

SEMINAR SERIES

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Melissa Garren

COO & Chief Scientist
Pelagic Data Systems



Sunlight and cellular networks filling data gaps at sea

The activities of the vast majority of fishing vessels in the world have remained unquantified and largely opaque due to a lack of technology. With newly developed hardware solutions that harness solar power and cost-effective cellular networks to transmit data, it is becoming possible to provide vessel tracking systems at meaningful scales for vessels of all sizes. Capitalizing on the relatively inexpensive cellular networks to transfer data enables the capture of data with much higher granularity. By recording a vessel's position every few seconds, instead of minutes to hours as is typical of most satellite-based systems, we are able to resolve a diverse array of behaviors happening at sea to inform sustainable management of natural resources, augment the livelihoods of coastal communities, shed light on the interactions at risk for illicit behaviors, lend insight into labor practices at sea for a given vessel, and monitor cross-national boundary interactions that take place at sea. This information can be readily integrated with other data streams, such as landings records, to create powerful tools for management bodies, the research community, and industry.