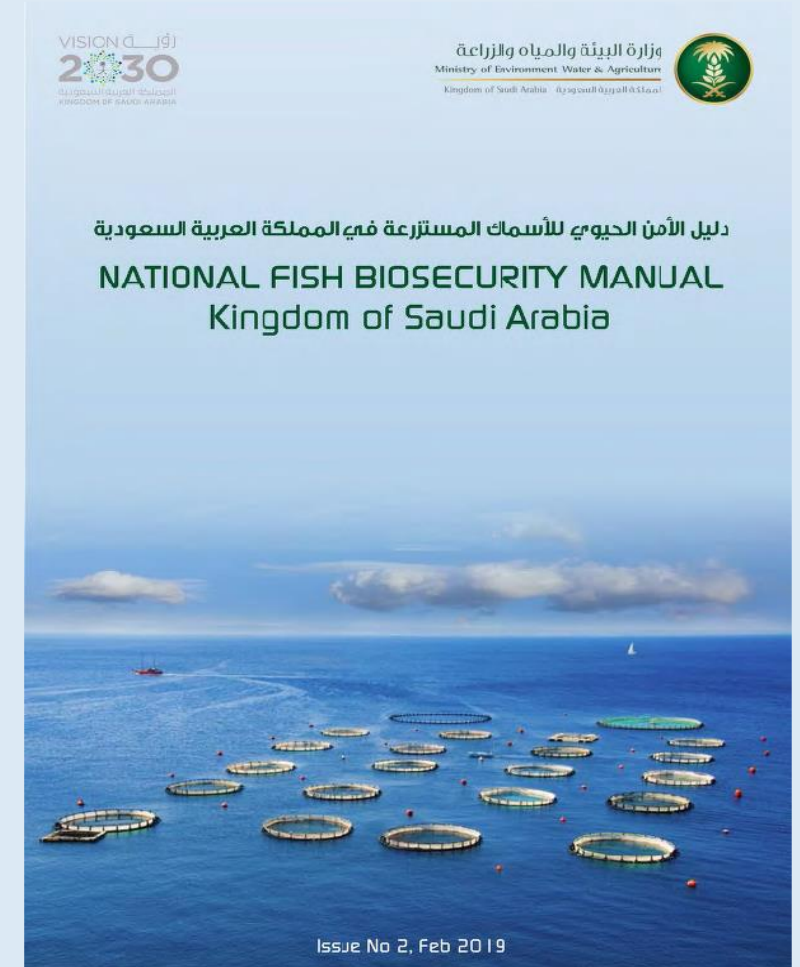
1. Switch to Specific Pathogen Free (SPF) stocks
2. National Reference Diagnostic Laboratory
3. KSA listed pathogens
4. National surveillance program
5. Health certificate for animal movement
6. National Zoning and Compartmentalization
7. Aquaculture Production Unit zoning
8. Compulsory reporting of disease outbreaks
9. Emergency response and contingency plan
10. Control on importation of live shrimp
11. Ban on the use of wild broodstock
12. Restriction on aquatic products based on the SPS agreement of the WTO.



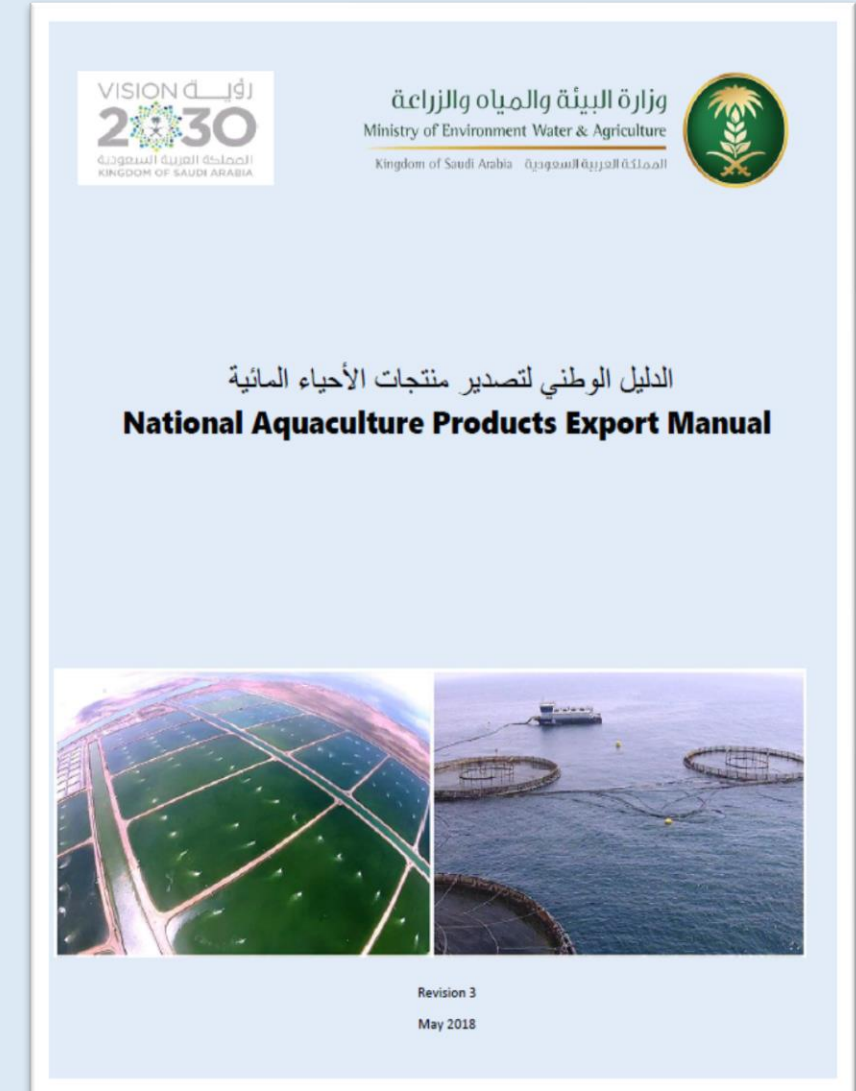


# National Fish Biosecurity Manual

- Fish species allowed to culture in the Kingdom
- Fish Farm Biosecurity guidelines and requirements
- Sampling and analysis protocols
- Details of National Reference Laboratory (JFHSL)
- Use of SPF Broodstock
- Geographical Zoning
- Risk Ranking Levels
- Diseases reporting, emergency response and contingency plan
- SOPs and procedures concerning to Fish aquaculture



- Details of Competent Authority and linked Agencies/Departments and functions in detail
- Authorization Systems
- Procedural approvals of aquaculture establishments
- Rapid Alert System
- Conditions and Procedures for export
- National Sampling and Inspection Plan
- Aquaculture Products export Certification System and other related annexures and procedures





# National Aquaculture Import Manual

- Approval of live aquatic species for importation
- Aquaculture species currently approved for importation to KSA
- Regulations to import live fish species
- KSA listed diseases
- Foreign hatcheries approved to export live fish to KSA
- Details of diagnostic reference laboratories etc.





- Samples collected by designated teams and uploaded to the system
- Real-time access to all relevant information
- Reports generated via the Laboratory Information Management System (LIMS)
- Controlled access through designated company login
- Reports available for viewing and download
- All laboratories integrated with Aquaportal

## Aquaculture Portal

Select language ▼ Account ▼

Reference Number

Dashboard

Reference Number

Lab Report

Field Visit Report

Surveillance Results

Analytical Report

My Account

Reference Number List

+ Add Reference No

Search:

Show 10 entries ▼

| #     | Project / Market Name       | Species Type | Species Name     | Division        | Source                               | Case | Analysis       | Reference Number |
|-------|-----------------------------|--------------|------------------|-----------------|--------------------------------------|------|----------------|------------------|
| 14891 | NATIONAL AQUACULTURE GROUP- | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm 104, Pond A 07                  | LIVE | PCR,Histology  | 250100380        |
| 14892 | NATIONAL AQUACULTURE GROUP- | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm 104, Pond B 05                  | LIVE | PCR,Histology  | 250100381        |
| 14893 | Jazan Development Company-  | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm I, Pond B 4                     | LIVE | PCR,Histology  | 250100402        |
| 14894 | Jazan Development Company-  | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm I, Pond D 7                     | LIVE | PCR,Histology  | 250100403        |
| 14895 | Jazan Development Company-  | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm I, Pond G 10                    | LIVE | PCR,Histology  | 250100404        |
| 14896 | Jazan Development Company-  | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm I, Pond H 4                     | LIVE | PCR,Histology  | 250100405        |
| 14897 | Jazan Development Company-  | SHRIMP       | Penaeus vannamei | FARM (GROW OUT) | Farm I, Pond I 8                     | LIVE | PCR,Histology  | 250100406        |
| 14898 | NATIONAL AQUACULTURE GROUP- | FISH         | Lates calcarifer | QUARANTINE      | Shipment No. 176-02963041, Australia | LIVE | PCR            | 250100407        |
| 14899 | NATIONAL AQUACULTURE GROUP- | FISH         | Lates calcarifer | QUARANTINE      | Shipment No. 176-02963166, Australia | LIVE | PCR            | 250100408        |
| 14900 | King Abdulaziz University - | WATER        | Water            | WATER SOURCE    | W 12                                 | ICED | Water and Soil | 250500125        |

Showing 14,891 to 14,900 of 14,901 entries

First

Previous

1,487

1,488

1,489

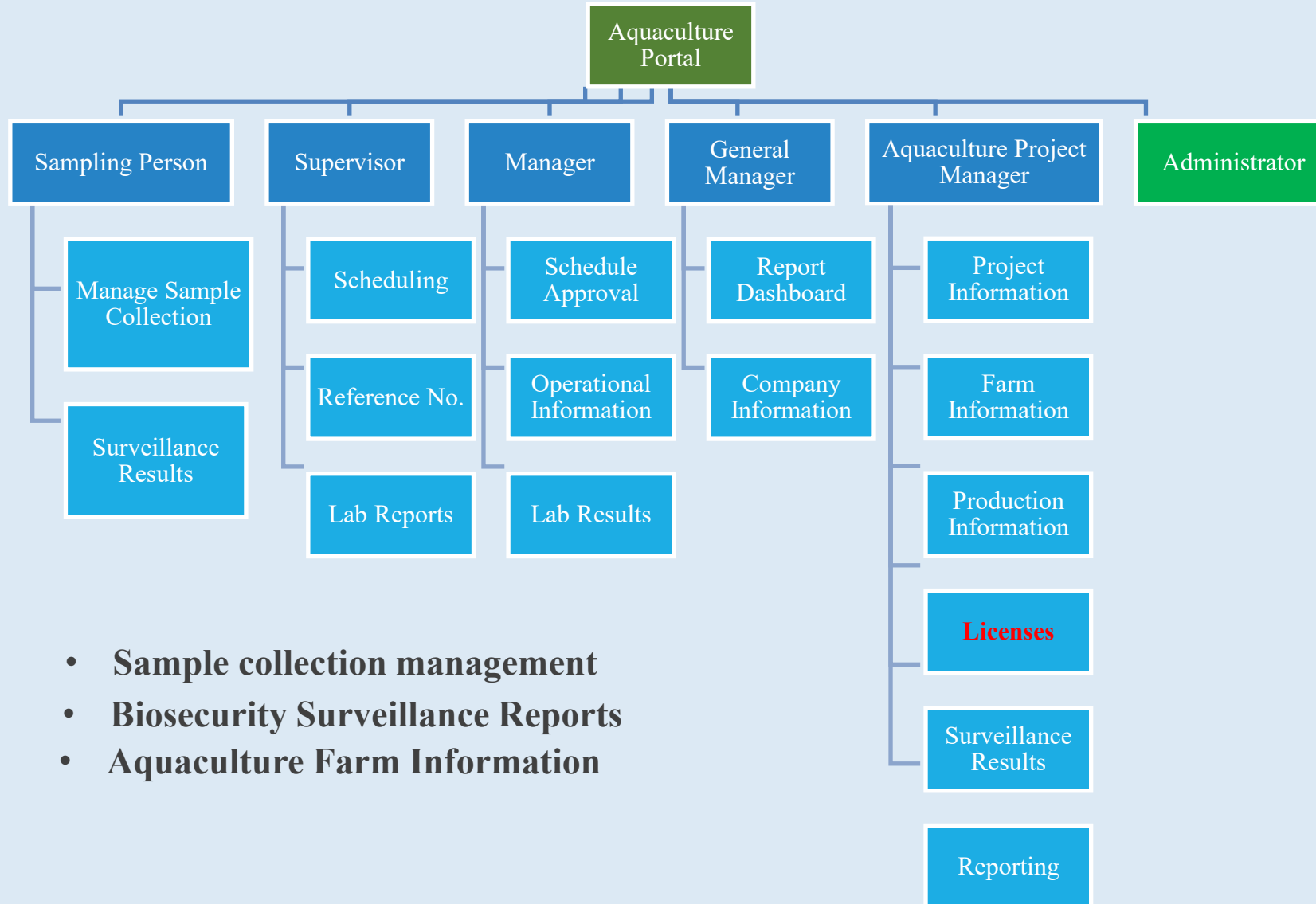
1,490

1,491

Next

Last

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Welcome,  
Biosecurity Manager

- Dashboard
- Sampling Schedule
- Surveillance Results
- Lab Reports
- Analytical Reports**
- Profile

## Aquaculture Portal

Logout

### Analytical Reports

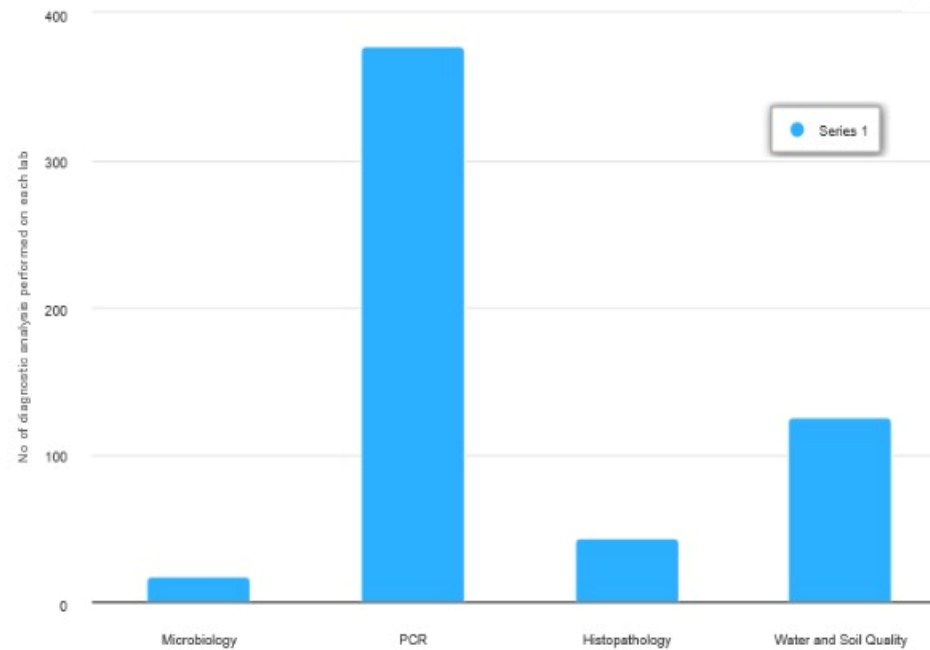
Month

Year

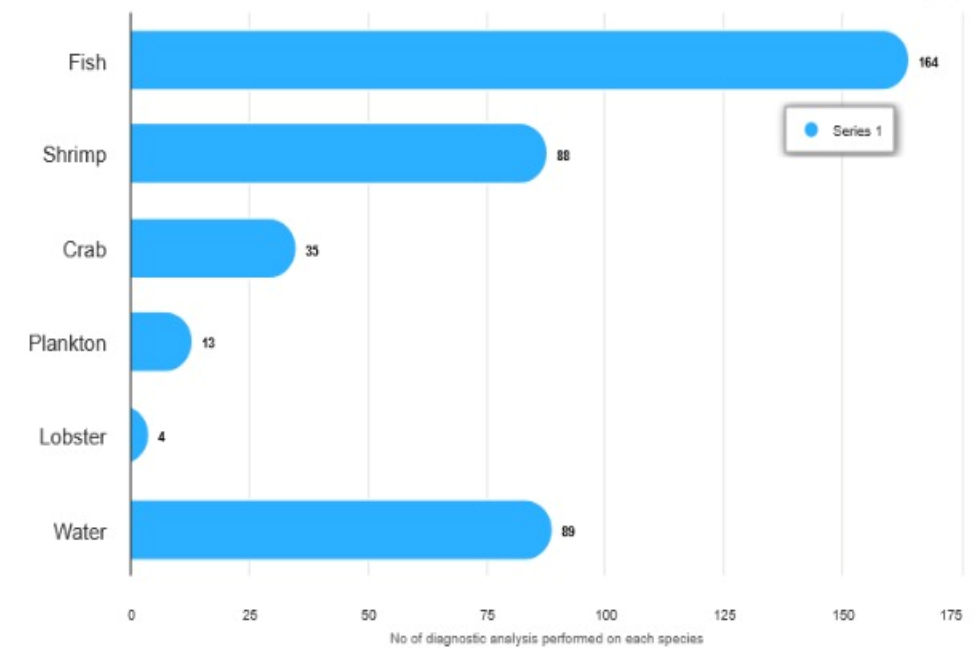
August

2025

Analysis performed on each lab



Analysis performed on each species





## Strengths

- Industry stakeholders are working parallel with the Competent Authority
- All the establishments can raise any queries or concerns
- Regional designated teams to support aquaculture activities
- Every agency is given a mandate to implement
- Technical support and services
- Round the clock emergency services
- Research and development along with capacity building

## Risks

- Disease introduction through imports
- New emerging diseases

# Thank you!

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