

Digital Monitoring Implementation Advisory Group – Meeting Minutes
28 June 2018

Chair	Simon Watt (Bell Gully)
Members	Dan Bolger (Fisheries New Zealand), Kevin McEvoy (Fisheries New Zealand), Rob Domanski (Speciality and Emerging Fisheries Group), Amanda Leathers (WWF), Jeremy Helson (Fisheries Inshore NZ Ltd), George Clement (Deepwater Group Ltd), Keith Ingram (NZ Recreational Fisheries Council), Karen Baird (Forest & Bird), Mark Edwards (Rock Lobster Industry Council), Michael Looker (The Nature Conservancy), Rosemary Hurst (NIWA), Lesley Campbell (FishServe), Kim Drummond (Te Ohu Kaimoana), Storm Stanley (Paua Industry Council), Joshua Barclay (Blue Water Marine Research), Freya Hjorvarsdottir (Department of Conservation)
In Attendance	Chris Bishop (Fisheries New Zealand), Maria Hansard (Fisheries New Zealand)
Observers/Presenters	Nathan Walker (Fisheries New Zealand), Graeme McGregor (Fisheries New Zealand), Stephen Hay (Fisheries New Zealand), Bubba Cook (World Wildlife Fund), Laws Lawson (Te Ohu Kaimoana), Kate Kauer (The Nature Conservancy via Skype), Chris McGuire (The Nature Conservancy via Skype), Lynne Hale (The Nature Conservancy via Skype), Mark Zimring (The Nature Conservancy via Skype)
Apologies	Jeremy Cooper (Paua Industry Council), Ian Angus (Department of Conservation), Matt Perkins (Fisheries New Zealand), Jamie Campbell (Fisheries New Zealand), Elizabeth Cossar (Fisheries New Zealand)
Key discussion points	
1) Welcome	Simon welcomed IAG members to the meeting, noting Dan Bolger and Kevin McEvoy would be a little delayed arriving. Presenters and observers at the meeting in Wellington and attending via skype were also welcomed.
a) Minutes 16 May 2018 (emailed to IAG members 22/5/18)	<p>a. Comments/changes on the 16th May minutes were received by Fisheries New Zealand on 21st June 2018. After some discussion it was noted Fisheries New Zealand had not yet fully considered the comments.</p> <p>ACTION: Fisheries New Zealand to address the proposed changes/comments to the 16th May Minutes and recirculate (red-line changes) to IAG prior to the next meeting (date to be advised)</p>
b) Outstanding actions update	<p>b. Fisheries New Zealand to liaise with IAG member regarding outstanding actions considered not completely closed.</p> <p>ACTION: Fisheries New Zealand to set up meeting to discuss outstanding actions and report back to IAG.</p>
c) Actions from last meeting	<p>c. There were five action items from the last meeting.</p>

	<p>Action #73 - Fisheries New Zealand to confirm what impact Digital Monitoring would have to the 18/19 cost recovery levy setting process. Including how cost recovery changes would come into affected and under what rules. OPEN</p> <p>Action #74 - Fisheries New Zealand to develop critical path sequencing for (1) Roadshows, (2) Trials and (3) Overall commencement of ER/GPR. OPEN</p> <p>Action #75 - Fisheries New Zealand to investigate ECAN's water telemetry and what precedence has been set, particularly with regard to where the obligation sits with the party creating the regulations. OPEN</p> <p>Action #76 - Fisheries New Zealand to confirm its position with regards to certification and confirm responsibilities for business continuity procedures should issues arise (including where liability lies should non-compliance due to equipment failure arise). OPEN</p>
<p>2) International lessons learned (cameras) - presentations</p>	<p>a) The Nature Conservancy</p> <p>Presentation via skype from Kate Kauer (Fisheries Project Director, California), Chris McGuire (Marine Program Director, Massachusetts) supported by Lynne Hale and Mark Zimring.</p> <p>The context to the briefings were to understand what experience Fisheries New Zealand could leverage, but it was acknowledged that the context of the NZ environment may not necessarily lend itself to direct transfer of what had occurred elsewhere.</p> <p>[Presentation attached via email]</p> <p>Questions fielded by the presenters were generally around the following themes:</p> <ul style="list-style-type: none"> • In their estimation only 1000 cameras systems installed worldwide – needs to learn lessons from their experiences • Implementation was generally staged with relatively few vessels. Cameras were targeted at addressing particular issues (bycatch) or information needs. • Information distribution issues managed in one jurisdiction by fishers owning footage and providing to the regulatory agency • Incentives to use cameras included access to otherwise closed areas and permission to fish multiple areas on same trip • What is the difference in discard survival rates for EM compared to Observers? No significant difference (depending on gear type and handling practises. EM potentially allows for less handling). • What timeframes were needed for the implementation of EM? The biggest slowdown was acceptance of US government agencies to recognise EM as a useful tool.

- Should regulations be developed before piloting/trialling EM? The US experience was that there was initially no understanding of the system (costs, structure, data needs/requirements). Regulations were developed after the learnings from the pilot programmes. Far better to regulate standards rather than specificity
- How was EM used to monitor bycatch of protected species? The fisheries used in the trials generally had minimal bycatch or interaction with seabirds. Cameras were as good if not better at marine mammal protection (dependent on placement of camera/boom).
- How was Artificial Intelligence used in the trials and what is the sense of current growth in the next year, two years, and five years? Pilots for algorithms measuring length of fish are being tested and maybe ready to be used within a year. Length OK, but Species identification harder due to the amount of training data required. TNC is also experimenting with activity recognition technology and currently working through the challenges that provides.
- Extent to which footage viewed based on rarity of events of interest
- Are EM solutions likely to be provided as a single (integrated) provider, or will fishers be able to be “pick and mix” EM components from several providers (eg cameras from one provider, storage from another, etc)? TNC predicts new providers will be coming in to the space. Expect to see rapid improvements in technology.
- Is there a logical approach to rollout of EM? TNC had more success focusing on geographical area to limit the range of EM solutions that might operate in that fishery. Each regulator needs to make their own decisions about how to deploy EM. Approaches vary from regulator to regulator.

b) World Wildlife Fund

Presentation given by Bubba Cook, Western and Central Pacific Tuna Programme Manager, WWF-NZ

[Bubba Cook is currently out of the country, a copy of the presentation will be emailed on his return]

Main themes of the comments/questions asked:

- Scheme needs to be designed for particular issues in a fishery -identify objectives carefully
- Does the combination of observers AND cameras have the potential to improve observer safety? Yes, with the unexpected benefit of also being a support tool for the observer.
- Complexity of infrastructure – dependent on how you look at it. Could be less complex with EM.
- Costs are reducing - systems smaller and lower power
- What is the need for trials/pilots? WWF recommend taking a look at what has already be done in other jurisdictions and don’t reinvent the wheel. EM implementation timelines are reducing, but need cooperation with industry
- Can the IAG be provided with a review of work already done?

- Paper already provided to IAG by WWF prior to IAG. SREs submitted review of that paper.
- Fisheries New Zealand happy to provide a copy of its literature review (noting it is just a review and was not designed to draw conclusions, but rather to just better understand the international experiences) and any associated reports from Snapper 1 or Black Petrel trials. (refer to open Action #65)
- Industry perspective with EM is not around the technical impediment, but rather around the regulatory and legal environment it was coming into and the need to consider that prior to implementation.
- DoC noted EM may open up other management options such as the ability to have trigger limits and tradeable entitlements to encourage innovation

c) Black Petrel Trials

Presentation given by Nathan Walker (Principal Scientist Aquatic Environment, Fisheries New Zealand)

[Presentation attached via email]

ACTION: Fisheries New Zealand to invite Nathan Walker back to IAG upon completion of Black Petrel Trial Review.

d) Snapper 1 Trials

Presentation given by Graeme McGregor (Senior Fisheries Analyst, Fisheries New Zealand)

[Presentation attached via email]

Main themes of the comments/questions asked for both the Black Petrel and Snapper 1 Trials presentations:

- The review process by humans looking at footage is a slow, laborious process that takes a lot of resource.
- How was the “Rain-X effect” (crew cleaning the camera lens/looking after the technology) achieved? Largely because the projects have come about through a huge amount of industry support. The trials were initiated at the request of industry and there was buy-in from the outset.
- Is Fisheries New Zealand comfortable the trials have worked? On the whole, yes, but the trials were not without challenges. There has been no formal evaluation completed yet.
- Forest and Bird were happy with the trials and with what was achieved.
- IAG members noted that both Black Petrel and Snapper 1 trials had specific objectives and that was what they are being measured against.

	<ul style="list-style-type: none"> Some IAG members noted that there was an opportunity for Fisheries New Zealand to verify reporting accuracy of the trials and how to manage accuracy issues.
<p>3) Update from Fisheries New Zealand</p> <p>a. Update on regulatory amendments</p> <p>b. Update on camera consultation process</p>	<p>Twenty-eight submissions received. There are two areas that are likely to change - one around the requirements for when a position reporting device is removed and the other on LFRs and timeframes. The paper will be going up to the Minister shortly.</p> <p>The Minister is likely to take a paper seeking approval for public consultation around cameras and associated policy changes to Cabinet by end-July.</p>
<p>4) Any other business</p>	<p>Question raised about whether members could talk publicly about the implementation timetable pre Cabinet decision. It was reiterated that information has not yet gone through Cabinet so public release would be premature and inappropriate.</p> <p>ACTION: Fisheries New Zealand to send out communications that can be used for public dissemination.</p> <p>The date of the next meeting is still to be decided.</p>

Summary Actions

Action No	Date Raised	Action	Action Owner	Status	Action completed by
77	28/06/18	Fisheries New Zealand to address the changes/comments to the 16th May Minutes and recirculate (red-line changes) to IAG prior to the next meeting (date to be advised)	Fisheries NZ	Open	Next IAG or before
78	28/06/18	Fisheries New Zealand to set up meeting to discuss outstanding actions and report back to IAG.	Fisheries NZ	Open	Next IAG or before
79	28/06/18	Fisheries New Zealand to create communications for IAG to be used when discussing implementation/timelines.	Fisheries NZ	Open	Next IAG or before
80	28/06/18	Fisheries New Zealand to invite Nathan Walker back to IAG upon completion of Black Petrel Trial Review.	Fisheries NZ	Open	When Review is completed