

Since the last Shrimp AP meeting, the Gulf of Mexico (GOM) Atlantis model project team has finalized a series of five, internal model review working group meetings with an expert panel of SEFSC staff - in preparation for [the Center of Independent Experts \(CIE\)](#) review of the model.

The GOM Atlantis model CIE review: March 28-30th; hybrid meeting.

For anyone wanting to attend in person, the CIE review will be held at the Florida Fish and Wildlife building in St. Pete in the 4th floor conference room. The GOM Atlantis model team welcomes Shrimp AP members to listen to the CIE review and to participate via public comment. Public comment is available from 3:30-4:30 ET, on March 28th and 29th. Formal participation is not necessary, as this is an independent peer-review process that brings in experts from around the world to critically evaluate the GOM Atlantis model and the modeled assumptions. This is the first, formal peer-review of an ecosystem model for the Gulf of Mexico! Both the South Atlantic Council and North Pacific Council have already used ecosystem models in fishery management applications - examples included in the briefing book materials. Please reach out to Michelle.Masi@noaa.gov if you are interested in attending the CIE review.

Following the CIE review, in 2023 the GOM Atlantis model project team will rectify any identified modeling issues and then finalize a NOAA Tech Memo. This Tech Memo will be published and publicly available, and will include all Atlantis model updates that have been completed since [the original GOM Atlantis model Tech Memo](#) was published. The team will then present to the Gulf SSC. Following SSC input, in late 2023, the GOM Atlantis modeling team will use the updated and formally peer-reviewed GOM Atlantis model to run climate and habitat change scenarios. These scenarios will explore how changes in habitat - due to climate change or human-induced changes, may impact penaeid shrimp productivity and how those changes in shrimp productivity could influence the productivity of finfish species and fisheries in the GOM ecosystem. These scenarios will be presented to the SSC and Shrimp AP to evaluate the advantages of using a full system ecosystem model to address similar types of management questions (e.g. sediment diversion scenarios).

Examples of how other regions are using ecosystem models in management applications:

- Menhaden example, South Atlantic Fishery Management Council: <https://www.frontiersin.org/articles/10.3389/fmars.2020.606417/full>
- 2 million optimum yield cap set for the BSAI groundfish fisheries in the North Pacific Fishery Management Council: <https://www.npfmc.org/wp-content/uploads/BSAIfmp.pdf>
- A CIE review of the NWFSC's Atlantis model (led by the GOM Atlantis model project co-PI): <https://academic.oup.com/icesjms/article/73/7/1715/2458746?login=false>
- See Dr. Masi's Atlantis presentation from the March 2022 AP meeting in the briefing book materials