

AQUACULTURE TOOLKIT GUIDE

**INFORMATIONAL MESSAGES
ABOUT OFFSHORE
AQUACULTURE IN FLORIDA**



ABOUT

Responsible aquaculture practices can sustainably provide food security and prepare us to meet future protein demands without increasing the pressure on wild-capture fishery resources. Learn about resources to aid in your communication on aquaculture in this toolkit.



The UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources curated the following materials in partnership with the Florida Department of Agriculture and Consumer Services (FDACS) Division of Aquaculture and the National Oceanic and Atmospheric Administration (NOAA) National Centers for Coastal Ocean Science (NCCOS). The purpose of these materials is to educate various audiences about aquaculture operations in Florida, potential benefits of responsible offshore practices, and how various concerns are being addressed. This toolkit includes social media content, an educational print piece, PowerPoint slides, an informational video, and instructions for how to access and use the materials.

This project received funding under award #28519 from NOAA Fisheries Service, in cooperation with the Gulf States Marine Fisheries Commission. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA Fisheries or the Gulf States Commission. Additional copies are available by contacting UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources, PO Box 110126, Gainesville, FL 32611-0126, (352)273-2598, www.piecenter.com.

TOOLKIT INDEX

Social Media Posts: Pre-made graphics accompanied by text and a suggested dissemination schedule, ready for you to post to your social media platforms. Includes posts with general information about aquaculture and its opportunity to exist in Florida, potential benefits of offshore aquaculture, and how concerns are being addressed.

Issue Guide: Uses text and graphics to display information so readers can understand aquaculture operations. Designed to be an educational, doubled-sided print piece.

Powerpoint Slides: Colorful presentation slides on general aquaculture information, offshore aquaculture operations in Florida and potential benefits, and how concerns are being addressed.

Informational Video: Short, educational video using animated text to showcase the benefits of offshore aquaculture.

Instructions: Detailed instructions on how to download materials and recommended usage.

SOCIAL MEDIA POSTS

The Aquaculture Toolkit provides social media posts that are ready for you to publish to your organization's social media accounts. The posts are categorized into weekly themes:

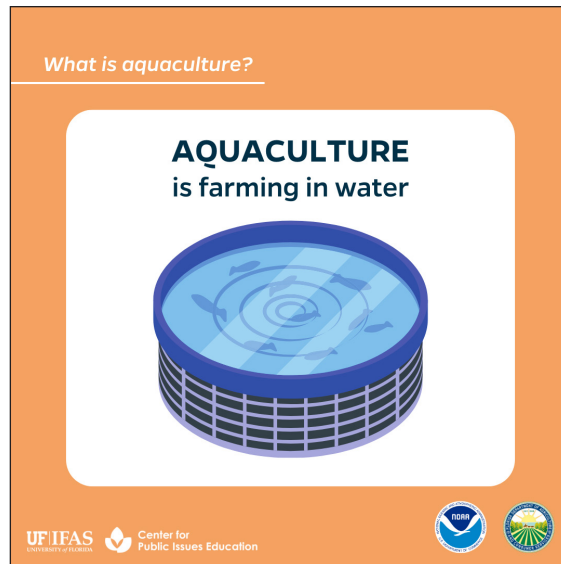
- *What is aquaculture?*
- *Offshore aquaculture in Florida.*
- *Why is offshore aquaculture beneficial?*
- *How are concerns being addressed?*

Every post has a graphic paired with an accompanied text. People are more likely to read posts that contain graphics than posts without graphics. The suggested dissemination calendar also provides you with a consistent plan for posting.

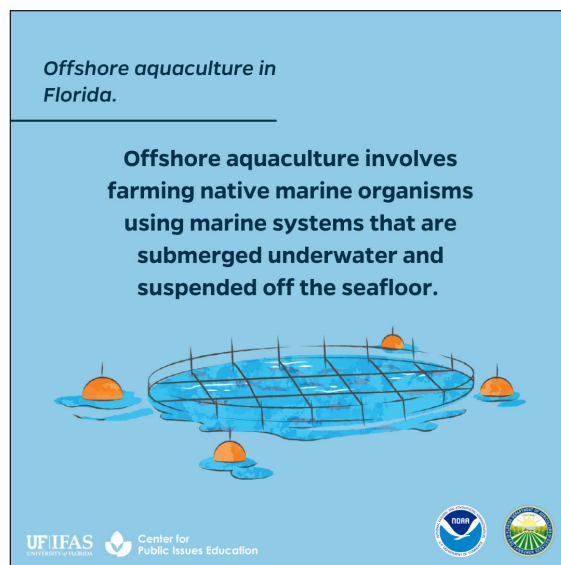
Social media is a great way to reach a diverse audience. The content in this toolkit is formatted to be educational and understandable for the general public.

To view and download all the social media posts, visit the [PIE Center's Aquaculture Toolkit webpage](https://piecenter.com/aquaculture-toolkit) (piecenter.com/aquaculture-toolkit) or FDACS Division of Aquaculture's toolkit webpage (coming soon).

SOCIAL MEDIA POSTS





Example post from the toolkit educating audiences about aquaculture.



Example post from the toolkit explaining how native marine organisms are farmed in offshore aquaculture operations.

SOCIAL MEDIA POSTS

Week 3: Why is offshore aquaculture beneficial?		
Calendar	Text	Graphic
Week 3 Day 1 (Mon.)	<p>Offshore aquaculture operations in the U.S. can expand our domestic seafood production and increase food security. According to the Food and Agriculture Organization of the United Nations (FAO), 52% of the seafood consumed globally is farmed.</p> <p>Visit this interactive story by FAO to learn more: https://www.fao.org/state-of-fisheries-aquaculture/2020/en</p>	
Week 3 Day 2 (Tues.)	<p>According to NOAA Fisheries, responsible offshore aquaculture practices can prepare us to meet future protein demands and work towards achieving several United Nations' Sustainable Development Goals by 2030.</p> <p>Check out this article by NOAA Fisheries to learn more: https://www.fisheries.noaa.gov/feature-story/aquaculture-supports-sustainable-earth</p>	

As a part of the toolkit, you can download .png files of each social media graphic as well as a Word document with suggested captions and a schedule of posting (pictured above). View and download these files on the [PIE Center's Aquaculture Toolkit webpage](https://piecenter.com/aquaculture-toolkit) (piecenter.com/aquaculture-toolkit) or on FDACS Division of Aquaculture's toolkit webpage (coming soon).

ISSUE GUIDE

11 in


OFFSHORE AQUACULTURE IN FLORIDA

AQUACULTURE IN FLORIDA


Aquaculture simply means farming in water. Aquaculture involves breeding, raising, and harvesting aquatic organisms in water. These aquatic organisms—including finfish, bivalve shellfish, shrimp, and other invertebrates, aquatic reptiles, and aquatic plants—are farmed for the ornamental aquarium trade, food, conservation, and other uses.

Aquaculture can take place in either freshwater or saltwater and can occur in tanks or ponds. Aquaculture can also be onshore or offshore.

Onshore operations are land-based systems and can include docks.



Offshore operations occur in open waters away from land. **Nearshore operations** are a type of offshore aquaculture that occurs directly on the coast in state waters.







FLORIDA'S CLIMATE, VAST COASTAL REGION, AND SHIPPING OPPORTUNITIES MAKE IT IDEAL FOR OFFSHORE AQUACULTURE AND THE PRODUCTION OF UNIQUE, VALUABLE SEAFOOD.

Offshore aquaculture involves farming native marine organisms using marine systems that are submerged underwater and suspended off the seafloor. Ongoing research projects with state, federal, and academic partners will help determine possible areas in Florida state waters of the Gulf of Mexico for offshore aquaculture operations.

BENEFITS OF OFFSHORE AQUACULTURE

- 1 Expand domestic seafood production in the United States and increase food security
- 2 Enhance employment and economic opportunities in coastal communities and support the Blue Economy¹
- 3 Prepare to meet future protein demands as the population continues to grow
- 4 Work towards achieving several United Nations' Sustainable Development Goals²
- 5 Take the pressure off wild-capture fishery resources and supplement sustainable wild-capture fisheries

1. NOAA National Ocean Service, Our Ocean Economy
2. NOAA Fisheries, Aquaculture Supports a Sustainable Earth
3. NOAA Fisheries, Potential Risks of Aquaculture Escapes

8.5 in

OFFSHORE AQUACULTURE IN FLORIDA

HOW CONCERNS ARE BEING ADDRESSED

Economic and Social Concerns:

Impact on local economy and fishing communities

There is concern that this growing industry may compete with or displace existing fishers and other ocean users. However, offshore aquaculture can present numerous opportunities for economic growth, jobs in rural and working waterfront communities, enhanced domestic food security, and preservation of coastal heritage and traditions.

Marine navigation and access to fishers

A sufficient distance must exist between offshore aquaculture operations and marine traffic routes to avoid both disrupting navigation and impacting access to fishers.

Human Health Concerns:

Use of preventative treatments

Public concern exists related to the use of preventative treatments in offshore aquaculture operations potentially causing human health risks or antibiotic resistance. Proper animal husbandry and care to prevent disease is an industry-standard best practice to avoid the use of expensive treatments. The high cost, intensive labor required, and strict regulations involved to use preventative treatments restricts their use in all but the most severe cases.

Environmental Concerns:

Nutrient pollution

Water quality is an important environmental concern related to aquaculture. As a best practice, marine systems are placed in deep waters with currents that allow for flushing to reduce the buildup of nutrients. Florida also requires rigorous environmental assessments and compliance with water quality regulations such as the Clean Water Act. When offshore operations are properly sited and managed, nutrients are nearly undetectable immediately outside of the system.

Fish escapes

Fish escapes present a potential risk to the natural environment and wild fish populations via competition and spread of disease. Proper animal husbandry, routine system maintenance, and escape recovery plans will prevent and manage fish escapes to protect natural resources. Escaped farmed fish will also likely die, quickly become prey, or fail to reproduce due to their decreased fitness in the wild.


[View this fact sheet for more information.](#)³

Mixing with native fish

Concern exists that farmed fish could mix with wild fish populations and produce negative genetic consequences. Farmed species in Florida **MUST** be native and originate from local genetics of the wild population. Non-native and transgenic, or genetically altered, organisms are strictly prohibited for farming in Florida state waters.

1. NOAA National Ocean Service, Our Ocean Economy
2. NOAA Fisheries, Aquaculture Supports a Sustainable Earth
3. NOAA Fisheries, Potential Risks of Aquaculture Escapes



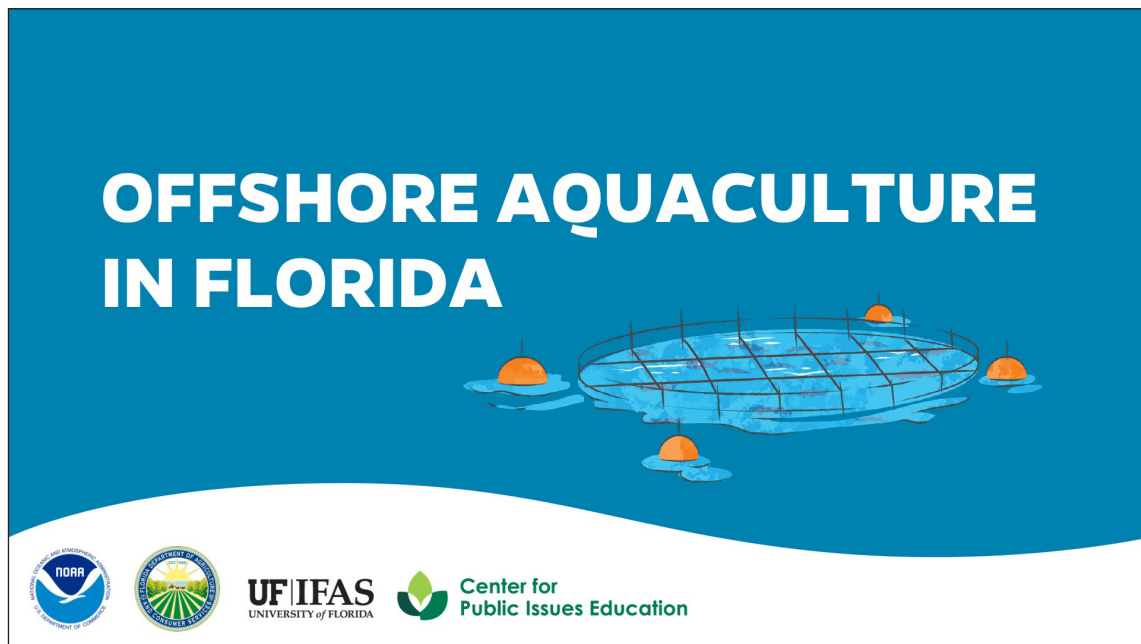



This toolkit includes one double-sided issue guide. The issue guide is intended to be an educational print piece that provides audiences with key information about aquaculture by using a combination of text and colorful graphics.

The issue guide is available to download on the [PIE Center's Aquaculture Toolkit webpage](https://piecenter.com/aquaculture-toolkit) (piecenter.com/aquaculture-toolkit) or on FDACS Division of Aquaculture's toolkit webpage (coming soon).

POWERPOINT SLIDES

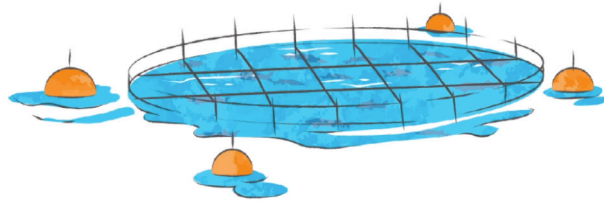
This toolkit contains the following PowerPoint slides available for download on the [PIE Center's Aquaculture Toolkit webpage](http://piecenter.com/aquaculture-toolkit) (piecenter.com/aquaculture-toolkit) or on FDACS Division of Aquaculture's toolkit webpage (coming soon).



Powerpoint slides containing text and graphics on aquaculture in Florida, plus potential benefits of offshore aquaculture, and how various concerns are being addressed.

INFORMATIONAL VIDEO

WHY IS OFFSHORE AQUACULTURE BENEFICIAL?



This toolkit contains a short, educational video (1 minute 43 seconds) using animated text and graphics to showcase the benefits of offshore aquaculture. This video can be shared to social media or used as part of a presentation in addition to the PowerPoint slides in this toolkit.

[Watch the video on YouTube](#), or download the video on the [PIE Center's Aquaculture Toolkit webpage](#) (piecenter.com/aquaculture-toolkit) or on FDACS Division of Aquaculture's toolkit webpage (coming soon).

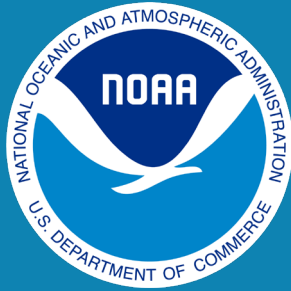
INSTRUCTIONS

Follow these steps to download toolkit pieces:

1. It is recommended to create a folder on your computer where you can collect all of your downloaded files. This will help keep everything organized when you post on social media, but it is not required.
2. Visit the [PIE Center's Aquaculture Toolkit webpage](http://piecenter.com/aquaculture-toolkit) (piecenter.com/aquaculture-toolkit) or visit the FDACS Division of Aquaculture's toolkit webpage (coming soon).
3. Expand the tabs to locate the download button for each toolkit piece. Then click the file(s) you would like to download.
4. Move the file(s) from your Downloads folder to the folder you created in Step 1.

Follow these steps to publish a social media post on Facebook:

1. Open your organization's Facebook account.
2. Create a new post.
3. Open the Social Media Plan and choose a post to share. Copy and paste the caption from this Word document into the new Facebook post.
4. Click photo/video to add the graphic to your new post.
5. Select the desired graphic from the folder you saved it in. (Tip: If you did not save it to a specific folder after downloading, the file may be saved to your Downloads folder.)
6. Click post to publish.



UF|IFAS
UNIVERSITY of FLORIDA



**Center for
Public Issues Education**

This project received funding under award #28519 from NOAA Fisheries Service, in cooperation with the Gulf States Marine Fisheries Commission. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA Fisheries or the Gulf States Commission. Additional copies are available by contacting UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources, PO Box 110126, Gainesville, FL 32611-0126, (352)273-2598, www.piecenter.com.

FOR MORE INFORMATION CONTACT

FDACS Division of Aquaculture: (850)617-7600 | Aquaculture_web@FDACS.gov

UF/IFAS Center for Public Issues Education: (352)273-2598 | piecenter@ifas.ufl.edu