

Advancing Sustainable Aquaculture in the Emirate of Abu Dhabi

Hamad Almansoori – Unit Head, Aquaculture

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EAD's Role



Ensure that aquaculture is conducted by means that have a benign, if not positive, net impact on the environment.



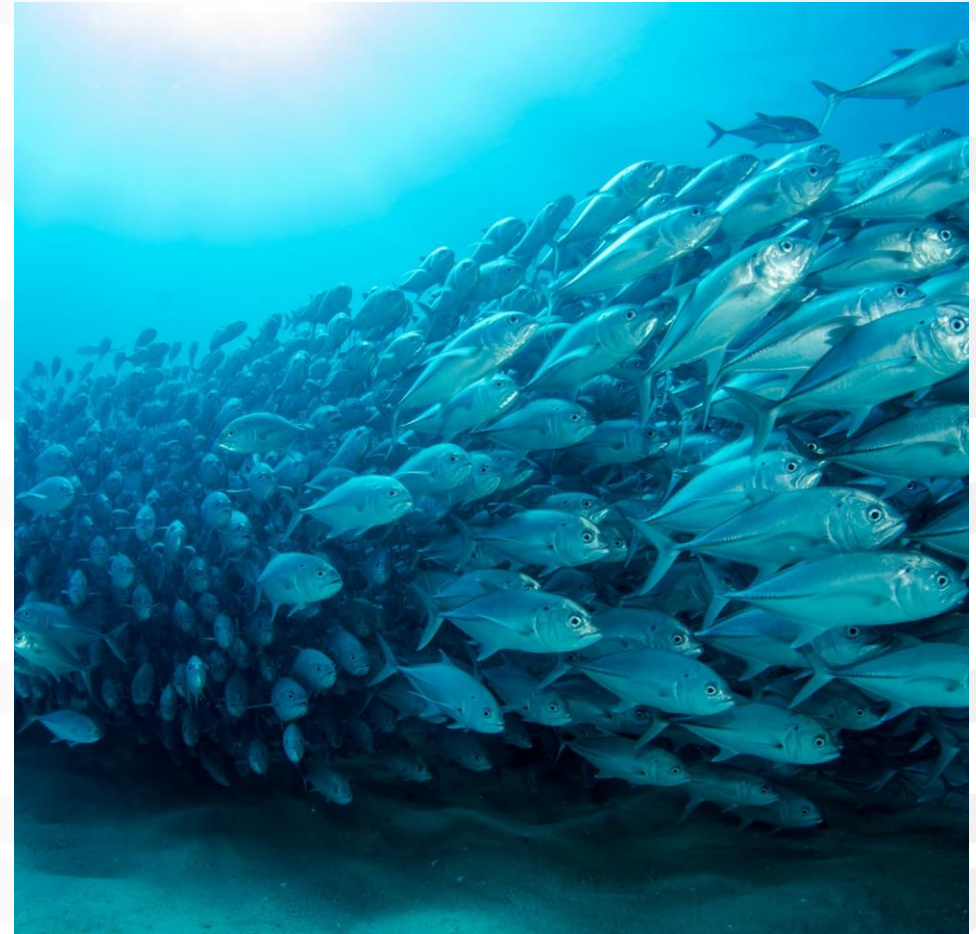
Ensure that the aquaculture sector maintains high standards of environmental stewardship by utilizing environmentally-sustainable technologies and practices.



Monitor the effects of aquaculture operations on the surrounding environment and use the results to support best management and continuous improvement.



Our task includes the development of effective and enabling policies, regulations and codes of conduct, enforcement and penalty systems, and streamlining of the permitting process.

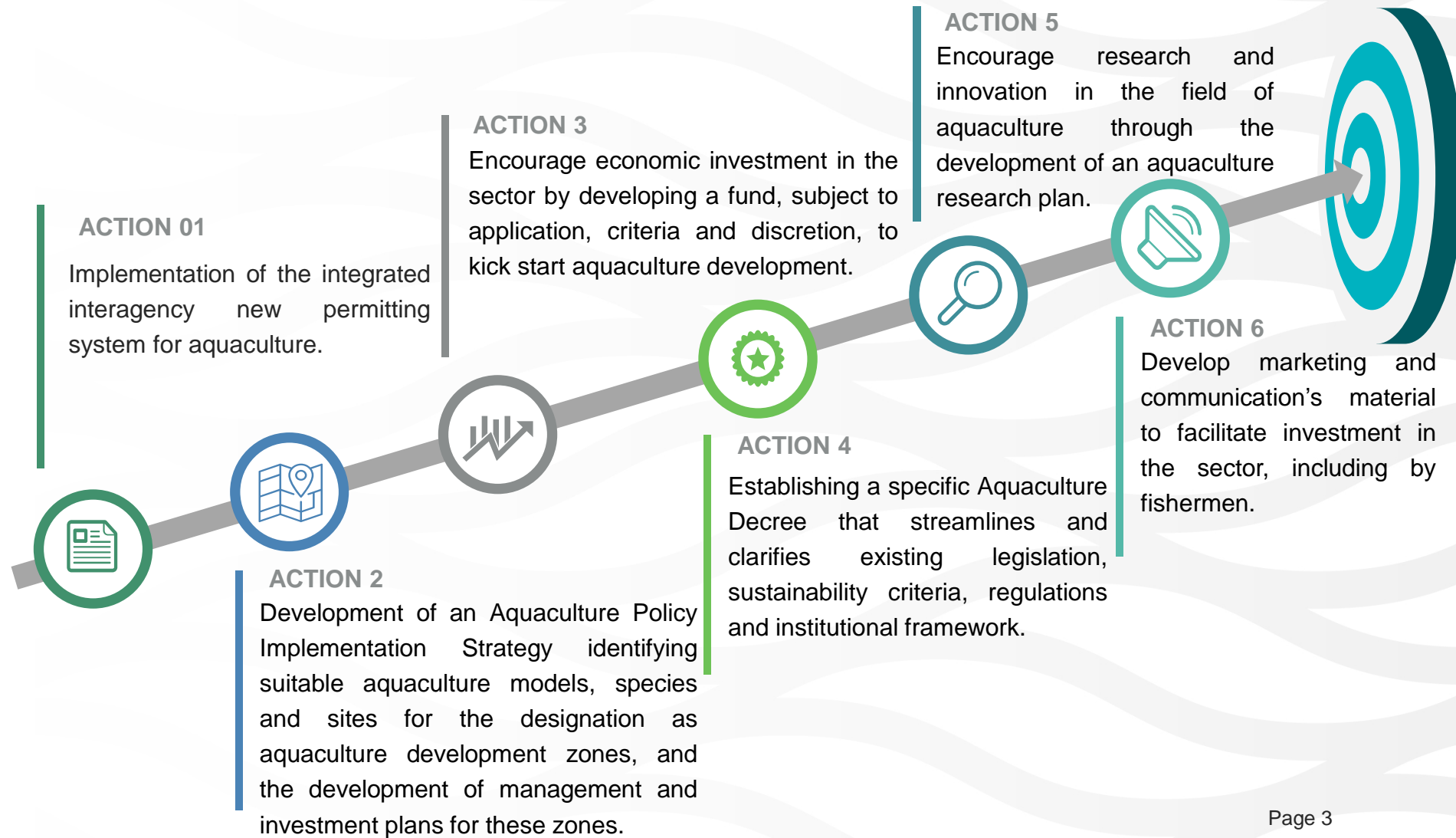


Sustainable Aquaculture Policy

SUSTAINABLE AQUACULTURE POLICY

Abu Dhabi Emirate

March 2019



Establishment of Sustainable Aquaculture Development Zones at Al Dhafra Region of Abu Dhabi Emirate

- As part of implementing the sustainable aquaculture policy initiatives, supporting and developing the sector in the emirate, EAD conducted a hydrodynamic modelling study to allocate suitable aquaculture zones in the vicinity of Delma island and Al Sila.

Modelling Objectives



Determine the capacity of fish that can be cultured in marine cages sustainably in the selected areas.



Analyze the potential environmental impacts of aquaculture activities on the marine environment.



Determine how long the environment will take to recover to its normal form after cages are removed.



Integrated Hydrodynamic Modelling Tool



Hydrodynamic

Predicts movement of water into and out of the system



Fish waste

Predicts the volume of waste for a given volume of fish



Particle transport

Tracks the vertical and horizontal movement of wastes



Waves

Gives realistic estimates of wave height, period and direction



Water quality

Simulates water quality pathways



Biogeochemical Predicts flux of nutrients, metals, DO and others

Pilot Scale Aquaculture Sea Cages Project – Delma Island

- Commence project operation to culture local important overexploited fish species in marine cages.



Hamour
Safi
Gabit
Sheri



100
Tonnes / Annually



6
Sea Cages



2
Years Duration

Study Objectives



Reduce stress on
depleted local wild
fish resources



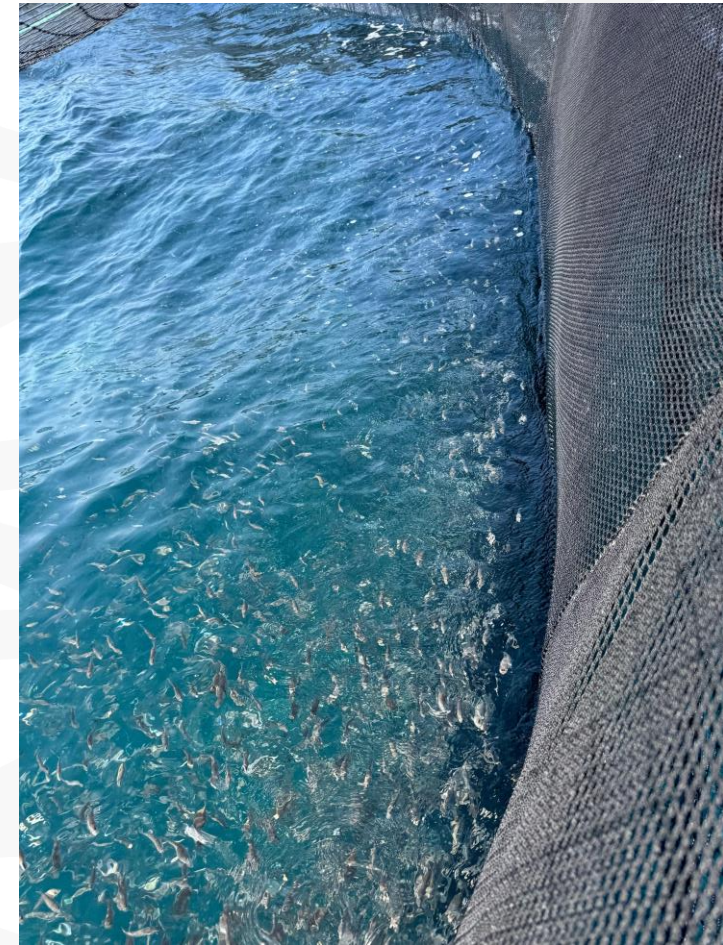
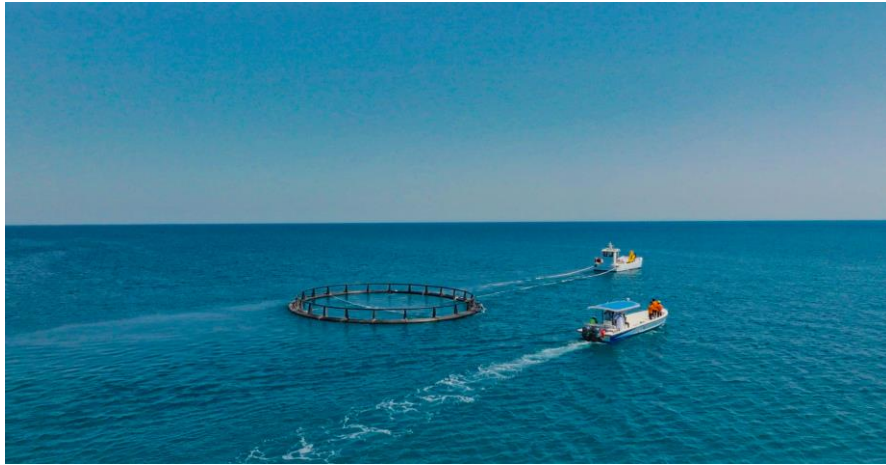
Achieve food
security goals



Diversify income
source of citizen
in the emirate



Pilot Scale Aquaculture Sea Cages Project – Delma Island



Pilot Scale Aquaculture Sea Cages Project – Delma Island

- Artificial Intelligence based monitoring and data collection system.

The system will include



Environmental sensors

- Water quality



Underwater & outdoor Cameras

- Fish behavior
- Feeding process
- AQ infrastructure

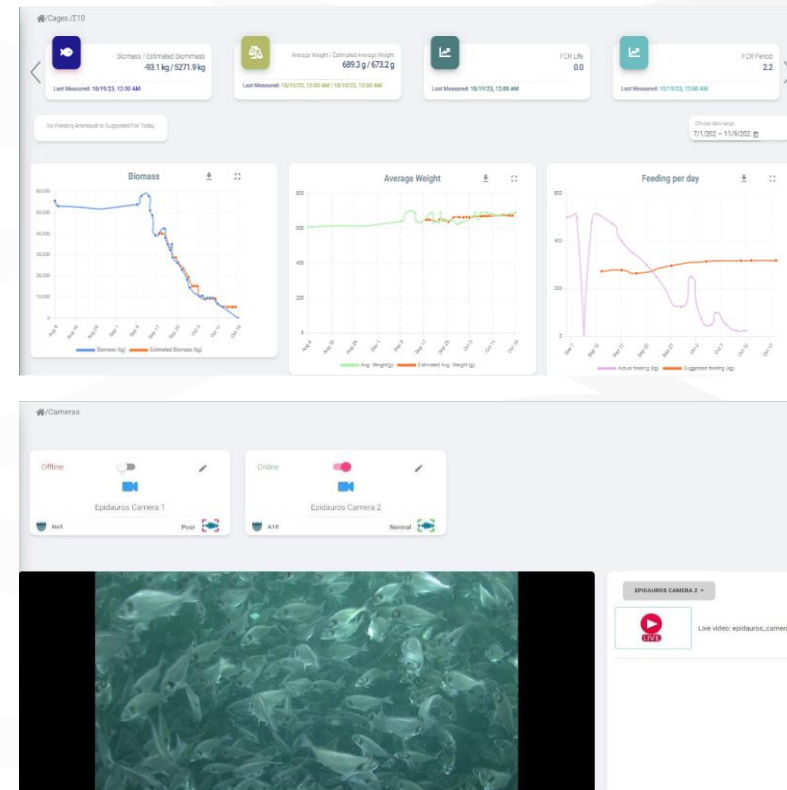
Benefits



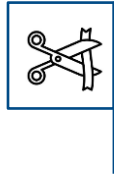
- Early detection of potential diseases
- Production plan simulations



- Utilize Solar panels
- 24/7 real time fish weight estimation
- Estimate fish weight (95%)
- Feed optimization



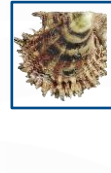
Abu Dhabi Pearls Center



2007



Al Mirfa
Al Mughirah



Pinctada radiata



3.6 to 4 years



80,000 Oysters



20,000 Pearls

