A Pilot Project to Modernize Pot Fishing for the Black Sea Bass Fishery using Acoustic Subsea Buoy Retrieval Systems

Marine Extension and Georgia Sea Grant
UNIVERSITY OF GEORGIA
Sea Grant

Image credits; Kim Sawicki

Project Team

Kim Sawicki

Fulbright-Schuman Alumni and Ropeless Gear Researcher, PI

Bryan Fluech

Sea Grant Fisheries Extension Agent

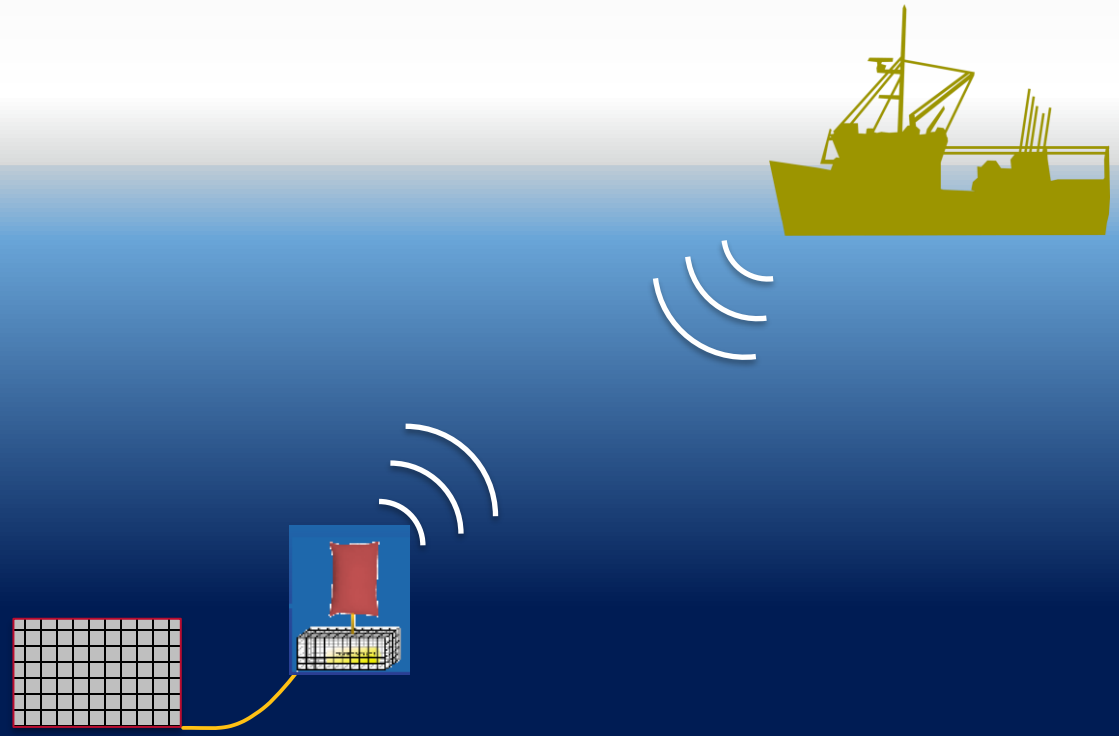
Captain Charlie Phillips

Commercial Fisherman and Seafood Dealer

Acoustic Subsea Buoy Retrieval Systems (ASBRS)

AKA “ropeless, lineless, pop-up, and on-demand” fishing systems

Stores buoys and retrieval devices at depth which are activated via acoustic release



- Utilized in other fisheries and in other marine applications world-wide for over twenty years
- Intended to minimize/eliminate risks of endangered cetacean entanglements

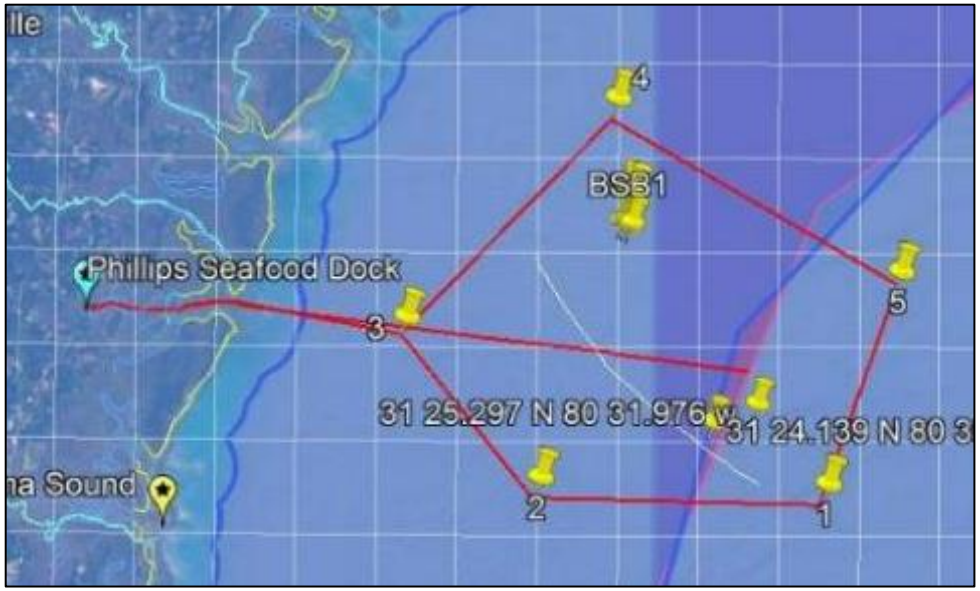
Summary of Current Ropeless Systems Available

Manufacturer	Gear type	Status	Field-tested	Web site
Fiomarine	Spool Design	Mature design 20+ yr. product	Yes	http://fiomarine.com
Desert Star Systems	Rope Release Bag	Mature design 20+ yr. product	Yes	http://www.desertstar.com
EdgeTech	Cage System	Mature design – 1965	Yes	https://www.edgetech.com
Lobster Lift	Inflatable Buoy	Solid Prototype	Yes	https://www.lobsterlift.com
SMELTS	Inflatable Lift Bag	Solid Prototype	Yes	https://www.smelts.org
Ashored	Cage Design	Solid Prototype	Yes	https://ashored.ca

Current Situation

Image credit; Kim Sawicki

Image credit Annika Toth



Project Objectives

Examine the potential usefulness of ASBRS in the BSB pot fishery while minimizing impacts to protected species.

Research Questions:

- Will ASBRS gear show a greater than >99% successful deployment and retrieval rate?
- Will ASBRS gear significantly increases time or expense for retrieval and recovery versus the current fishing method such that it might affect profitability?
- Will SBRS gear significantly increases time or expense for repacking of gear for redeployment versus the current fishing method such that it might affect profitability?
- Will bycatch rates for a modified BSB pot design (“4by”) be greater than traditional single pots?

Two Testing Cycles

1. May-July 2020

- Familiarization with gear and methods as allowable by current regulations
- Safety lines in place; camera and film recording

2. August-September 2020 (*after EFP issued*)

- Testing of selected gear and pot configurations
- Modifications to rigging will be done through consultation with appropriate agencies and collaboration with project partners
- Consult with NOAA Fisheries to ensure pilot design is in line with current NARW conservation measures

EFP Methods

- BSB pots will be fished as singles with a traditional configuration in both the inshore and the offshore areas.

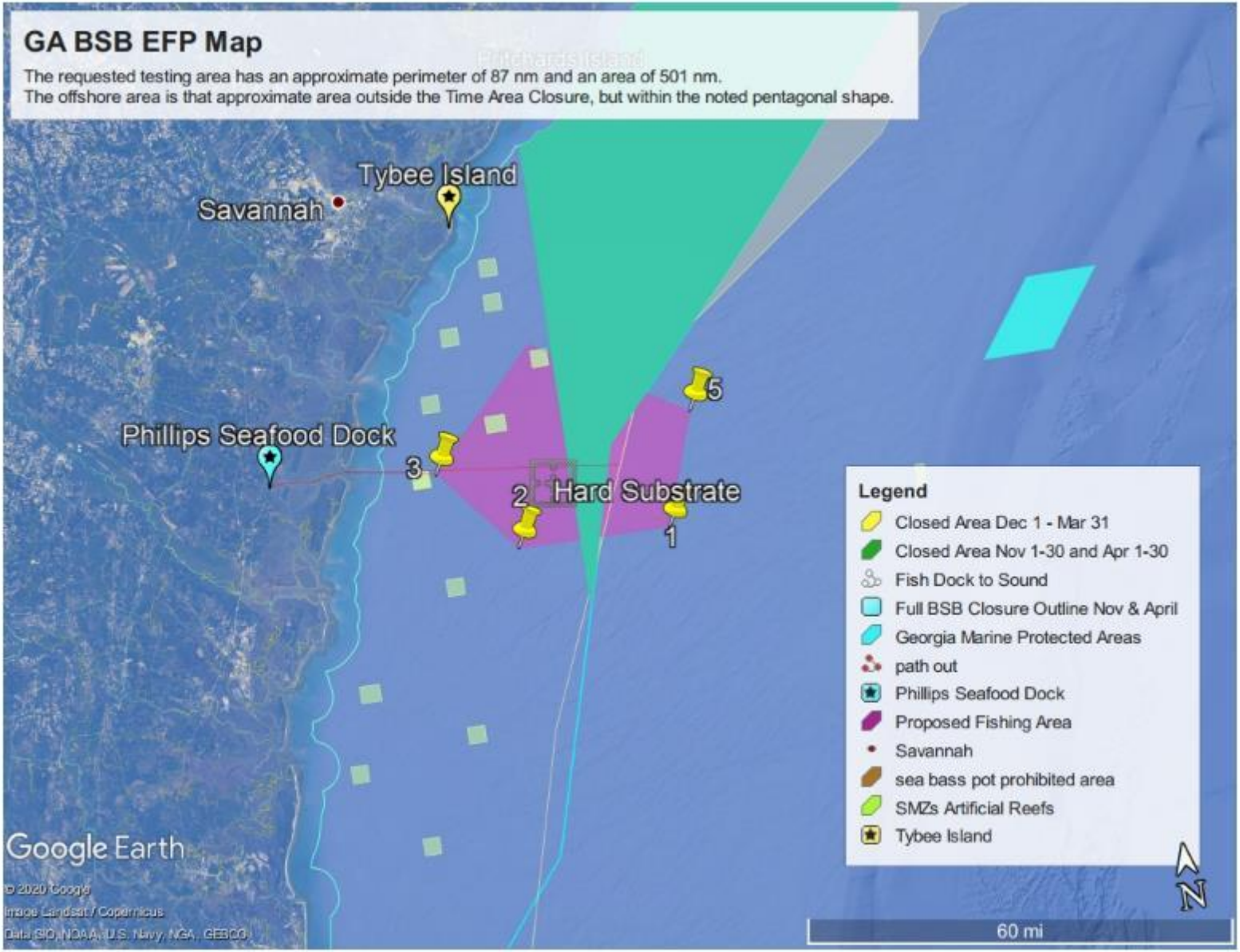
- Experimental configurations will be fished without vertical buoy lines on live bottom near control pots with traditional configurations.

- Virtual gear marking will be utilized and evaluated, with analysis of the interoperability of systems being shared with partners.

Testing Areas Inshore and Offshore within Pentagon

GA BSB EFP Map

The requested testing area has an approximate perimeter of 87 nm and an area of 501 nm.
The offshore area is that approximate area outside the Time Area Closure, but within the noted pentagonal shape.



Requested Exemptions

I. 50 CFR §622.189 (g) Restrictions and requirements for sea bass pots-line marking

II. 50 CFR §622.177 (4) Gear identification, unmarked pots or buoys

III. 50 CFR §229.32 (b) (1-3) Gear marking requirements

IV. CRF 50 §622.189 (b) Configuration restriction.

V. 50 CFR § 229.32 (C) (1) (i) Buoy line floating at the surface

V. 50 CFR § 229.32 (C) (vi) (D & E) Buoy line free of objects

Modified BSB Pot Configurations

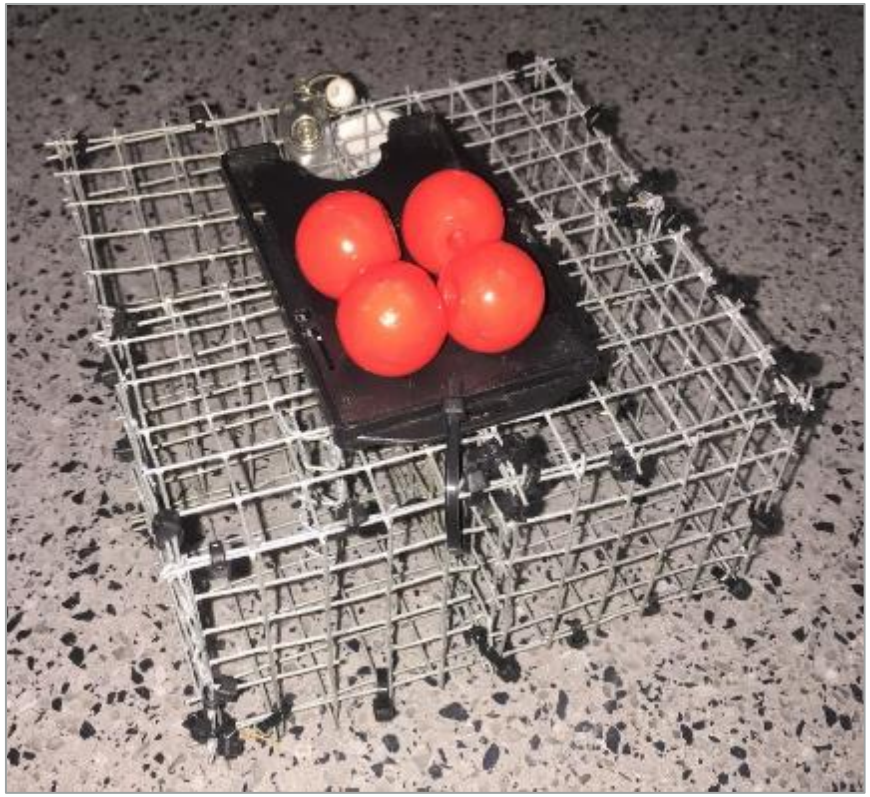
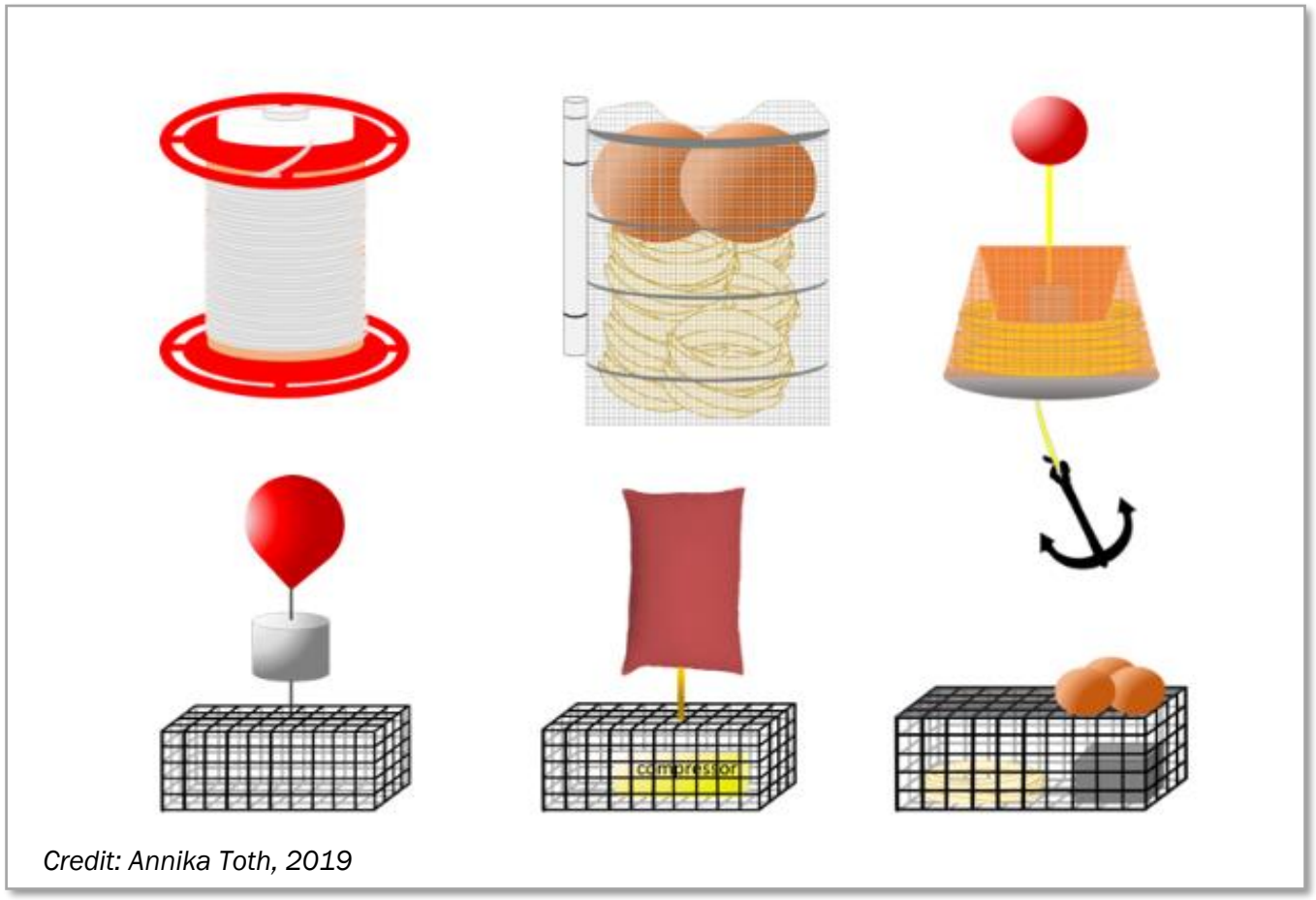


Image credits; Kim Sawicki

Modified BSB Pot Configuration

Modified BSB Pot Configuration with ASBRS Device

ASBRS Gears To Be Tested



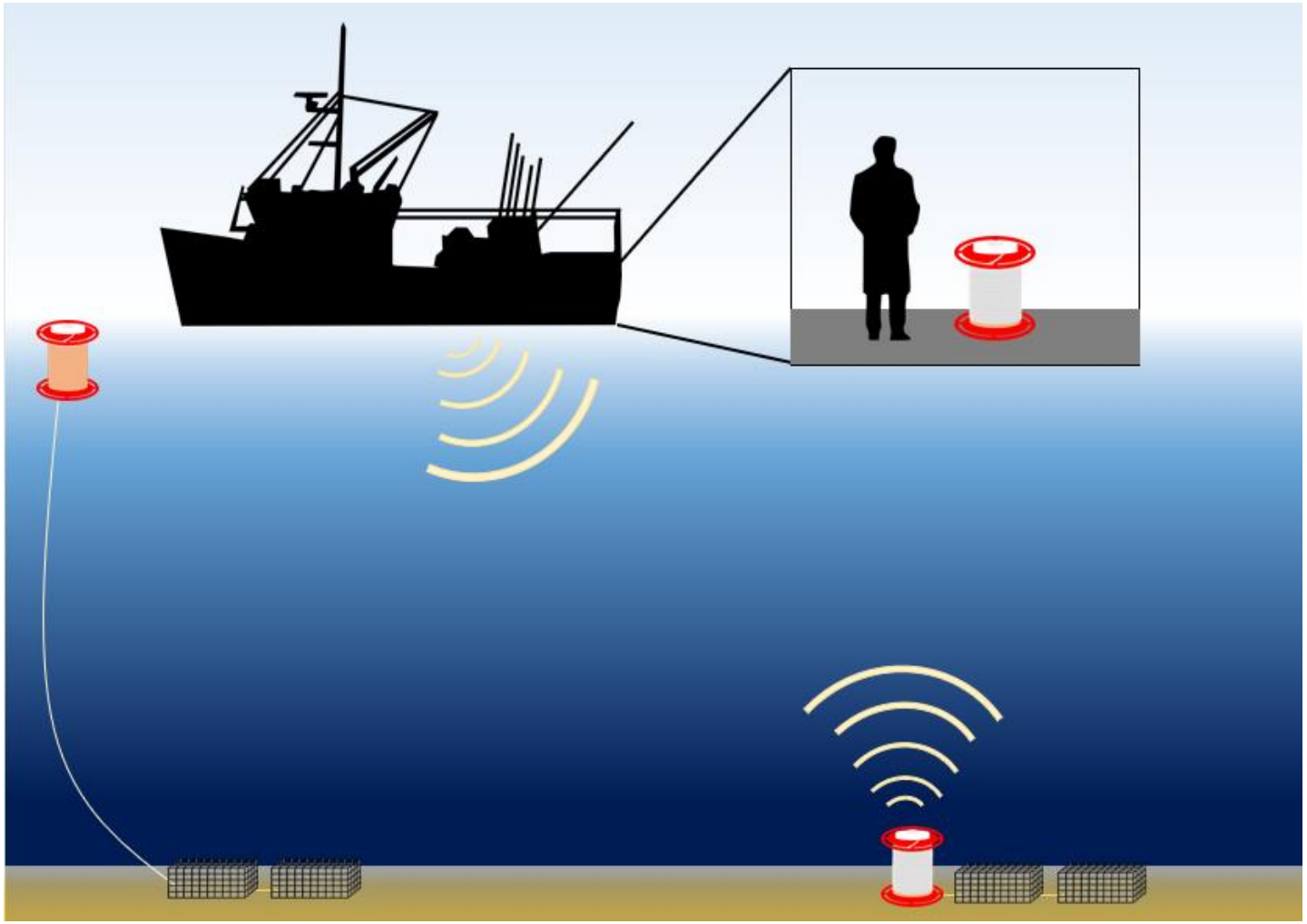
Credit: Annika Toth, 2019

From Left to Right:
Fiomarine-FioBuoy, Desert Star Systems ARC-1, Ashored-MOBI, LobsterLift, SMELTS-Lobster Raft, EdgeTech 5112)

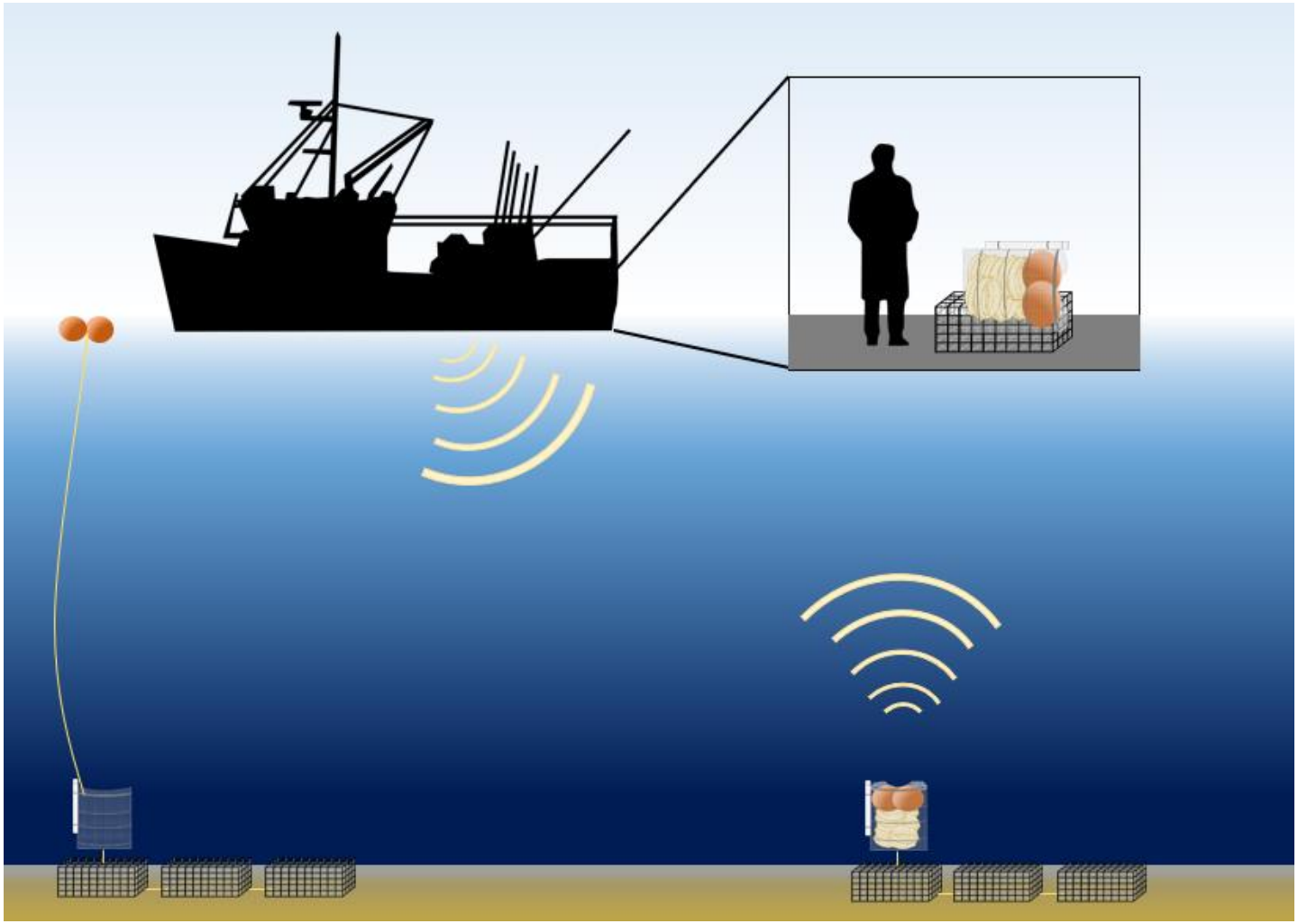
Recent Trials

Image credits; Kim Sawicki

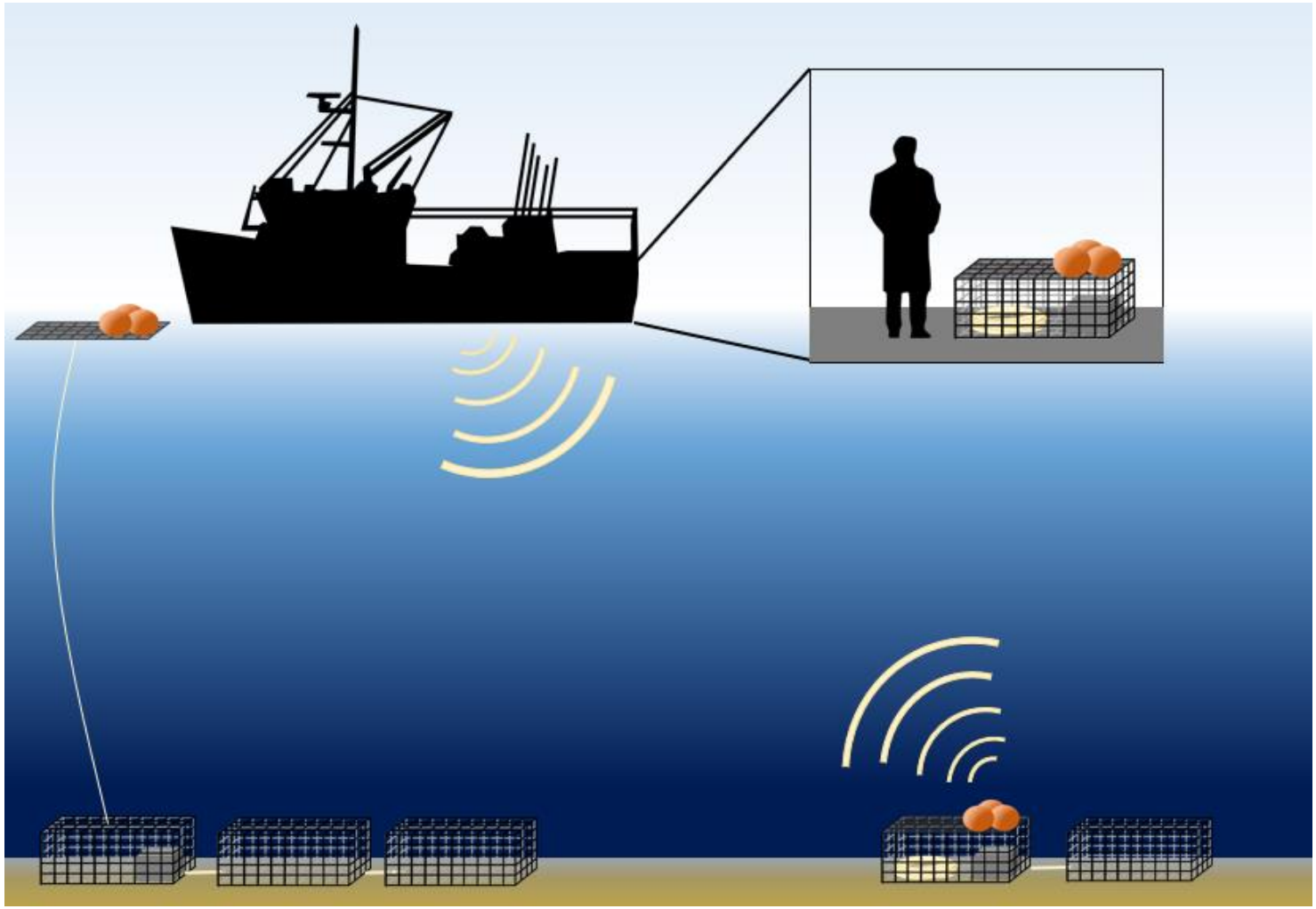
Spool Design (Fiobuoy®)



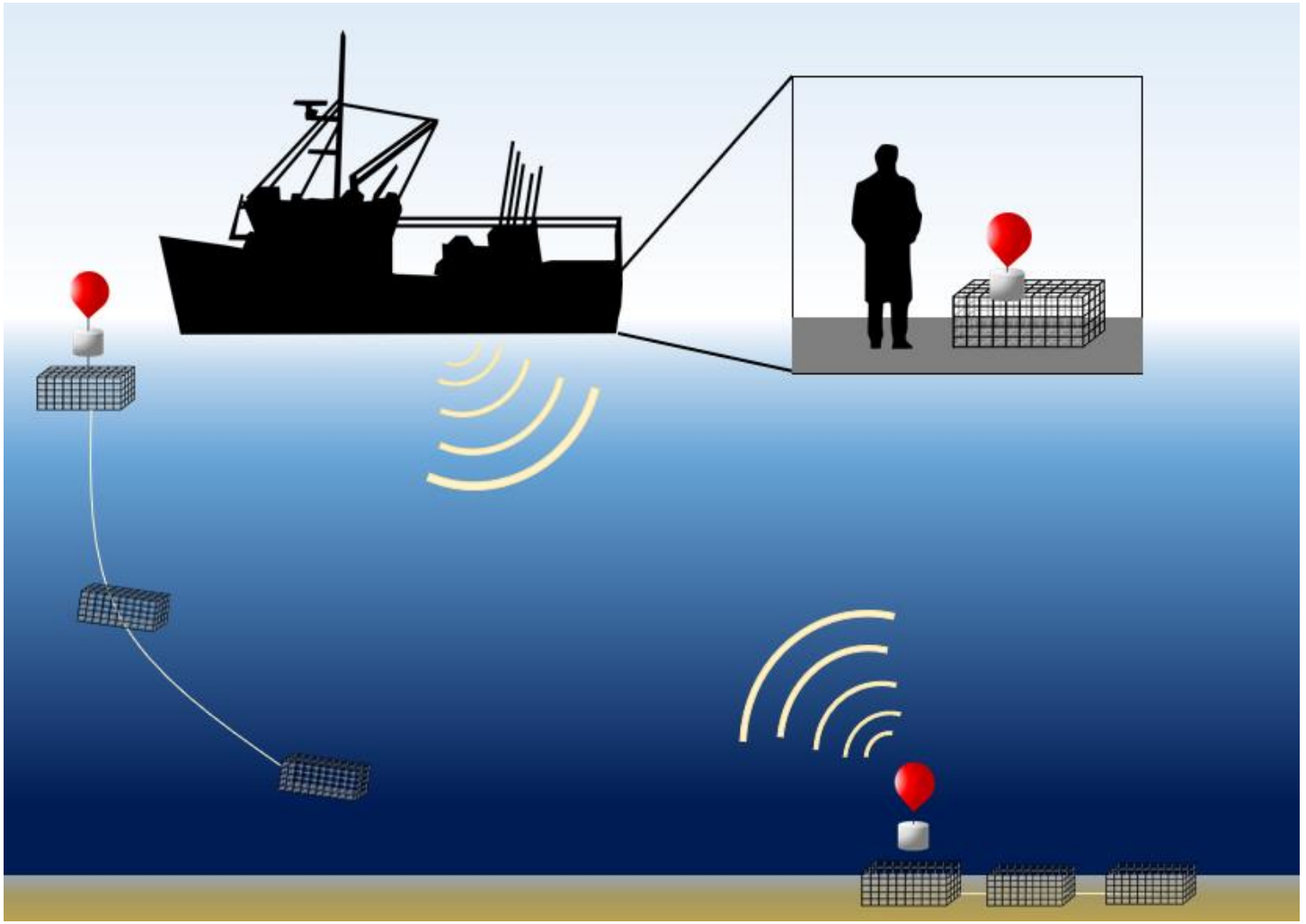
Desert Star ARC-1



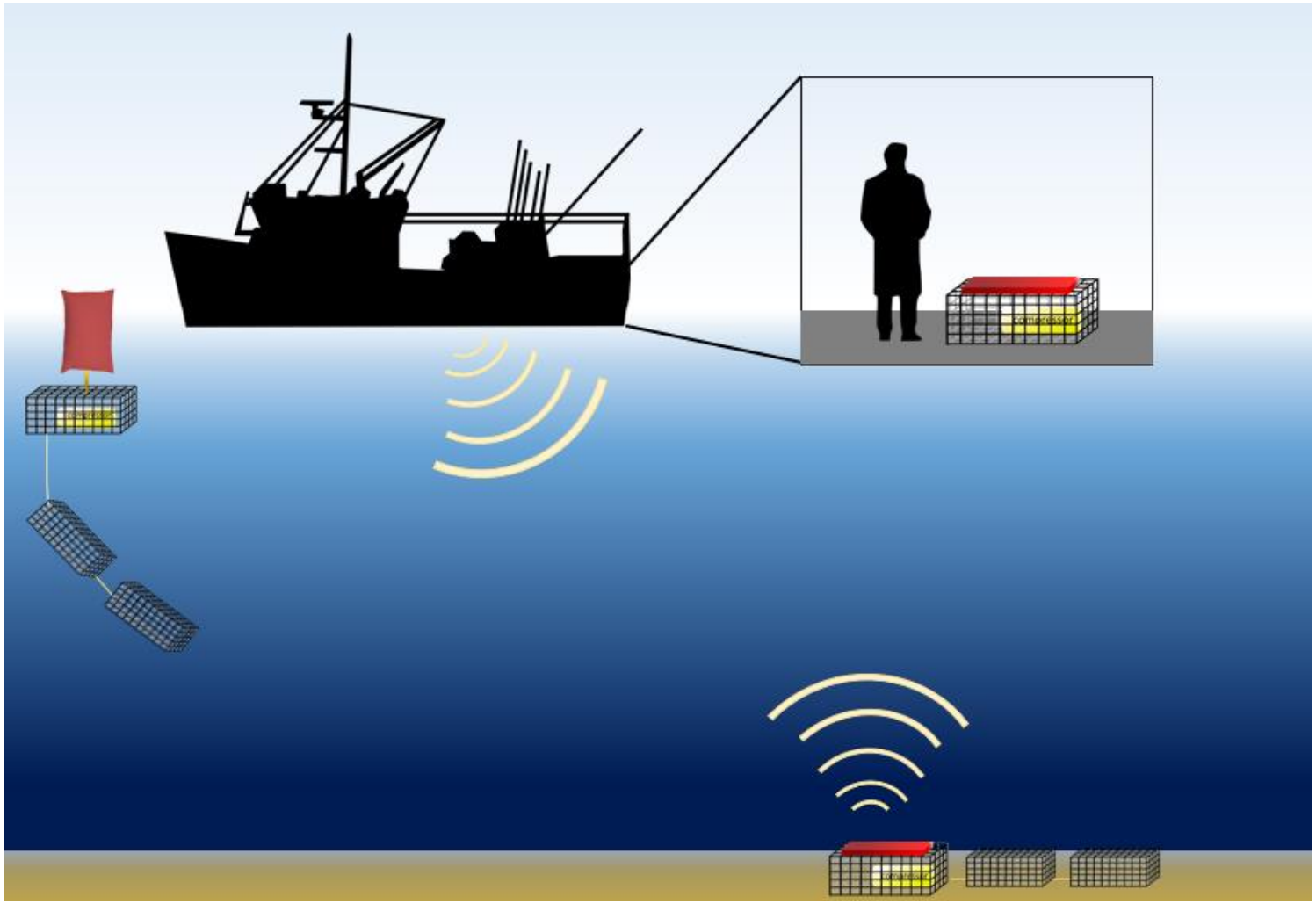
Cage System (EdgeTech 5112)



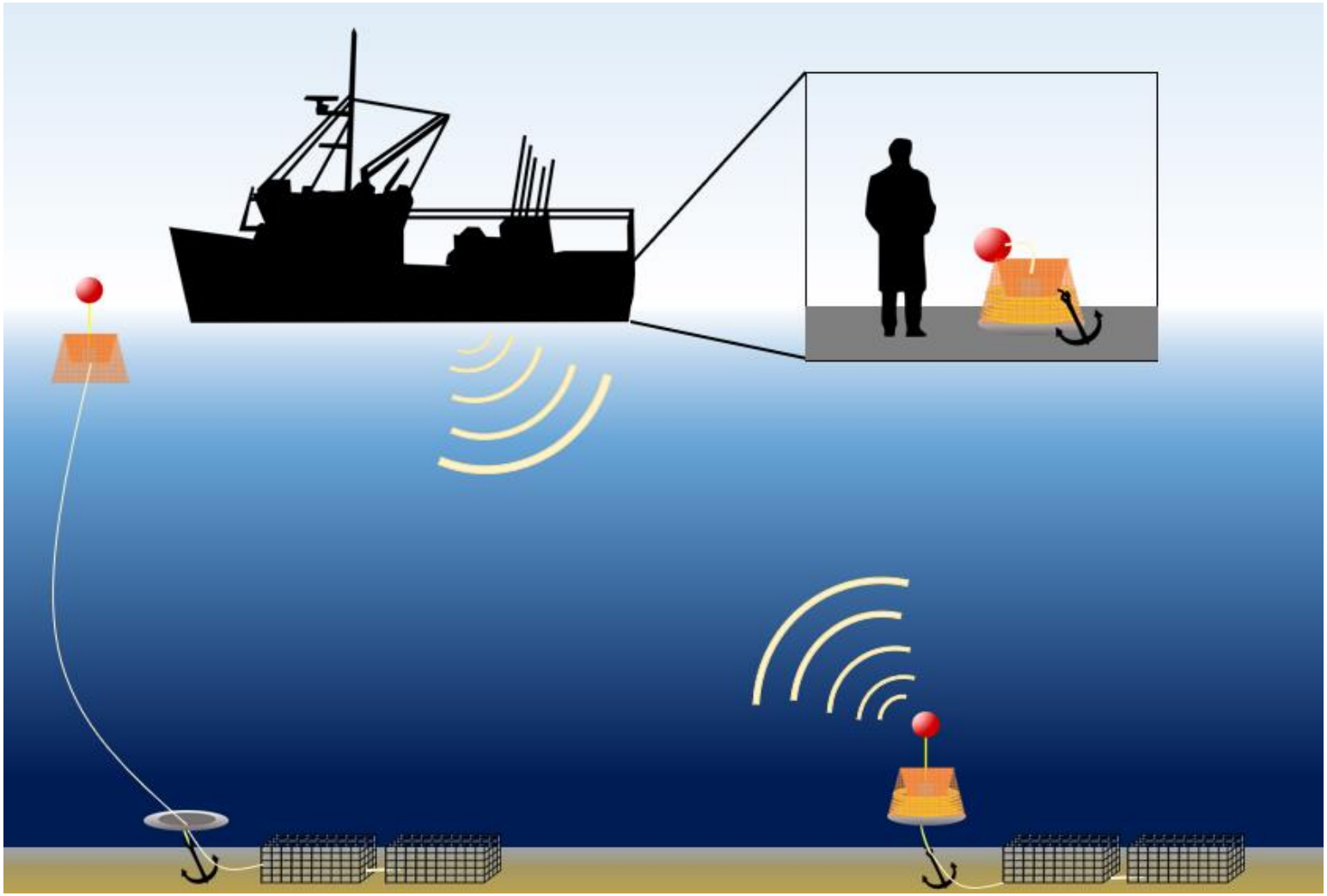
Lobster Lift



SMELTS Lobster Raft



Cage Design (MOBI)



QUESTIONS?

Bryan Fluech
fluech@uga.edu

Kim Sawicki
kim.sawicki@uconn.edu

Captain Charlie Phillips
ga_capt@yahoo.com

Marine Extension and Georgia Sea Grant
UNIVERSITY OF GEORGIA

Sea Grant

Image credit: Bryan Fluech