

# A Field Primer for Monitoring Benthic Ecosystems using Structure-from-Motion Photogrammetry

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jove.com/video/61815

## Materials

Name	Company	Catalog Number	Comments
Action camera (GoPro Hero7 Black)	GoPro		Could be any waterproof action camera
Adobe Lightroom	Adobe		Color correction
Calibration tiles ( flat PVC board cut to size for Agisoft targets. Attach a dive weight underneath if expecting waves)			Any negatively buoyant object of known size and color. We recommend using the scale marker templates available from Agisoft Metashape software (v.1.6.0).
DSLR camera (Canon EOS Rebel SL3 )	Canon	3453C002AA	Could be any DSLR camera in a underwater housing
Line (plastic clothes line filament)			Any negatively buoyant line that is strong enough to withstand field use
Micro SDXC memory card (for GoPro)			
Oceanic Veo 2.0	Oceanic		Digital depth gauge
SDXC memory card (for DSLR)			Any SDXC memory card should work, so long as there is enough space to hold all the pictures necessary to build the model
Spool (2 inch-long section of 8 inch diameter PVC pipe which was attached to a 3 feet section of 1 inch PVC pipe to form the stem			Any negatively buoyant, round object of the desired diameter
Underwater camera housing for DSLR (Ikelite 200DLM/C Underwater TTL Housing)	Ikelite	6970.09	Should be the specific water housing for the DSLR make and model
Windows 10 desktop computer with an Intel i9-9900K 8-core CPU, two			Processing

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Nvidia GeForceRTX 2070 SUPER GPUs, and 128 GB of RAM.			
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