

ECOSYSTEM WORKGROUP REPORT ON FISHERY ECOSYSTEM PLAN INITIATIVES

The Ecosystem Workgroup (EWG) discussed the three ecosystem initiatives we had described in [our briefing book report for this agenda item](#): a cross-fishery management plan (FMP) initiative on climate; a cross-FMP initiative on the effects of fisheries management programs on fishing communities; and an initiative on human recruitment to the fisheries. During our discussions, we benefited from detailed consultations with Scientific and Statistical Committee (SSC) members Dr. Dan Holland and Dr. Martin Dorn, and with Ms. Gway Kirchner of The Nature Conservancy. The EWG would like to thank them for their contributions and insights. Our meeting with the Ecosystem Advisory Subpanel (EAS) and the SSC Ecosystem Subcommittee also shaped our thinking for this report and we thank them for their time.

The EWG heard from Dr. Dan Holland about the project he presented to the SSC Ecosystem Subcommittee, *Models of Fishery Participation Choices under a Variable Climate*. This study's focus on a handful of fisheries and the tradeoffs experienced by participants may provide useful information for the initiative on cross-FMP effects of fisheries management on fishing communities as well as some utility for the human recruitment to fisheries initiative. We also note that a variety of projects discussed during National Marine Fisheries Service's (NMFS) 2017 Economics and Human Dimensions program reviews for the [Northwest](#) and [Southwest](#) Fisheries Science Centers should mature over the next few years and could potentially support future Council work on cross-FMP initiatives. Thus, the EWG believes that initiative efforts more focused on fishing communities issues (i.e. A.2.7) may be better supported by project results that are expected to be available in 2020 and beyond. Therefore, the rest of this supplemental report focuses on the cross-FMP climate initiative (A.2.8) and on opportunities for background work in support of the human recruitment to the fisheries initiative (A.2.6).

Cross-FMP Climate Initiative

Our conversation with the EAS and SSC Ecosystem Subcommittee made it clear that there is a notable chicken-or-the-egg challenge to launching this initiative – which comes first, climate science or management needs? What scientific information is available to support a climate initiative addressing Council fisheries management? What management questions does the Council have that could be answered by climate and ecosystem science?

In our first report for this agenda item, we recommended beginning the science side of the climate initiative with a webinar series presenting current scientific information about the potential effects of climate shift and change on: productivity in the CCE, managed fish stock productivity, managed fish stock distribution, fisheries' landings quantities and landings diversity in coastal communities, and physical impacts on fishing communities that could affect their ability to prosecute fisheries. We continue to support an initial education process as a useful first step to a climate initiative. If the Northwest and Southwest Fisheries Science Centers are willing and able to prepare presentations for these educational webinars, we suggest that the webinars begin in late 2017 or early 2018.

We recommend beginning the management side of the climate initiative with an EWG report on major Council decision types that may benefit from increased ecosystem science input. This EWG

report would be available at both the March 2018 and September 2018 Council meetings, for review and comment by Council advisory bodies and the public. We would be seeking comments on: 1) have we identified the range of fisheries management questions that could benefit from the support of climate information? and 2) what climate science efforts might be needed to answer the suite of management questions?

During our discussions with Ms. Gway Kirchner, she reiterated her organization’s offer to support a workshop exploring the impacts of climate change on fisheries management. As we understand it, this would not be a Council process workshop, but could include Council process participants and may provide information in support of a climate initiative. If the Nature Conservancy’s workshop occurred in spring 2018, any results from that workshop could be delivered to the Council in September 2018, in common with any other public comments on the action.

At the Council’s September 2018 meeting, the Council could review the comments of its advisory bodies and the public to identify its highest priority management questions on the potential effects of climate variability and change on fish stocks and fishing communities. Council priorities from this discussion would serve to narrow and focus the goals of this initiative, including the content of the Council-sponsored workshops we proposed in our first report for this action. These priorities could also be used to support the 2018 update of the Council’s Research and Data Needs document. It may also be useful for the Council to hear about an update on the implementation of NMFS’ [Western Regional Action Plan](#) for the National Climate Science Strategy.

After the Council’s September 2018 meeting, this initiative could follow the process described in [our briefing book report for this agenda item](#), first exploring the effects of climate variability and change on fish stocks, and then on fishing communities. The EWG could use Council priorities identified during the 2017-18 process to refine management questions to then propose revisions to this initiative. The EWG would be interested in reviewing and refining the proposed initiative implementation process at that time, to better account for the Council management priorities identified during 2017-18. A process summary table follows:

Late 2017	EWG prepares report on management questions and Council actions (decisions) that could benefit from additional climate and ecosystem science. The report would be made available at both the March and Sept 2018 meetings, for review and comment by the Council, its advisory bodies, and the public in September 2018.
Late 2017/Early 2018	Educational Webinars. Number and specific content TBD.
March 2018	Council meeting: EWG report on management questions available.
Spring 2018	Public comment development on narrowing and refining management questions, potentially including TNC-sponsored workshop.
Sept 2018	Council meeting. Council receives comments on management questions and on Council actions that could benefit from additional climate and ecosystem science. Council provides further guidance on initiative prioritization and content.
Beyond Sept 2018	Additional workshops questions could be the next likely step in assessing the effects of climate on fish stocks and fishing communities, and in planning science and policy process to address the Council’s prioritized management questions.

Human Recruitment to the Fisheries Initiative

As noted in our first report for this agenda item, the Alaska Sea Grant program has been working on the issue of human recruitment to the fishery. A next step for addressing this issue would be to reach out to the state Sea Grant programs on the West Coast to gauge interest and identify whether Sea Grant would be willing to collaborate with us. We have heard interest in this issue from members of other Council advisory bodies who are associated with West Coast Sea Grant programs. Members of the EWG would be willing to reach out to Sea Grant offices over this winter to discuss regulatory barriers to recruitment of young and new fishermen to our fisheries, and bringing more awareness of the Council process to those fishermen.

PFMC
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