

# Association for Professional Observers

## Electronic Monitoring Position Statement

### April 2015

The Association for Professional Observers (APO) is a non-profit, non-governmental organization dedicated to strengthening fisheries observer programs through advocacy and education. It is our intention that the results of our activities may encourage the recruitment and retention of professional observers to foster the best quality observer data for the purposes of conservation and the responsible management of marine living resources. As such, APO remains firmly committed to the interests of the men and women who serve as observers in various observer programs throughout the world.

APO recognizes that recent advancements in computing power and camera technology have, in some situations, made Electronic Monitoring (EM), through the use of digital technologies, more practical and feasible for fishers and fisheries managers. Electronic Monitoring (EM) integrates the use of video cameras, gear sensors, and GPS to potentially provide data on fishing methods and gears, compliance to conservation measures, fishing locations and times, and catch and bycatch (including discards). “Electronic Monitoring” may also include systems such as Automatic Identification Systems (AIS), Vessel Monitoring Systems (VMS), electronic measuring boards and calipers, Passive Integrated Transponders (PIT) and PIT tag readers, automated flow scales, motion-compensated scales, or other electronic systems as defined by a particular regulatory authority.

APO’s core responsibility is to the integrity and independence of fisheries monitoring data and we believe that well prepared and supported human observers are able to best serve that function. APO acknowledges that while human observers provide a superior option for the collection of fisheries information, there could be potential value in using EM tools in conjunction with human observers for verification of information or where the health, safety, and welfare of the observer is excessively affected. Just as APO reviews fishery observer programs, APO intends to play a central role in the review of EM programs. APO believes that EM can play a role in augmenting and improving existing observer programs, such as with e-reporting, which would provide timely access to observer data for management decisions or by placing cameras in areas of needed monitoring where it would otherwise be dangerous or impossible for observers. We also acknowledge that our position on EM will evolve as the technology improves. However, at this time, we strongly oppose its exclusive use as an alternative to or replacement for human observers for the following reasons:

1. At the present time, EM is deficient in identifying species that require close inspection, may not be brought on board, or that are otherwise not viewable in the camera’s visual frame; Nor can EM collect biological samples needed for stock assessments, effectively assess or assign injuries and mortalities to species/stocks, or collect biological data from tagged specimens;
2. EM is not consistently applied to where it could be an effective monitoring tool for interactions with protected species. For example, EM could be used to monitor: a) seabird interactions with trawl sonar and other cables; b) the



- dumping of trawl nets on deck for marine mammal or other megafauna catch;  
c) compliance to bycatch reduction mitigation measures;
3. EM cannot effectively and consistently estimate weights of discarded fish;
  4. Observers can provide advice to fishing vessel operators to prevent a violation before it occurs;
  5. EM systems can be turned off, tampered with or otherwise prevented from collecting the necessary data, whereas an observer can report on obstruction and be cross-examined or interviewed;
  6. The length of time required to obtain and review video and extract all requisite information can be excessive with EM;
  7. Details regarding data aggregation and public access to the data remain unresolved;
  8. There is no comprehensive cost comparison between EM and human observers that include all elements of monitoring a fishery, such as enforcement costs, data storage, review, and dissemination.
  9. Most critical information on MCS or Illegal, Unreported and Unregulated (IUU) issues provided by observers is through observations, conversation and opinions that are recorded in the observers' field journals. Without actual observers on board, it would be very difficult to verify any allegations of compliance violations observed on camera.
  10. Observers provide critical information to fisheries managers that would be greatly reduced with EM, if not eliminated. Observers provide more thorough and reliable data on fishing strategies and fishing practices. Although technologies exist to provide environmental and weather data, not all vessels considered for EM could afford the equipment.
  11. EM cannot report on human rights abuses and injuries in places outside the view of the camera, such as in cabins or galley.
  12. Observers play a critical role in identifying IUU practices of other vessels in the same area with the use of binoculars, which would be impossible using EM exclusively.

Any EM proposal or project should include the following:

1. First and foremost, a transparent and scientific peer-reviewed assessment of a fishery where EM is proposed to determine: a) what data is needed to manage the fishery and its impacts upon the marine environment; b) how it is currently being monitored; c) the specific duties of the human observer and those that EM will be replacing; d) justification for any data sacrificed, if any; and, what monitoring in the fishery could be enhanced, if any, above that currently possible with human observers;
2. VMS for the unmonitored sectors as an inseparable component to the EM program;
3. A thorough, transparent and itemized cost comparison of every aspect of the monitoring program between EM and human observers to prove cost



efficiency and effectiveness. This should include:

- a) All operating costs to determine where cost-saving measures in the current program could be made;
  - b) Costs of data management, review, extraction and dissemination to the public;
  - c) Enforcement compliance costs, and;
  - d) The responsible stakeholder(s) for each (i.e. agency, industry, observer provider, EM provider).
4. Full disclosure of how the data in the film will be collected, reviewed, and disseminated to the public along with details of any associated confidentiality rules;
  5. If the fishery is currently monitored by human observers, an economic analysis and assessment of observer health, safety and welfare of the observers, including job or income loss due to EM replacement of observers; assessment of on-board conditions and fisheries observer accident rate (if any) in the fishery to be monitored; and, disclosure of specific safety concerns (for any justification of using EM in place of observers for reasons of health, safety and welfare concerns of crew or observer);
  6. Protocols for transparently reporting observer waiver requests (and agency acceptance), including proof of a vessels' inability to take an observer due to insufficient space on board the vessel (either number of bunks or life raft capacity). Records from past dry dock construction, crew compliment and life raft use should be required to ensure vessels, crew compliment, and life raft availability have not been manipulated to avoid observers.
  7. Any exempted fishing permits or pilot programs granted to study the viability of EM in a fishery should remain completely transparent, given the public interest of potential changes in fisheries management. Agencies should require confidentiality waivers as a condition of participating in exempted fishing;
  8. An analysis must be included of compliance monitoring by fisheries observers compared to the capabilities of the proposed EM system to achieve the same purpose, including a comparison of costs between the two;
  9. Full disclosure of the protocols to be followed in cases of system malfunction, including the transparent reporting of malfunctions;
  10. An analysis of how the EM system will monitor interactions with protected species;
  11. An analysis of associated dockside monitoring, in lieu of at-sea monitoring by human observers, including potential biases such as loss of weight from dockside vs. fresh weight at sea, and collecting multiple hauls dockside vs. haul-by-haul at sea.
  12. A description of camera placement and an analysis of what portions of the vessel will be outside the camera view;



APO insists that any such decision to implement EM in lieu of human observers should be made according to a robust, third party analysis subject to public review and comment as well as, in all cases, be subject to periodic review and validation by human observers. Moreover, seasoned observers, with a history of proven quality data collection, must be included in any design, review, or analysis of any proposed or existing EM system. Observers are uniquely qualified to examine the necessary components of their duties and could be invaluable in understanding specific duties where EM could be implemented. Most importantly, any fishery that engages EM must use qualified, seasoned observers in the review of any video imaging to ensure that the quality and integrity of data collection is maintained at a high level.

In conclusion, we note that some advocates of EM in the fishing industry claim that fishermen can perform the scientific duties that cameras cannot and respond that the modern observer programs were established because the fishing industry proved unreliable in collecting exactly this information. Furthermore, APO notes that, as with any program, the independence and objectivity of the observer is paramount to achieving the quality, objectivity, integrity, and utility of information necessary for use in fisheries decision-making processes. As such, APO further affirms that observer programs, whether using human observers or EM, absolutely must maintain complete separation, transparency and independence from the fisheries that are monitored.

