

## ECOSYSTEM WORKGROUP REPORT ON THE REVIEW OF FISHERY ECOSYSTEM PLAN INITIATIVES

The Fishery Ecosystem Plan (FEP) at Section 1.3 provides a process for the Council and its advisory bodies to review progress to date on FEP initiatives and to consider new initiatives. The FEP Appendix suggests a series of potential initiatives for Council consideration, most based on the Magnuson-Stevens Fishery Conservation and Management Act's national standards (MSA at §301). The Ecosystem Workgroup (EWG) suggests adding a potential FEP initiative to the appendix on developing ecosystem indicators of potential interest and use to the Council and the public.

The Council adopted its FEP and appendix in April 2013. We now have more experience with the State of the California Current Ecosystem Report (hereinafter, "the Report," see Agenda Item E.1.b, NMFS Report) and with the information and analyses available from the California Current Integrated Ecosystem Assessment (CCIEA). In December 2014, the Ecosystem-Based Management Subcommittee of the Council's Scientific and Statistical Committee (SSCES) met to review the indicators used in the Report and to consider how the report might be refined and improved. The EWG appreciates the SSCES's time on both that workshop and on the June 2014 methodology review workshop for the Atlantis ecosystem model, and suggests amending the FEP appendix to include the draft FEP initiative, below, in response to the SSCES suggestion that "A workshop or series of workshops could solicit input from management teams and advisory subpanels on indicators that represent the ecosystem objectives expressed in the Council's FMPs and FEP, and are relevant to Council decision-making" (SSCES Report at E.1.c).

While FEP Initiative 1 ultimately became draft Comprehensive Ecosystem-Based Amendment 1: Protecting Unfished Forage Fish, it is not necessary for every FEP initiative to be developed and implemented as fishery management plan (FMP) amendments. We suggest structuring the initiative, below, as a discussion process within and between the Council, its advisory bodies, and the public, with the ultimate goal of ensuring that the Report's ecosystem indicators are interesting and useful to the Council process and its participants. A new Workgroup might be the most efficient body to facilitate such a process, but maintaining a Workgroup has budgetary impacts, and while able to capture a range of views and expertise, cannot replicate the range of having all advisory bodies engage individually. The Council's advisory bodies have been admirably well-engaged in the development of the FEP and CEBA 1, but the EWG recognizes that any new ecosystem initiative presents workload challenges for the Council's advisory bodies.

Throughout this report, the EWG uses the term "indicator" as it is used in the Report – a piece of information that tracks the status and trends of some physical, biological, or socio-economic aspect or characteristic of the ecosystem. If well-developed and adequately informed by data, indicators can be used to track policy targets and even include reference points for action. At this stage, however, the EWG does not believe such ecosystem reference points will be ripe, beyond possible species-specific information provided under the FMPs, until the Council family has had an opportunity for a coordinated dialogue on informational ecosystem indicators. The EWG recognizes that the CCIEA process has other types of outputs beyond indicators and welcomes

input and education from the Centers and the SSC on the types of science products that might be useful to the Council process.

The EWG recommends adding the following draft potential ecosystem initiative to the FEP appendix:

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## **A.2. X Coordinated Ecosystem Indicator Review Initiative**

The FEP at Section 1.4 discusses a Council process for the NMFS Northwest and Southwest Fisheries Science Centers to provide the Council with an annual State of the California Current Ecosystem report. The March 2015 report on ecosystem status and trends included indicators within the broad categories: Climate and Ocean Drivers (indicators of shifting climate and other oceanographic trends); Focal Components of Ecological Integrity (indicators of shifting abundance of biological components of the ecosystem); and Human Activities and Human Wellbeing (indicators of human interactions with the ocean ecosystem). The Scientific and Statistical Committee's Ecosystem Subcommittee (SSCES) has provided guidance on the quality of the scientific information and analyses that support the State of the California Current Ecosystem report (see SSC report at H.1.b, November 2014, and SSCES report at Agenda Item E.1.b, March 2015). However, the overall usefulness of the annual report to the Council could be refined and improved if the larger Council family were to have a deeper discussion of the report's indicator categories, what indicators should be part of the annual report, and, more importantly, how they interface with FMP fisheries to better support the Council's ecosystem-based management policies. Under this initiative, the Council, its advisory bodies, and the public would together discuss the ecosystem-scale physical, biological, and socio-economic drivers that most strongly influence FMP species and their biological communities, and FMP fisheries and their human communities.

Background work on this initiative could begin with a CCIEA program review of the CCE indicator development process to date. Additionally, a NMFS and Council staff review of available scientific literature on the use of indicators in ecosystem reporting elsewhere in the U.S. and in the rest of the world, possibly including ideas from other public policy areas that use indicators, such as public health, education, economics, etc. For example, NMFS's Alaska Fishery Science Center has been submitting an annual *Alaska Marine Ecosystem Considerations* report to the North Pacific Fishery Management Council since the mid-1990s, and the Southeast Fishery Science Center recently developed a new *Ecosystem Status Report* for the Gulf of Mexico Fishery Management Council.<sup>1</sup>

The Council and its advisory bodies should be briefed on the review of indicator literature and on any CCIEA products that might also be useful to Council decisions at the FMP level. These briefings should be followed by science-policy dialogues between the appropriate CCIEA scientists and Council advisory bodies. The advisory bodies would identify their major policy concerns and then discuss those concerns with the scientists to learn whether there are adequate data and analyses to provide those indicators for the CCE. Ultimately, these discussions should make the ecosystem reporting as connected as possible to the Council's major policy concerns,

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<sup>1</sup> <http://access.afsc.noaa.gov/reem/ecoweb/Index.php>  
<http://www.gulfcouncil.org/docs/Gulf%20of%20Mexico%20Ecosystem%20Status%20Report.pdf>

and should provide policy-making input to CCIEA scientists looking to understand the Council's longer-term needs for ecosystem assessments.

To develop materials for this initiative and to bring the many advisory body ideas together into comprehensive documents for review by the Council and public, the Council may need either: an ad hoc committee of policy and management advisors to work with the SSCES across science and policy issues, or a stand-alone ad hoc advisory committee consisting both policy/management and science advisors. Either version of the ad hoc committee could consist of Federal, state, and tribal staff with experience in preparing analyses for Council review and consideration. Under this initiative, the Ecosystem Advisory Subpanel would retain the traditional Subpanel role of providing the Council with expert review and advice from a range of public interests and perspectives.

PFMC  
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