UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

UAE Aquaculture Guide

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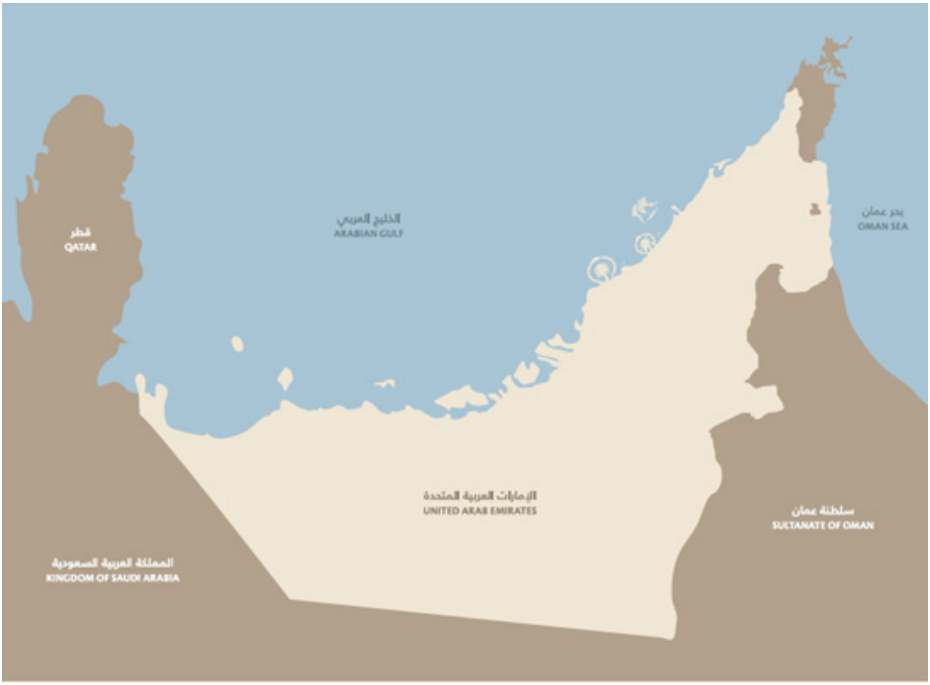
The United Arab Emirates



UAE Aquaculture Guide

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Aquaculture

Aquaculture, also known as aquafarming, is the farming of fish, crustaceans, molluscs, aquatic plants, algae, and other aquatic organisms. Aquaculture involves cultivating freshwater and saltwater organisms under controlled conditions, and can be contrasted with commercial fishing, which is the harvesting of wild fish.

Aquaculture and food security

The UAE's interest in living marine resources and the preservation of its natural habitats coinsides with the development boom witnessed by the country over the last four decades. Aquaculture is currently one of the pillars of economic, social and environmental development worldwide, with the pivotal role it plays in achieving self-sufficiency and meeting human protein needs at lower costs in a relatively shorter period than other animal protein products. According to FAO, aquaculture products represent around %50 of global fish consumption.

Current status of aquaculture in the UAE

The Ministry of Climate Change and Environment established the Marine Environment Research Department in the early 1980s to promote food security and sustainable marine development in the UAE. The interest in this industry has grown in recent years and culminated in the establishment of the Sheikh Khalifa Marine Research Center in 2014. The center consists of several facilities including an integrated closed hatchery according to the latest technologies used globally with a capacity of 10 million fingerlings of local fish annually. This achievement will play a major role in the development and promotion of aquaculture technology in the UAE and the region.

Sheikh Khalifa Marine Research Center Hatchery

The country's aquaculture industry is still in its initial stages with a total production of 1,239.7 tons in 2016. Commercial production in the UAE focuses on five types: seabream, seabass, shrimp, tilapia and sturgeon.

In this context, the integrated regulatory framework for the aquaculture sector in the country has been developed in the form of a detailed manual. The framework includes the most important aspects that contribute to achieving the objectives of the sector and strengthening the aquaculture industry to create new investment opportunities.

General framework for aquaculture in the UAE

The regulatory framework for aquaculture

Chapter 1: Definitions

- Ministry: Ministry of Climate Change and Environment.

- Concerned Authority: Concerned local authority.

- Licensee: Natural or legal person authorized by the concerned authority after the approval of the Ministry for the investment and establishment of aquaculture farms.

- Environmental impact assessment: Study and analysis of the environmental feasibility of activities that may affect environmental safety.

- Environmental declaration: The document issued by the concerned authority to applicants after approval of the site fitness to establish the farm.

- Aquaculture farm: Production project in an industrial or natural environment for cultivation and farming of fish, crustaceans, molluscs, aquatic plants and others.

- Aquaculture: Refers to the breeding, rearing, and harvesting of plants and animals in all types of water environments including ponds, rivers, lakes, and the ocean.

- Experimental aquaculture: Aquaculture for the purposes of research and experiments for testing systems, species, nutrition, etc., after obtaining the approval of the concerned authority.

- Commercial aquaculture: Licensed aquaculture units established for trade purposes.

- Site Rehabilitation Plan: A plan for all site processing activities in case of project cancellation.

- Feed: Natural or artificial food to feed cultured species.

- Sterilization: Use of physical or other chemical elements for the treatment of cultured species. These elements are used in clean areas or ponds that are emptied to completely eliminate microorganisms to avoid diseases and pollution harmful to health and surrounding environment.

- Disinfection: The use of physical or chemical elements or other methods for the treatment of cultured species , clean areas or emptied ponds. This aims to minimize microorganisms to a level that prevents cultured species from carrying disease or infection or harmful contamination to health and surrounding environment.

- Recuperative safety period: The period following the infusion of a veterinary drug to farmed animals. This period is necessary to ensure that the eatable parts of such animals are free from the permissible limits of drug residues.

- Hazard Analysis Critical Control Point (HACCP) is a management system in which food safety is addressed through the analysis and control of biological, chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product.

- Infected aquatic organisms: Aquatic organisms that have symptoms of disease or epidemiological signs or abnormal changes.

Chapter 2: Classification of aquaculture farms

First: classification of aquaculture farms based on the system used and in term of location of establishment:

A: Land-based aquaculture:

- Ponds/ Basins: Fixed and mobile structures in which aquatic organisms are housed for the purpose of breeding.

- Fences: A fence of any shape or size made of a barrier material and connected to floating installations installed at the bottom of the sea.

- Closed System Aquaculture (RAS): A system that relies on the closed management of water in a recycling manner after mechanical and biological treatments.

- Integrated aquaculture: Aquaculture units set up alongside water, agricultural and animal sources in a space of the same location, including the aquaponic system.

B: Sea-based aquaculture farms:

- Cages (Floating / Submersible): floating cages or nets consisting of a wooden frame or netting and yarn that contains the appropriate juveniles for the type of water, be it for sea or river, where continuous feeding is provided for fish.
- Coastal Fences: Netting barriers or cages on the coasts or beaches dedicated to aquaculture.
- Suspended aquaculture system: An open system in which aquatic organisms are produced in the tidal area using cages, longlines or ropes and are anchored to the seabed.

Multiple systems are used in the UAE, ranging from relatively simple systems such as ponds, basins, integrated aquaculture and aquaponics to complex, technology-based systems, including Closed System Aquaculture (RAS).

Secondly: Classification of aquaculture farms in terms of production capacity:

- Small farms: The production capacity does not exceed 35 tons
- Medium farms: The production capacity ranges between 35 to 275 tons
- Large farms: The production capacity is above 275 tons

Another set of criteria is also taken into account in the classification of farms, including the impact of aquaculture activities on the environment.

Chapter 3: Who is permitted to establish aquaculture farms

The following are permitted to establish aquaculture farms:

- UAE Nationals
- Commercial companies and establishments
- Companies and establishments registered in the free zones in the country
- Cooperative Union and Cooperative Societies of Fishermen
- Accredited scientific research institutions in the country
- Governmental bodies and authorities

Chapter 4: Aquaculture farms licensing procedures

First: Medium and large farms

Steps to be taken to obtain aquaculture license:

1. Trade name registration / booking from the Department of Economic Development in the concerned Emirate
2. No Objection Certificate from the Ministry
3. License from the concerned authority
4. Commercial license from the Department of Economic Development
5. License from the Ministry to establish and operate the aquaculture farm

Step 1: Department of Economic Development

Submit the application for a commercial name / commercial registration to the Department of Economic Development in the concerned Emirate in accordance with the procedures and documents specified by the Department.

Step 2: Ministry of Climate Change and the Environment

Submit the application for a No Objection Certificate from the Ministry for the planned species and the aquaculture system to be used via the e-form attaching the following documents:

- Copy of the owner's identity card
- Copy of the commercial name / trade name registration

Step 3: Concerned Authority

Firstly: Submit application for preliminary approval of project site to the concerned authority in the Emirate.

Secondly: After the approval from the concerned authority on the project site, the applicant must carry out the following:

- Environmental impact assessment study of the project site via a consultant approved by the concerned authority
- Preparation of the site rehabilitation plan in case of project cancellation

Thirdly: - If the site is environmentally fit to establish the farm based on the environmental impact assessment study, the applicant has to complete the procedures required by the authority to obtain the license for aquatic farm (environmental declaration) attaching following documents:

- No objection certificate from the Ministry
- A copy of the approval of trade name booking/registration
- Mulkiya or tenancy contract of land
- Biosecurity Plan (Health and Preventive Measures) and Project Emergency Plan
- Any other documents specified by the concerned authority

Step 4: Department of Economic Development

Submit application for the commercial license to the Department of Economic Development with the following documents:

- License from concerned authority
- Copy of feasibility study
- Action plan and sketch drawing of the project or draft design of the facility showing the buildings and ponds of farming and reservoirs. It must include number, dimensions, source of water and means of water extraction and discharge.
- Any other documents specified by the Department

Step 5: Ministry of Climate Change and Environment

Submit application for the license to establish and operate an aquaculture farm via the e-form with the following documents:

- Commercial license
- Environmental declaration (license) by the concerned authority including the result of the environmental impact assessment study (EIA)
- Copy of feasibility study

Secondly: Small farms

Steps to obtain a license for a small farm:

Step 1: Apply for a permit / license from the concerned authority of the Emirate with the documents specified by the authority.

Step 2: Fill out the e-form on the website of the Ministry and attach the following documents:

- Passport copy of farm owner
- Copy of owner's identity card
- Authorization / permission from the concerned authority

Chapter 5: Criteria for aquaculture farm location selection

When choosing an aquaculture site, the following requirements should be considered:

- The farm location should be at a safe distance from potential sources and locations of water pollution and pollutants in order to protect products from pollution. For example, estuaries, mining industries, intensive farming especially animal breeding sites and residential areas
- Conduct a farm site survey to identify and classify marine habitats and areas of biodiversity
- Keep away from areas of natural or artificial reserves or areas with biodiversity such as the mangroves and coral areas around 1 nautical mile (for marine aquaculture farms)
- Farms should be constructed and designed to reduce its impact on natural habitats and plants
- Aquaculture farms in the sea, including cages and basins, should be away from natural drainage sites and ship and boat routes preferably higher than any site.

All aspects of aquaculture, including environmental impact, production and economic performance, must be taken into consideration in all cases.

Annex 1 to this guide sets out the criteria to be observed when selecting sites

Chapter 6: Conditions for renewal, amendment and cancellation of aquaculture license

Renewal of aquaculture license:

- License will be renewed if it meets the requirements of the concerned authority and Ministry
- If the renewal is rejected by the concerned authority considering the public interest, the licensee should remove the equipment and rehabilitate the site from the date of notification within the time limit specified by the concerned authority.

Submit the applications to amend the aquaculture license to the Ministry in the following cases:

- Any modification in the farm (change in facilities or addition of new ponds / cages)
- Change of owner or partner
- Change of name of the organization
- Addition or change of cultured species
- Addition or change in the system used in the farm

Cases of rejection of renewal and cancelation of license by the Ministry:

- Violation of the laws and regulations in force in this regard or any other environmental considerations
- Addition or change to farm (change in facilities or addition of new ponds / cages) or cultured species and system used in contradiction to those mentioned in the license without notification to the concerned authority and the Ministry

Chapter 7: General conditions for aquaculture farms

- More than one aquaculture system may be included in the license, provided that they do not exceed three systems according to the classification shown in this guide

- The owner of the farm or its manager must facilitate the task of specialists from the concerned authority and the Ministry to inspect the farm and provide the necessary data for them

- The licensee is obliged to culture the species described in the license. If they wish to add other types, they must obtain the approval of the concerned authority and the Ministry

- The total biomass of farmed fish should not exceed the maximum production capacity described in the farm license

Licensee shall comply with the following:

1. Keep a copy of the license always in the farm to be shown upon request

- In case of using freshwater, observe the following:

  • Use groundwater: If the water system used in aquaculture farms is re-drained to agricultural plants

  • Use treated water: If the amount of recycled water is not less than %80. If the water is lower than %80 it will be filtered and used in agriculture

2. The concerned authority shall be notified in case of death or escape of any aquatic organisms in or from the farm. The authority shall determine the procedures and place of disposal.

3. Complete the project work within one year from the date of approval for the establishment and operation of the farm. The concerned authority may allow an extension of a similar period, if necessary.

Chapter 8: Periodic reports system for aquaculture farms

Reports of aquaculture farms are submitted annually to the Ministry according to the details in Table (1)

Required data	Details
Farm owner details	Name and ID..... etc
Farm details	Farm license details and aquaculture system used
Farm productivity in tonnes	Annual productivity and cultured species
Productivity of hatcheries	Annual production of fingerlings
Sales details	Sales value and marketing location
Water used for aquaculture farms on land	Source and type of water
Assessment criteria for aquaculture farms at sea	Temperature and salinity rate
Nutrition	Type and source of food and its annual value
Mortality rate	Natural and non - natural mortality rate
Diseases and drug handling	Disease types, diagnosis and treatment program
Reports	Periodic annual reports
Storage	Number of warehouses, facilities and types
Details of the person in charge of the entity	Name and contact

Table (1) Data required for aquaculture farms reports

The licensee should specify each batch of aquaculture for the purpose of marketing or manufacturing with a special number including the following data:

- License number of aquaculture farm
- Project Name (Establishment)
- Date of harvest
- Aquatic species
- Batch number

Drug reports:

1. A record must be kept at the drug storage which records the following data for each type:

a) Veterinary drug quantities entered into and withdrawn from the storage

b) Name and signature of the person in charge

c) Entry and withdrawal date of drugs from the storage

d) Current state of stock

2. The licensee must maintain the register of the veterinary drugs for each batch of treated aquatic organisms for one year from the date of the last recorded batch. The signature of the veterinarian or fish specialist should be obtained. The lincensee shall be responsible for the application of the veterinary drugs program recording the following details.

- Batch number
- Quantity and species of aquatic organisms under treatment
- Quantity and dosage of veterinary drugs used (including composite feeds that contain veterinary supplements)
- Time and date of treatment
- Reversal period, if these periods are specified
- Symptoms and diseases
- Name and type of drug and its expiration date
- Approval signature of the veterinarian who is supervising the prescribed doses of veterinary drugs, including the following data:
    - License number, signature and stamp of the doctor
    - Time and date of treatment
    - Reversal period, if specified

Aquaculture health framework

Chapter 1: Occupational health and safety requirements in aquaculture farms

Occupational health

Aquaculture units must have all the HACCP health requirements, in particular, the following:

- Sufficient sanitary facilities for the employees of aquaculture units at a suitable distance.
- Feed storage facilities must be well-ventilated and protected from insects, rodents and birds and away from the storage of pesticides, chemicals and medicines
- Veterinary drugs should be stored in a designated place for this purpose only. An appropriate label should be stuck and registered in a veterinary drug registry.
- Do not use contaminated water

General guidelines:

Aquaculture systems and cultured species should be considered when applying these guidelines as many guidelines are not applicable to all aquaculture farms.

Apply the following procedures and measures to reduce the following risks:

1. Prevention and reduction of potential impacts on the environment resulting from the construction of aquaculture farms by:

- Assessment of soil characteristics prior to constructing ponds to ensure that the low permeability / porosity levels of the bottom dam of the soil is enough to retain pond water. In the absence of sufficient silt, the pond may exhibit high leakage rates that contaminate groundwater used for other purposes in neighbouring areas such as drinking water.

- Assessment of the level of soil acidity and the presence of pesticides residues and contaminants (especially in areas heavily used for agriculture previously), as well as the assessment of the natural presence of sulphur.

- Raising the surrounding edges of brackish water pools systems

- Installation of saline / brackish water treatment and drainage systems

- Alien or genetically engineered species should not be introduced without obtaining permission from the Ministry

- Installation of shading nets on external basins to reduce heat and prevent the entry of birds to the ponds

2. Prevention of the escape of cultured species as per the system used:

First: ponds and basins:

- Installation and maintenance of nets with small rings on the drainage channels connecting the production basins and sediment ponds, which also connect the sedimentation channels and receiving water

- Installation of filter dams to prevent the passage of fish

- Installation and maintenance of gravel filtration systems of the drainage systems in basins

- If necessary, consider the chemical treatment of water discharged from the farms (by mixing them with chlorine at acceptable density to be discharged into the receiving water) to kill all larvae or escaping small aquatic organisms

- Design ponds ensuring the height of pond edges is sufficient to contain the water inside and prevent the escape of species during periods of heavy rain or potential floods

- Develop an emergency plan to be applied in the case species escape

Second: Cages:

- Design and build cages and sheds with appropriate netting to withstand the worst climatic and environmental conditions likely to occur on the site

- Periodic inspection of cages and nets to make sure they are free from defects

- Apply suitable precautionary measures in design to face storms and high

altitude tides

- Use diving cages which can be flooded during storms to a level away from the destructive effects of waves

- Place enough marking to distinguish the aquaculture farm to warn navigators and reduce the risk of collision

- Develop an emergency plan to be applied to prevent the escape of cultured species from the farm

3. Apply the following measures to reduce soil erosion and consequent sedimentation of nearby water bodies:

- Avoid building fish ponds in areas with more than %2 land slope.

- Execute construction work during the 'dry' season to reduce the sedimentation of water that may contaminate nearby water

- Install temporary fences for silt during the construction work to slow and hold any sediment. Fences can be made of woven plastic, cloth or straw bales

4. In the event of wastewater discharge in systems based on pools/ponds and systems based on barns /cages:

- Construct lakes and cultivate mangrove forests to absorb liquid wastes

- Treat liquid waste prior to release to receiving water to reduce pollution levels

- Place floating net cages in deep marine areas known for marine currents suitable for the growth of fish in cages. This will reduce the concentration of waste in the natural water environment

- Merge fish farming with crop production in the hydroponics system with aquaponics

- Use water recycling system in fish farms located on land far from the sea

- Use shellfish, which feeds via marine water filtration method, and cultivate them in the corridors of sea currents coming from network cages, in order to reduce pollutants emerging from cages

5. When using feed:

- Ensure that granular feed is free from "fine particles" or fodder dust as much

as possible

- Select the size of feed grains as per the age of species

- Periodic monitoring of feed absorption to determine its consumption level and adjust feeding levels accordingly

- Use floating or prominent feed grains as they help in monitoring during feed time

- Spread the feed as evenly as possible to ensure that it reaches as many aquatic organisms as possible

- Provide feed multiple times a day as needed

- Stop feeding before harvest to reduce the presence of food and / or feces in the intestines of aquatic organisms

6. Harvesting of cultured species:

- Water contaminated with blood should be disposed of during harvest to reduce the risk of disease outbreaks

- Use harvesting crates in good condition fitted with a damper lining, fixed cover and covered edges

- Use partial discharge techniques to discharge the ponds where harvest has been completed. It can be done wherever practicable as the last %15 of pond water contains the highest amounts of dissolved nutrients, suspended solids and organic materials. After harvesting, keep the remaining water in the pond for several days before discharging, or transferring it to a separate treatment facility

7. Fertilizer use:

- Plan the proportion and method of using fertilizers to achieve maximum benefit and avoid overuse, taking into account expected consumption ratios

- Increase efficiency of use and dissemination through practices such as liquid fertilizer dilution or conversion of granular fertilizers into solutions before use. Other options include the use of enrichment powders or sludge in shallow water to spread and transform into solution

- Consider the use of time-specific fertilizers so that the nutrients from the resin-

covered grains are released into the pond water. The release rate depends on water temperature and movement

- Large soil ponds should be fertilized only if they are static and their water is not overflowing in order to avoid affecting the water in the lower parts

- Enrich ponds to avoid or reduce the consequences of possible drift due to floods or heavy rain and to avoid fertilization in overflowing ponds

8. Use of chemicals:

- Design the basin depth to reduce use of chemicals in order to control aquatic weeds and reduce the thermal division into layers

- Do not use material that prevents the accumulation of dirt on the net when handling cages and barns. The nets should be cleaned manually or using net washing equipment

Occupational health and safety in aquaculture

Physical risks

The following measures should be taken to prevent daily occupational risks:

First: Heavy lifting:

- Use mechanical equipment to facilitate the lifting of loads weighing more than 25 kg, which can be adjusted to suit the design of work platforms and individual workers, especially when processing fish after harvest

- Make large rectangular basins to facilitate harvesting. If the ponds were of sufficient size and had a width of at least 2.5 meters, vehicles could be used on those edges to pull the harvest nets

- Make round basins in cylindrical shape with repressive bottom in order to facilitate the automatic cleaning of fish ponds

Second: Electric shocks:

- Isolate all electrical installations to become waterproof

- Use fuses and appropriate ground connections

- The wires should be waterproof
- Provide training on the correct methods to deal with electrical equipment (such as pumps)

Third: Risks of drowning in marine farms:

- Provide life jackets and belts with safety clips (metal rings) connected to ropes or fixed points
- All individuals must know how to swim well and wear life jackets while they are at sea
- Provide marine safety training including personnel supervision procedures
- If large vessels are used to transport personnel and equipment to marine sites, the vessel must be safely anchored on buoys

Fourth: Exposure to chemicals:

- Take caution when using chemicals

Fifth: Waterborne diseases:

- Conduct specific periodic medical examinations of the workforce
- Put mosquito netting
- Display guidance boards on the environment, health and safety in relation to preventing and controlling the risks of infectious diseases

Sixth: Resistance against veterinary drugs:

Follow below steps to reduce the use of antibiotics:

- Vaccination should be done where possible as a way to reduce the use of antibiotics
- The site should be refreshed in terrestrial aquaculture facilities where possible as part of a strategy to deal with diseased organisms in production shed units. Minimum four weeks rest should be given at the end of each session

Procedures to be followed if antibiotics are used:

- Use approved antibiotics purchased and used without a prescription strictly as

per the manufacturer's instructions

- Use approved antibiotics purchased and used with a prescription as per the guidelines of the qualified specialist

Procedures to be followed while storing antibiotics:

- Keep in a tightly closed private place

- Stick proper label on the store and limit the access to authorized persons only.

- Take caution of the possibility of spills to avoid the uncontrollable emission of antibiotics in the environment

- Store containers on mobile platforms or similar places to easily detect leaks

- Avoid accumulation of neglected stocks of antibiotics by adopting the "first-in, first-out" method so that antibiotics do not exceed validity dates. Any antibiotics exceeding validity dates shall be disposed of in accordance with applicable laws

Seventh: Monitoring Program

To ensure public health in the farm, the self-examination programs should be implemented as follows:

- Maintain cleanliness and personal hygiene standards

- Implement insect control programs

- Implement cleaning and sterilization programs

- Maintain the quality of water used

- Ensure that the farm is free of peritoneal parasites, for freshwater aquaculture farms

- A permanent pest control schedule should be prepared to ensure that all parts of the farm facilities and the equipment used are free of insects and rodents. Also a person must be specified to be responsible for the implementation of the system

- A permanent cleaning and sterilization schedule should be prepared to ensure that all parts of the project facilities and equipment are properly and regularly cleaned under the supervision of a specific person who will be in charge of implementing the system

Aquaculture products quality and safety framework

Chapter 1: Harvesting, circulation and internal transport of aquatic organisms

Harvesting and circulation of aquatic products

Methods of harvesting and trading of aquaculture products should be as follows:

1. To be carried out in accordance with the type of product. The equipment and containers used should be sterilized, protected and clean to avoid contamination or damage to the product

2. Design of the areas and methods of harvesting in the fish farm should ensure the ability of easy and fast operations in a healthy way

3. Design all equipment used to be fast and effective in harvesting, capturing, classification, sorting, transporting and delivery of fish without causing any mechanical damage

4. Design and manufacture the equipment and containers that contact fish ensuring that they are cleaned, sterilized and stored in a manner that prevents pollution

5. All surfaces of boxes, tools and other equipment that contact the fish shall be made of stainless material, smooth and easy to store and designed for use only once

6. If the boxes are used many times to transfer fish from the basin, there must be appropriate means to clean them with water and sterilisation substance

7. Products for human consumption shall be accompanied by a certificate of product quality by a veterinarian

Requirements for the transfer of living aquatic organisms to other farms within the United Arab Emirates. If the transfer of living aquatic organisms is for the purpose of selling or farming them in another farm, the shipment shall have the following:

- Purchase invoice with license number of aquaculture farm in the production facility

- Receipt and quality certificate issued by a registered veterinarian from the concerned authority in the Emirate

- Keep the records of transport or import and provide them for inspection for a period of not less than two years

- Write the following data on each container of aquatic products

- Company name and farm license number

- Unit name

- Unit quality control number

- Source of aquaculture (local / imported)

- Date of harvest

- Types and quantities

- Batch number

Chapter 2: Import and export requirements for living aquatic organisms

Importing requirements:

- The certificate of establishment and a health certificate issued by a licensed veterinary authority in the country of origin should be attached in accordance with the requirements and regulations in force by the concerned authority

- Aquaculture farms must obtain permission to import broodstock and larvae for the purpose of aquaculture from the Ministry, this includes all stages of growth of aquatic organisms (eggs, larvae, fingerlings, broodstock)

- The licensee must obtain the Ministry's approval to import non-local aquatic animals

- The living aquatic organisms imported into the country should meet the following conditions:

- Should be free of pathogens

- The water used to transport living aquatic organisms should be free of

pathogens

Conditions for issuing import permit for broodstock and larvae:

- Apply for the permission to import living aquatic organisms from the Ministry by filling out the e-form with the following documents:

- Copy of valid trade license

- Copy of decision by the associations (for the Cooperative Societies of Fishermen / Cooperative Union of Fishery Associations)

- Upon arrival of the shipment, the application for the release shall be submitted electronically accompanied by the following documents:

- Origin of import authorization

- Certificate of origin from the exporting country

- Health certificate from the exporting country issued by an accredited body in the country of origin

- Customs declaration or shipping bill

- Purchase invoice and packing list issued by the sender

- The licensee is obliged to import the species mentioned in the farm license. To import new species, the licensee should submit an application to the Ministry to add new types of species to the farm license

- The importer of living aquatic organisms shall keep copies of the following documents relating to each consignment of imports for at least two years. It must be provided to the Ministry or the concerned local authority when requested:

- Bill of air shipping/ customs declaration / shipping bill, whichever is applicable depending on the type of transport
- Customs Permits (Customs Statement)
- Certificates of origin
- Health certificates
- Bills with full details of the exporting company of living aquatic organisms,

including address, contact information, date of receipt, quantity (biomass / number) and types of species in the shipment

- Copy of importing permit issued by the Ministry

Quarantine of living aquatic organisms imported into the country:

- Veterinary quarantine measures are applied to imported aquatic organisms for the purpose of aquaculture to ensure their safety and non-contamination of water and environment with their residues and wastes or any means during the period of custody until they are released or destroyed

- All aquaculture farms wishing to import living aquatic organisms should establish quarantine facilities on the farm. The imported shipment should be kept in quarantine facilities at the farm for at least 3 weeks

- In the case of abnormal mortality of imported living aquatic organisms during this period, they shall be examined by the veterinarian with the concerned authority. A status report should be sent to the Ministry

Manufacturing and export requirements:

1. The manufacture, import or export of aquatic products shall be carried out by the licensed companies and institutions by the concerned authority of the Emirate

2. The companies and institutions referred to in paragraph (1) above shall comply with the following

- Do not accept any batch of aquatic products that have been given unauthorised veterinary drugs

- Examination of aquatic products batches treated with licensed veterinary drugs to ensure that the prescribed safety period has passed, and the maximum residue of the drug is within the permissible limits

3. Anyone wishing to export cultured species or its products shall submit a request to the Ministry through the form prepared for this purpose, accompanied by the following documents

- Type and quantity of cultured species

- Certificate of Origin
- Health certificate from the concerned authority of the Emirate

Transport and shipping containers conditions:

- Vehicles or containers used for the transport of living aquatic organisms shall be designed and equipped in an appropriate and safe manner to enable them to carry the weight of living aquatic organisms and transport water and to ensure their safety during transport
- Vehicles or containers used for transport must be cleaned and sterilised prior to use according to the recommendations of the Aquatic Code of the OIE
- The containers for the transport of living aquatic organisms shall be installed and constructed in a way that prevents pollution and accidental flow of water during transport

Chapter 3: Chemicals, storage and veterinary drugs

- Veterinary drugs used in aquaculture units must be registered and approved by the concerned authorities in accordance with the applicable rules
- It is prohibited to use any drug to treat cultured organisms except authorised drugs. The use of drug should be in accordance with the conditions specified for that purpose. Compound fodder, with medical supplements, including hormones and antibiotics, is considered a veterinary drug
- Veterinary drugs should be used in accordance with the manufacturer's instructions and comply with precautionary data and contraindications, especially in relation to the reversal period
- Veterinary drugs are not allowed to be dispensed except in a written form issued by a licensed veterinarian or specialist in aquatic diseases specifying the type, dosage and duration of the drug
- Maintain drug records as specified in the annual reports section for at least one year

- Comply with the following guidelines to keep drugs and pesticides properly:
- Avoid exposing products to direct sunlight, heat or humidity
- Keep in dry, well-ventilated areas away from food and feed
- Cooling and freezing of some products if required

Chapter Four: Supervision and Inspection

All aquaculture farms should facilitate the task of specialists from the Ministry or officials authorised by the Ministry to perform the following tasks:

- Ensuring the compliance with the health, construction and technical specifications and conditions to establish the farms, and monitoring the compliance with conditions for the storage of feed and veterinary drugs used in farms
- Evaluation of technical specifications of packaging lines and processing of cultured fish, if any, in addition to refrigerated warehouses, means of products transportation and so on
- Ensure that farms maintain records and reports on production, feed and records of the use of veterinary drugs in an accessible format
- In-vitro sampling of aquaculture ponds and basins and sampling for testing in approved laboratories to determine the percentage of residues of veterinary drugs
- Carrying out any other procedures required by the control plan for the residues of veterinary medicines and environmental pollutants as approved by the Ministry and the concerned authority in each Emirate

Annexe (1)

Criteria to be considered when selecting a farm site

Criteria to be considered when selecting onshore land sites	Criteria to be considered when selecting offshore sites	Other criteria to be considered when selecting sites
1. Availability of water source	1. Water depth	1. Easy access to the site
2. Amount of oxygen in water	2.Type and speed of currents	2.Availability of technical support for the type of farming system used
3.Temperature	3. Storm exposure	3.Availability of electricity network and supply of bottled water service
4. Salinity	4. Seabed type	4. Proximity to markets
5. Pressure	5. levels of light	5. Proximity to airport or main seaport
6. Rain rate	6.Temperature and salinity	6. Distance from military zones
7. Evaporation rates	7. Oxygen	7 .Distance from natural reserves
8. Characteristics of tides	8. Natural predators	8. Distance from tourist sites
9. Pollution percentage	9. Extent of spread of pests and pathogens	9. Distance from desalination plants
10. Soil type and filtration rate	10. Spread of algae	10. Distance from industrial areas
11. Sandstorms	11. Wind speed	
	12. Percentage of pollutants and pollution	
	13. Distance of location from main navigation routes	

Annexe (2)

References

- Federal Law No. 23 of 1999 concerning the exploitation, protection and development of the living aquatic resources of the United Arab Emirates, its amendments and executive bylaw

- Federal Law No. 24 of 1999 concerning the protection and development of the environment , its amendments and the environmental regulations issued thereunder

- Ministerial Decree No. 277 of 2001 concerning fish farms in fresh, brackish and sea water of the country

- Guidelines for aquaculture in Arab countries

- The Environmental, Health, and Safety (EHS) Guidelines AQUACULTURE - World Bank Group. 2007

- Safety Guidelines for Aquaculture Farms and Vessels - Fish SAFE network, New Zeeland, 2009

- FAO Aquaculture reports

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