Strengthening the knowledge base for fisheries monitoring technology: the Global Electronic Monitoring Symposium (GEMS)

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Electronic monitoring (EM) as a means of enhancing fisheries data is on the increase. These new tools provide a more efficient means of capturing, storing, and reporting data which is vital for effective fisheries management. How this is implemented on a global scale with compatible standards and technologies is a challenge that requires international coordination and knowledge sharing.

To catalyse the development and use of electronic monitoring (EM) programmes to increase fisheries data collection and transparency, the Pew Charitable Trusts convened more than 50 stakeholders, both in-person and virtually, for a three-day workshop in June 2022 in Honolulu, USA. The symposium brought together government officials, regional fisheries management organisation (RFMO) staff, and representatives from industry, academia, and civil society to exchange lessons learned, discuss barriers, and jointly develop solutions to increase EM adoption.

Despite the many benefits of EM, adoption of the technology is not yet widespread in the world's fishing industry. EM programmes are usually limited to the local or national level with minimal coordination between countries and stakeholders. This symposium was designed as a venue for information sharing, with a focus on how to expand the use of EM on commercial fishing fleets. A symposium steering committee of EM experts developed the agenda, produced background papers, compiled the latest literature on the technology, and helped facilitate discussions during the meeting. The agenda included presentations and discussion sessions that centred around harmonisation of EM standards, EM costs and benefits, artificial intelligence/machine learning and EM market drivers.

Based on the discussions during the symposium, the participants agreed on four main takeaways/priority areas:

1. The need for better coordination across the different RFMOs developing EM standards. This can be achieved through inter-RFMO processes such as closer cooperation between EM working group chairs.

2. The need for an EM provider/vendor coalition to exchange information with other stakeholders to build a shared understanding of what can be delivered and how to specify requirements.

3. Templates are required to improve EM data collection for various initiatives e.g., EM costs and benefits for input into already-developed analysis models.

4. A practical review of artificial intelligence/machine learning and its potential to improve the efficiency of EM programmes.

Each priority area will form the basis of an output paper that captures the key points of the discussion and includes recommendations for future action and will be shared with RFMOs, fisheries managers, and other EM stakeholders to help drive EM implementation.

These output papers will also be presented at a series of topical workshops (either in-person or virtual, depending on global conditions and travel restrictions) with relevant stakeholders. These workshops may also develop recommendations on how to best integrate emerging technologies within existing or future EM programmes.
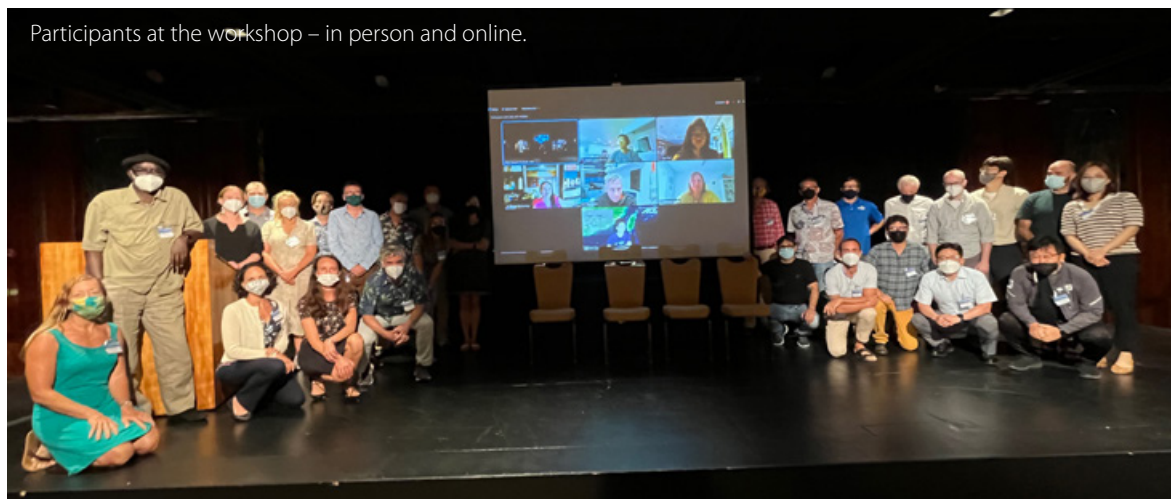
Participants at the workshop – in person and online.

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