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AOTTP

an example of actionable science?

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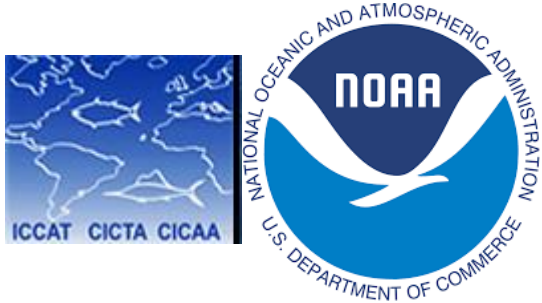
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What's “actionable science”?

“... data, analyses, projections, or tools that can support decisions in natural resource management; it includes not only information, but also guidance on the appropriate use of that information.”

Beier et al 2017





Traditional approaches to actionable science:

- Management agency contracts scientist(s) to deliver a specific product which has been identified as necessary to support a management decision.
 - e.g. population forecasts predicting evolution of stocks for different quota levels
- A funding agency independent of management opens a competitive grant process which broadly defines scientific products with potential application to guide management decisions.
 - e.g. US NSF program on “Dynamics of Integrated Socio-Environmental Systems (DISES)”. And a specific project : “Social-Ecological Dynamics of Recreational Fishery Landscapes”



Limitations of traditional approaches

Management is not often aware of the products that can help them in decision making, often because the system that they are trying to manage is overly complex or functions at temporal/spatial scales that are not under the complete control of management.

New approach to actionable science: Co-Production

Beier et al 2017 define Co-production

“...coproduction as collaboration among managers, scientists, and other stakeholders, [=partners] who, after identifying specific decisions to be informed by science, jointly define the scope and context of the problem, research questions, methods, and outputs, make scientific inferences, and develop strategies for the appropriate use of science.



Is the science produced by AOTTP “actionable”?

No

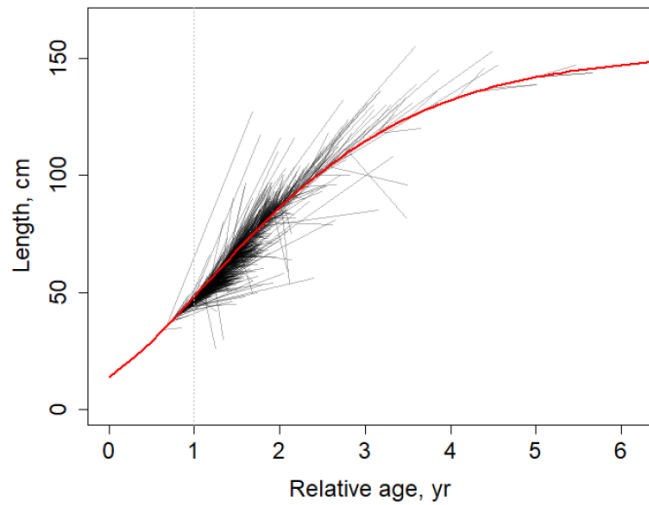


Yes



May be ?

- This question will be answered not at the time the AOTTP stops, but rather years later, when all the outputs from the program have had a chance to influence science and management.
- Some outputs have already contributed to management decisions.
- One of the aims of this symposium is to continue to provide answers to this question and identify any further actions that will help AOTTP science to become actionable.



Is the science produced by AOTTP “actionable”?

- Some outputs have already contributed to management decisions:
 - Yellowfin tuna assessment used new growth/ageing data to revise stock status determination, such determination helped the Commission in their 2019 and 2020 decisions.
 - Capacity building objectives have already borne fruit as many new scientists/technicians have benefitted from AOTTP activities.
 - Outreach activities have increased awareness of the importance of quality science products among stakeholders





What AOTTP outputs are likely to be “actionable” in the future?

- New estimates of population parameters (growth, mortality) for BET will be used in the 2021 assessment of this stock and will support management decision by the Commission.
- Population parameters for SKJ, YFT and BET will be used to progress the MSE for tropical tunas which may lead to a major change in the management of these stocks
- Data on migration and association of TT with FADs may provide insights on the appropriateness of current FAD management, specially the use of closures.
- Scientists and technicians trained as part of the AOTTP will enhance management and scientific capacity for developing country CPCs beyond the life of the project.



How can we tell if science is “actionable”?

No



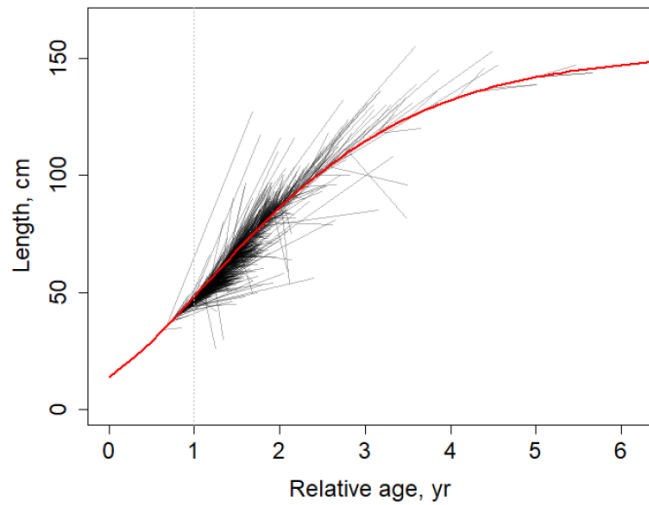
Yes



May be ?

- *“must be credible (scientifically sound),*
- *salient (relevant to a management decision),*
- *legitimate (fair and respectful of stakeholders’ divergent values)*
- *most reliably produced by iterative collaboration between scientists and managers”*





CONCLUSION

Is the science produced by AOTTP “actionable”?



- There is evidence that it is, at least in relation to current management measures for YFT
- A few other products show potential to be actionable
- This symposium can contribute to answer this question
- The SCRS could agree on a set of criteria that could help evaluate which scientific outputs can be considered to be actionable