

## **Use of video monitoring to quantify spatial and temporal patterns in fishing activity across sectors at moored fish aggregating devices off Puerto Rico**

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Supplementary material

Table S1. – Camera type, power source and setup used in this study.

Make and Model	Brinno TLC Pro 200
Power Source	(4) AA lithium ion batteries
Frame Rate	30 frames per second
Image Time Interval	1 image every 30 seconds
Time-lapse Video Format and Resolution	.AVI & 1280 x 720 pixels
Field of View and Focal Length	112° & 19 mm (35 mm equivalent)
Timer off	1930-0530
Timer on	0530-1930
Timestamp	on
White Balance	auto
Image Quality	best
Scene	twilight
HDR	high
Exposure	n/a
Saturation	n/a
Contrast	n/a
Sharpness	n/a
Low Light Recording	on
Set Date & Time	local internet time in deployment region
LED	Off
Band Filter	None
Housing	ATH 120 Weather Resistant Housing
Memory	32 gigabyte SD card
Additional Protection	Plastic roof and duct tape
Mounting	12" hose clamps and two industrial cable ties



Fig. S1. – A camera was redeployed to conduct a range test to determine approximately how far a vessel in an image was from the FAD. Image (1) is a vessel that is 70 metres from the FAD; Image (2) is the same vessel 132 m from the FAD. These photos were used to determine the proximity of vessels to the FADs.

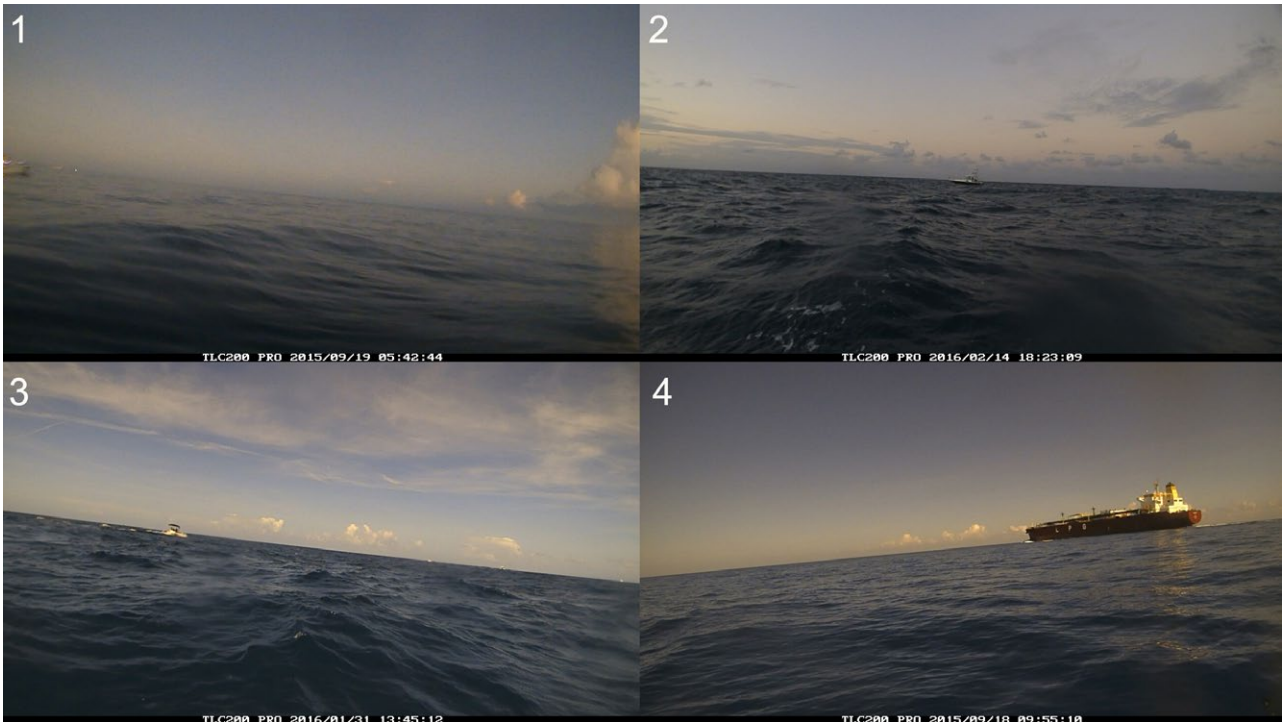


Fig. S2. – Clockwise from upper left: (1) Vessel #55 earliest buoy visit 0542; (2) Vessel #143 latest buoy visit 1823; (3) Yellow arrows indicate highest number of vessels present in single image; all were unclassifiable and designated as unknown; (4) tanker.

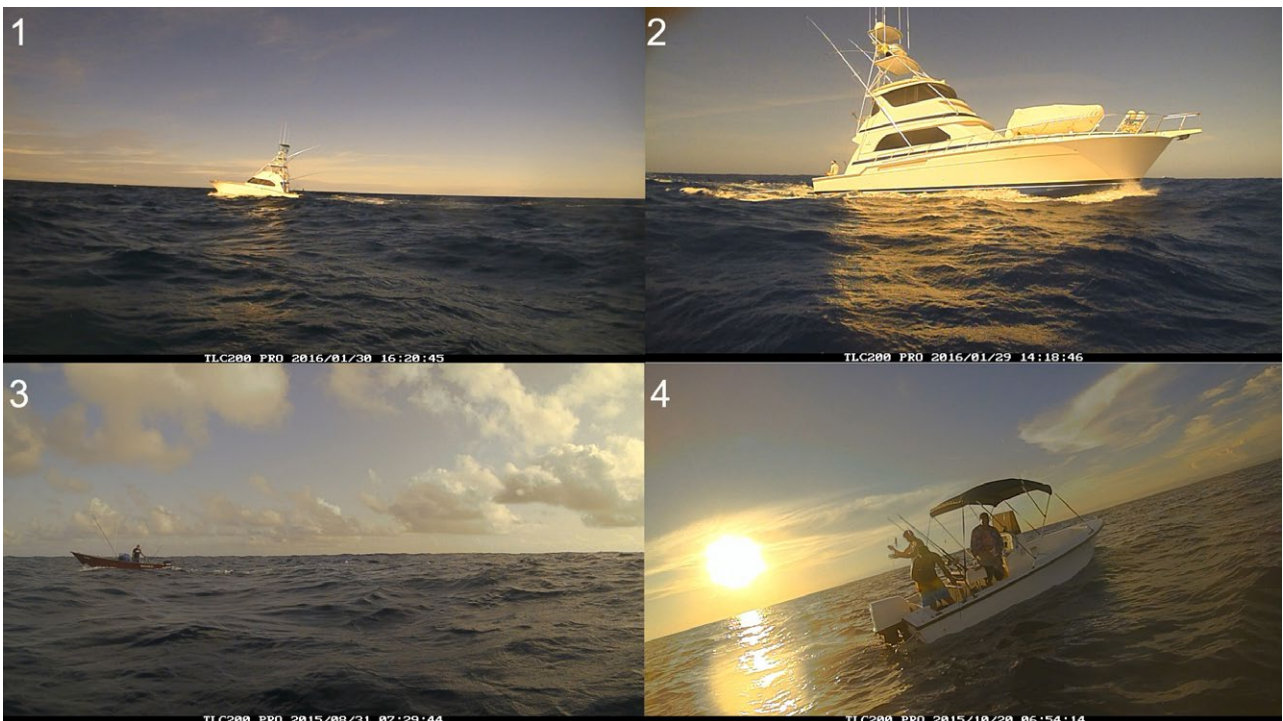


Fig. S3. – Clockwise from upper left: (1) Vessel #89 known charter vessel trolling; (2) Vessel #132 likely recreational vessel trolling named “g\_yacht\_blue\_pin\_strips\_dbl\_window”; (3) Vessel #9 known commercial vessel trolling; (4) Vessel #23 likely recreational vessel drift fishing with handlines named “g\_blank\_boat”.



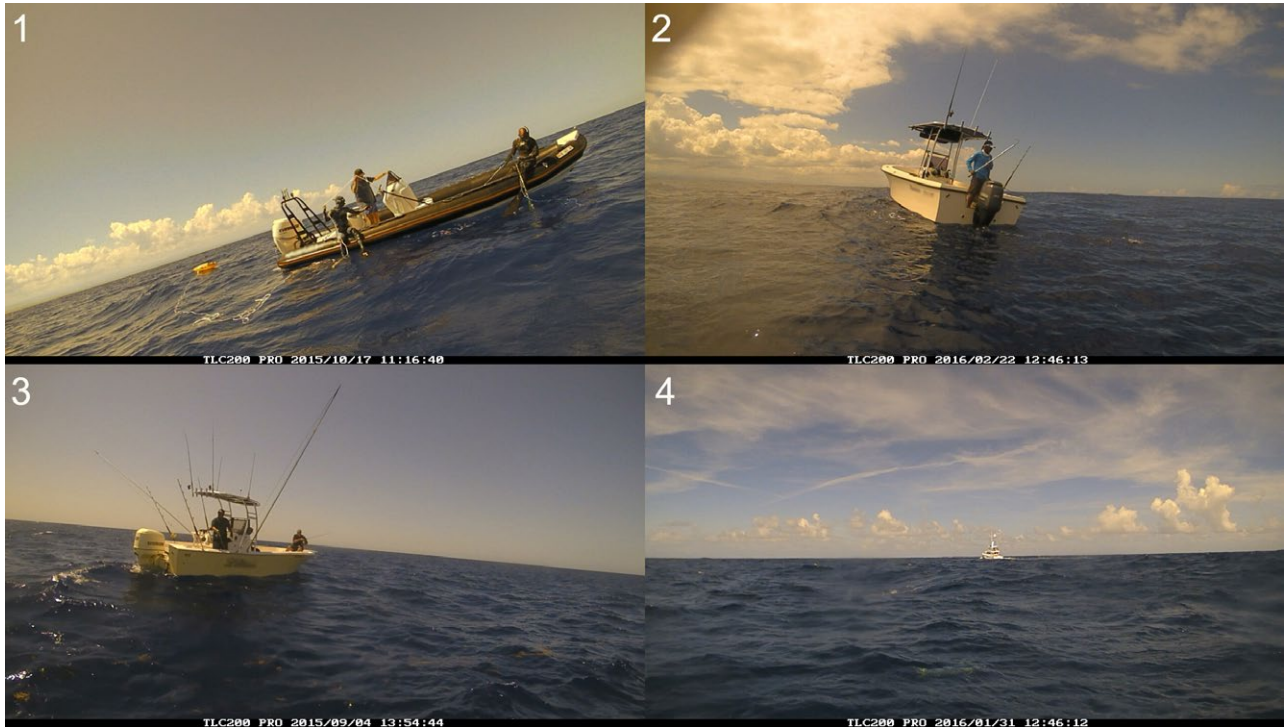


Fig. S4. – Clockwise from upper left: (1) Vessel #69 likely recreational spearfishermen with spears and floats visible; (2) Vessel #12 known commercial vessel with gaff in hand; (3) Vessel #19 likely recreational vessel jigging and drift fishing with sargassum present; (4) Unknown vessel trolling away from the buoy with a fish visible (it appears to be a dolphinfish) in the foreground.

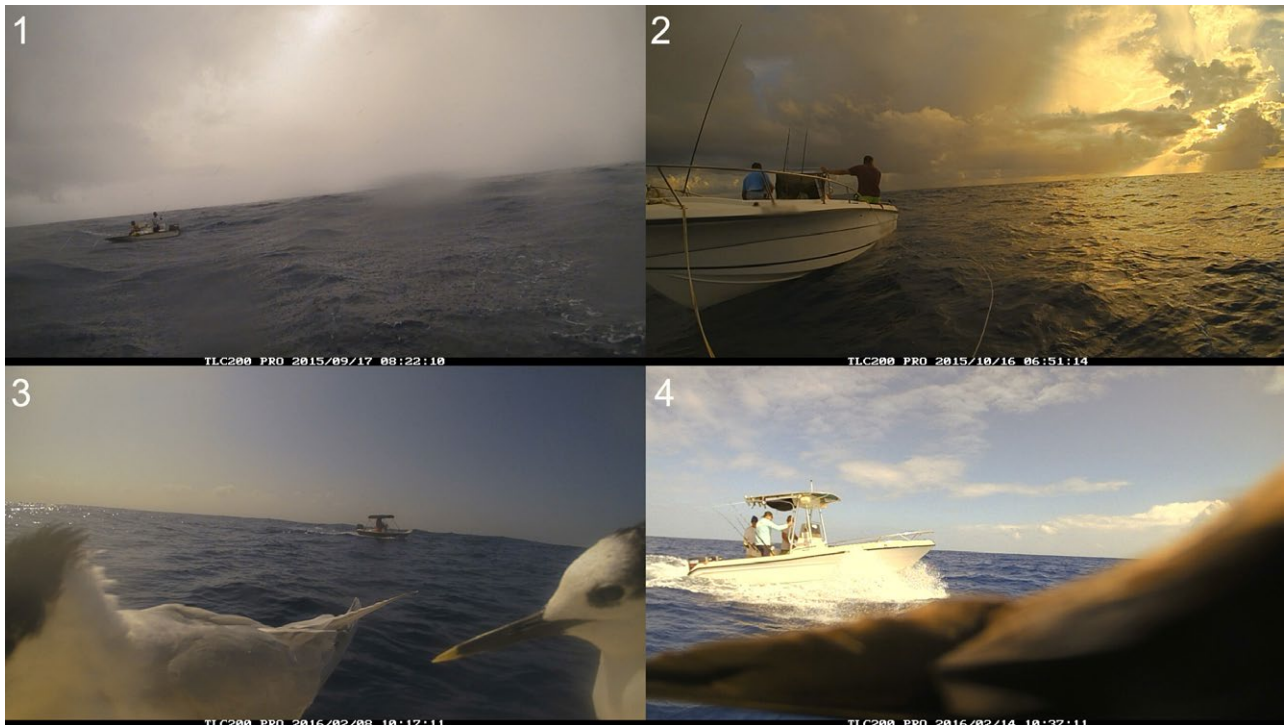


Fig. S5. – Clockwise from upper left: (1) Vessel #50 present in squall; this vessel was named “g\_very\_sm\_lowris\_centercons”; (2) Vessel #57 shown tying up to buoy F; (3) Example of image with vessel and birds blocking a portion of the field of view; (4) Example of image with vessel with a bird blocking a greater portion of the field of view.

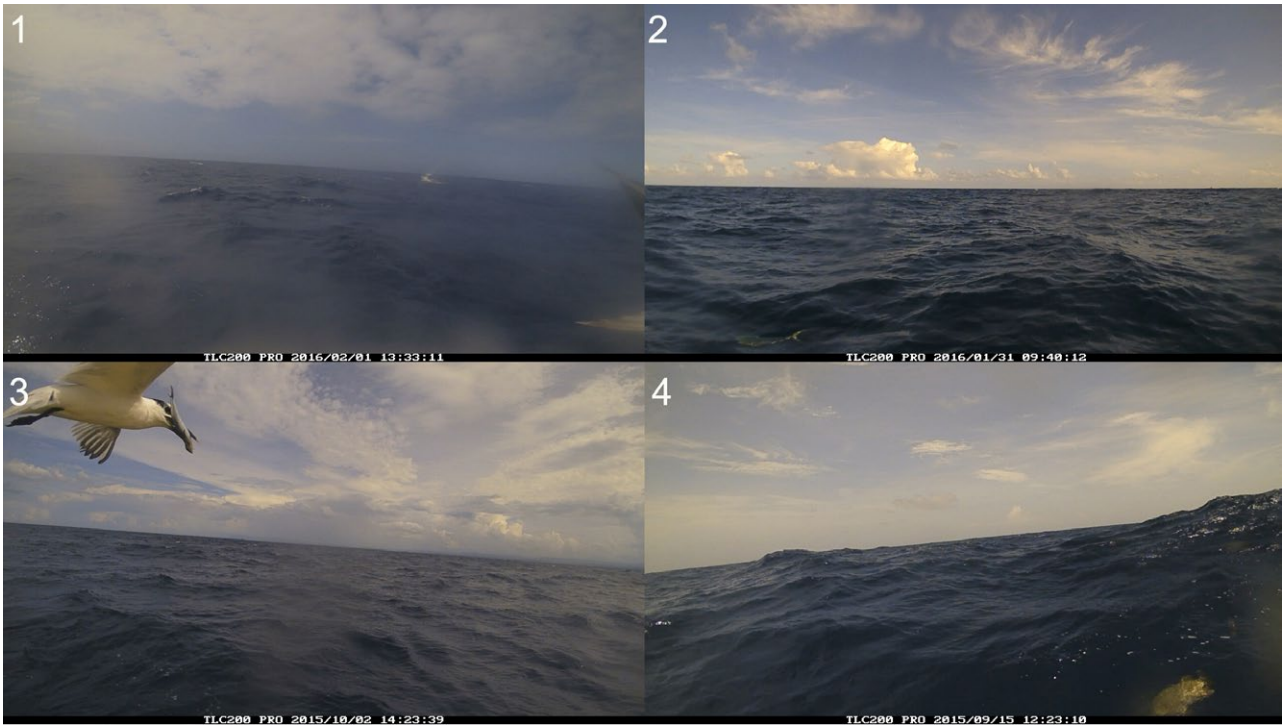


Fig. S6. – Clockwise from upper left: (1) Unknown vessel present with foggy lens and bird present; (2) A dolphinfish is present in the lower left portion of the image; (3) An unidentified tern bird with a fish in its beak; (4) An unidentified marine animal.