

Solar Logger Pilot Project

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CA Dungeness Crab Fishing Gear Working Group

Solar Logger Pilot Project

Goals in 2018/19:

- Explore viability of solar loggers to support data needs for Risk Assessment and Mitigation Program (RAMP) developed by the California Dungeness Crab Fishing Gear Working Group (CA Working Group)
- Quantify and clarify the spatial distribution of commercial Dungeness crab fishing and whales, and the relationship between the two
- Inform the relative risk of whale entanglement

Additionally, how can solar loggers support new regulations

Solar Logger Pilot Project

Duration: December 2018 - January 2021 (in-process extension to **August 2021**)

Key Partners:

- Volunteer commercial D crab fishermen (40-43/40)
- Volunteer whale watch organizations (10/20)
- CA Working Group



Data Access & Sharing

- Fisherman & whale watch participants have full control over data access and sharing
- Data collected is proprietary to each participant and is stored on secure servers with Pelagic Data Systems
- No individual data will be made accessible to the Working Group and will be shared in aggregate reporting form

Solar Logger Pilot Project

	Fishing	Whale Watch
Participants	40-43 <ul style="list-style-type: none">• 9 are also doing DA or Quality testing. 3 of those are unsure of participating in this pilot project• 5 fishermen need to provide permission to include data (have logger)	10
Total Solar Loggers Available via Grant	40	20

Solar Logger Pilot Project

Costs

- Solar Logger = \$150
- Data Service = \$300/year

Data & Functionality

- **Easy to install, and no effort once installed**
 - Anyone with a screwdriver can easily install and there is no on/off button
 - Logger automatically activates once it receives access to direct sunlight and has a full charge. (Usually it is immediate, but in the case of longer storage periods, the logger may need to recharge a bit first)



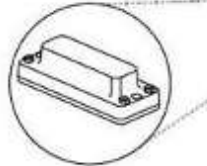
Data* & Functionality

**Data is encrypted and secure. Access is controlled by the fisherman.*

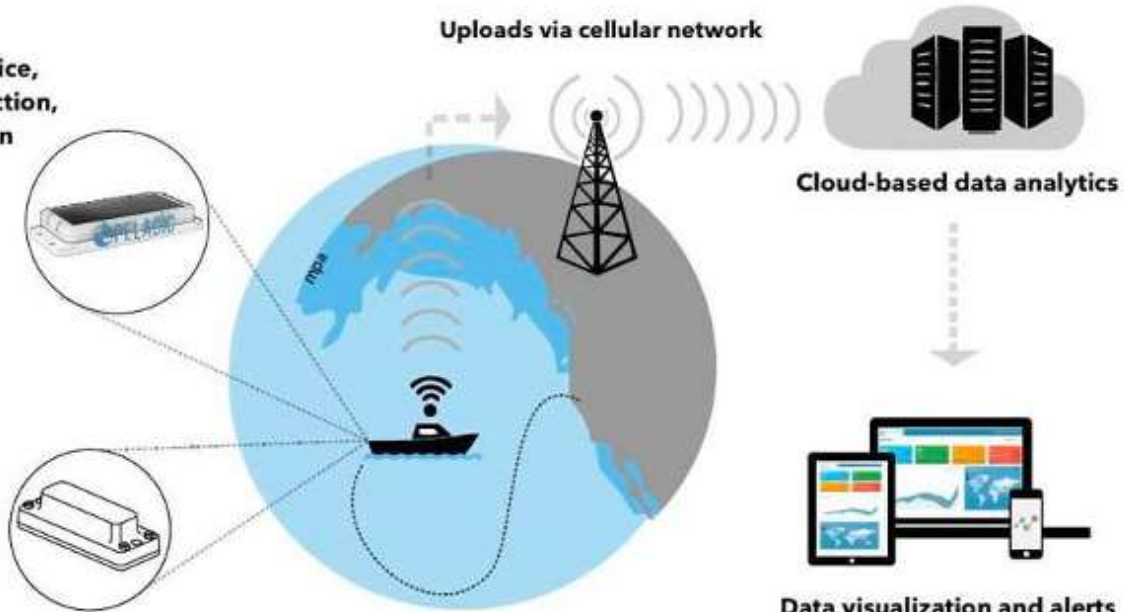
**Solar-powered device,
automatic data collection,
simple installation**



**Application-specific
wireless sensors**



Uploads via cellular network



Cloud-based data analytics



**Data visualization and alerts
on a customizable dashboard**

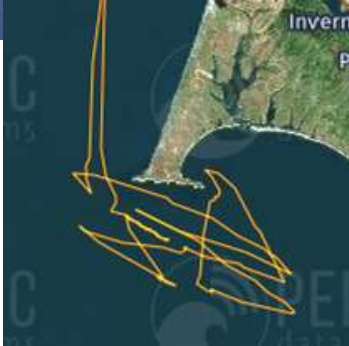
Pelagic Data Systems (PDS) Portal

The screenshot displays the Pelagic Data Systems (PDS) Portal interface. The top navigation bar is blue and contains the Pelagic logo, the title 'Multiple Trips', and a user profile for 'Ruth (Kourtz) George'. A left sidebar menu includes options for FILTER, CUSTOMERS (with a 'Click Opp.' link), DATE RANGE (set to '16 - 17 Dec 2019'), DEVICES, BOATS, TRIPS, ALERTS, and MANAGEMENT. The main content area features a search bar and a table with 1 selected trip. The table has columns for Boat, Captain, Start, End, Duration, and Distance. A tooltip for the selected trip provides details: Trip ID: 852432, Boat: Karen Jeanne, Duration: 1d 5h, Range: 0.0 km, Start Time: 2019.12.16 13:17:59, and End Time: 2019.12.17 18:39:29. To the right, a map shows the trip path in yellow along the coast of South Africa, with a tooltip for the trip details overlaid on the map.

<input checked="" type="checkbox"/>	Boat	Captain	Start	End	Duration	Distance
<input checked="" type="checkbox"/>	Karen Jeanne	--	2019.12.16 13:16:34	2019.12.17 20:56:33	1d 7h	220.64 km

PDS Data with Depth

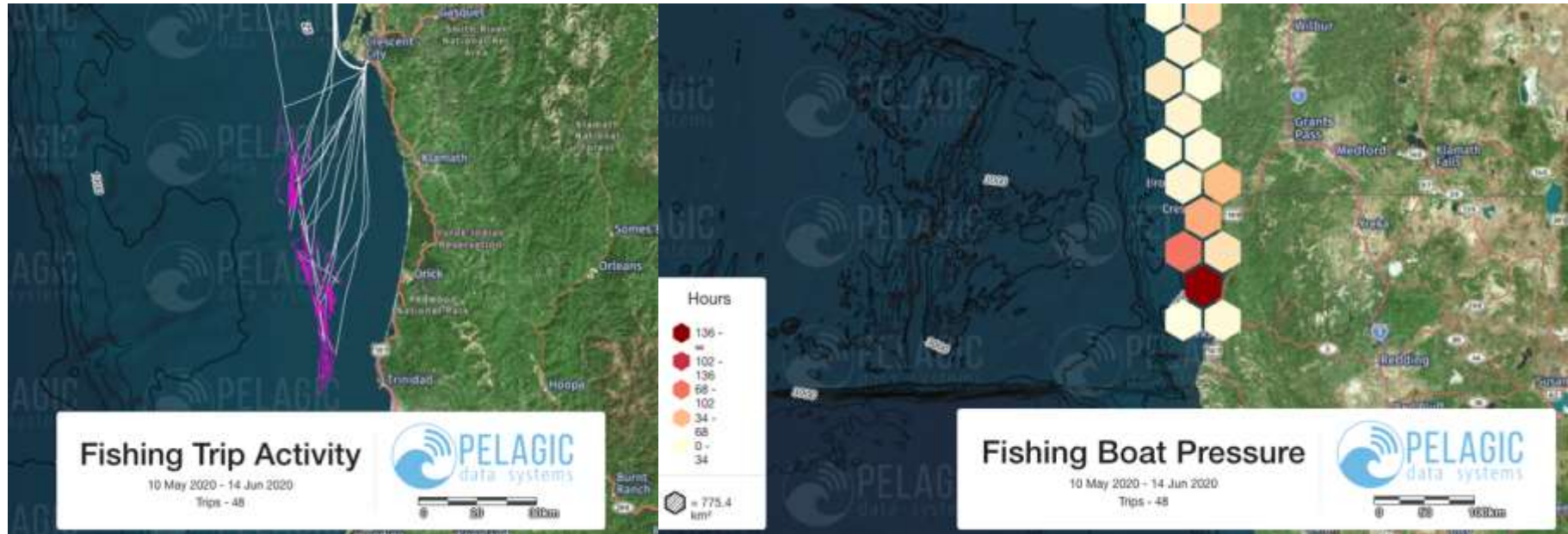
(Point Blue Conservation Science script)



PDS Maps



PDS Maps (with Bathymetry)



PDS Maps



PDS Maps



Next Steps

- Ongoing DA & quality testing
- Complete the pilot project with + participants
- Explore/Refine with Dave Colpo/PSFMC
 - Scripting opportunities
 - New analyses and reports
 - Opportunities to comply with regulations
 - Other uses for solar loggers



Fishing Opportunity:

- Transit closed areas
 - DA closure or District 10 closure prior to original July 15th closure



Kate Cummings / BOWW

Thank you!



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