
Governor's Blue Ribbon Panel on Ocean Acidification

Summary of Sixth Meeting

Wednesday, August 8, 2012, 9:00 a.m. – 4:00 p.m.

NOAA Pacific Marine Environmental Laboratory, Building 3, Seattle, WA

Meeting documents are available on the WA Dept. Ecology Ocean Acidification webpage:

<http://www.ecy.wa.gov/water/marine/oceanacidification.html>

Meeting Attendance and Objectives

The Blue Ribbon Panel on Ocean Acidification held its sixth meeting on August 8th, 2012, in Building 3 of the NOAA Pacific Marine Environmental Laboratory in Seattle, WA. The meeting was open to the public and broadcast as a webinar.

Panel members, staff and invited guests participating in this meeting included Hedia Adelman, Lara Whitely Binder, Brian Blake, Steve Bloomfield, Chad Bovechop (Makah Tribal Council alternate for Micah McCarty), Shallin Busch, Meg Chadsey, Bill Dewey, Lisa Dropkin (Edge Research), Paul Dye (The Nature Conservancy alternate for Chris Davis), Ara Erickson (Weyerhaeuser Co. alternate for Sara Kendall), Richard Feely, Peter Goldmark, Kate Kelly (EPA alternate for Dennis McLerran), Jay Manning, Ed Miles, Jan Newton, Betsy Peabody, Libby Pettit, Kevin Ranker, Michal Rechner (Dept. Natural Resources staff), Julia Roberson (Ocean Conservancy), Bill Ruckelshaus, Jennifer Ruesink, Norma Smith, Ted Sturdevant, Dan Swecker, George Waldbusser, Brad Warren, and Terry Williams.

Over 40 members of the public and interested stakeholders participated, in person and via webinar.

Meeting objectives included:

1. Discuss whether and how the Panel should recommend reducing global atmospheric CO₂ emissions.
2. Reach consensus on the “Top 18” recommended Actions submitted by the following workgroups:
 - Research and monitoring
 - Local source reduction
 - Adaptation and remediation
 - Outreach and education
 - Post-Panel institutional framework needs
2. Provide feedback on each workgroup’s full set of recommended Strategies and Actions
3. Review format and timeline for preparation of Final Report

The recommended Strategies and Actions presented at this meeting were drafted by the workgroups listed above, during a series of meetings between July 20th and Aug 6th, with input from Panel members and non-Panel experts.

Presentations and Discussions

All presentations are available on the WA Dept. of Ecology Ocean Acidification webpage (<http://www.ecy.wa.gov/water/marine/oceanacidification.html>) and should be consulted for details. This summary focuses on discussions generated by the presentations.

Welcome

Co-chairs Jay Manning and Bill Ruckelshaus stressed the importance of this meeting for reviewing and discussing the complete set of recommended Strategies and Actions as a group. Facilitator Lara Whitely Binder reviewed the day's agenda, and asked that members of the public submit their comments in writing since there would not be time for a public comment period at the end of the meeting. A timeline for completing the Science White Paper and Final Report was presented; Panel members' comments on the initial draft of the Final Report are requested by Aug 31. Dick Feely, lead editor of the Science White Paper, thanked Panel members for their comments, which are being considered by the paper authors. He does not expect any of the comments will result in substantial changes.

Related presentation slides:

<http://www.ecy.wa.gov/water/marine/oceanacidification.html>

http://www.ecy.wa.gov/water/marine/oa/20120808_Binder.pdf

Update on Addressing CO₂ Emissions Reductions in the Report

Jay Manning, Co-Chair

Jay Manning acknowledged the importance of addressing CO₂ emission reductions in the Final Report, but also raised several considerations. First, recommending new or aggressive action on reducing global atmospheric CO₂ levels is considered by some Panel members to be beyond the scope of the Panel's charge. Second, there is a risk of derailing the Panel's efforts if we allow the recommendations to get bogged down in the politics of climate change. Finally, Washington State already has a plan for reducing greenhouse gas emissions, as laid out in the 2008 Climate Action Team recommendations. The Panel's statement about the importance of reducing global atmospheric CO₂ emissions can recognize and endorse these recommendations without going into further detail about which emissions reduction actions should be implemented.

Panel members then discussed whether and how to frame the need to reduce atmospheric CO₂ emissions in the Final Report. Jay's draft statement (circulated to Panel members prior to the meeting) acknowledges that the Panel's recommended actions will be far less effective if global atmospheric loading of CO₂ is not dramatically reduced. Furthermore, investing in potentially costly local source reduction strategies doesn't make sense without a concomitant effort to control global CO₂ emissions. Washington needs to lead by example, and several Panel members argued that doing so is central to our credibility. Other possible strategies include:

1. Implement and enforce state policies that already exist (update them if necessary). Use disclosure to document emissions.
2. Craft multi-state and multi-jurisdictional initiatives.

The co-chairs concluded the discussion by acknowledging that while there is still disagreement about the nature and scope of the Panel's recommendations, there is no debate that CO₂ is an important issue. The objectives of the Panel should be to:

1. Inform people about ocean acidification.
2. Make recommendations for what we can do about ocean acidification here in Washington State.
3. State clearly what else needs to be done to address the problem on a broad scale.

Jay invited Panel members to contact Lara if they wish participate in a follow up meeting on this issue after the Panel meeting.

Update on the Final Report

Hedia Adelsman, Washington Dept. of Ecology

This presentation reviewed the draft outline and production timeline for the Final Report. The report will be prepared by a NOAA science editor, using material submitted by Panel workgroups. For this purpose, workgroups should edit each of the long-form Actions drafted for the Aug 8th meeting into a more streamlined one-page format that includes estimates for cost and implementation time frame, and identifies implementation partners. A timeline for this process will be outlined in Lara's "Next Steps" presentation.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftFinalReport.pdf

Update on the Panel Communications Platform

Lisa Dropkin, Edge Research, and Julia Roberson, Ocean Conservancy

Lisa and Julia have been working with Ecology and the Panel Co-chairs to develop materials to support rollout of Panel products on Oct. 1. This Communications Platform, which will include a set of common principles for framing Panel products, and a set of public-facing FAQs, will be distributed to Panel members on August 22nd (a draft was provided at the Aug 8 meeting). FAQs will be finalized by Sept. 1, the press release and additional materials will be completed by the end of that month.

The objectives of the Panel Communications Platform are to elevate OA as an issue, describe potential economic impacts, and showcase actionable solutions. The first two weeks following release of the Final Report are when media attention will be greatest, so top-level messaging must be prepared in advance. Messaging must take into consideration potential barriers to public understanding and acceptance. These include: climate change, scientific uncertainty, the issue of whether observed environmental change has a basis in human activities, or reflects natural variation, and the degree to which OA in our region is caused by local vs. global drivers.

Lisa and Julia urged Panel members to think about what 'headline' they want to see in the media following the Oct. 1 release, and invited interested Panel members to speak with them after the meeting or send feedback on the messaging platform. Some Panel members will also be interviewed as part of the process of Platform development.

Related presentation slides:

Top Action Recommendations

This portion of the meeting was devoted to presentations of individual workgroup's highest priority action recommendations (each was asked to select four actions from their complete set of up to 20). This was intended to provide Panel members with an opportunity to comment on the prioritized actions, but also to understand the basis for their selection and agree whether the selections were appropriate. Panel members had been provided with the full set of each workgroup's recommendations in advance of the meeting.

The summary below lists the top action recommendations as presented on August 8. Note that:

- all recommendations are draft and subject to change,
- presentation order does not imply prioritization within a set of recommendations, or of one workgroup's recommendations over another's.
- Only the shortened titles of prioritized actions and relevant comments (as bullets) are included in this meeting summary. Expanded descriptions may be viewed in related presentation slides.

Research and Monitoring Workgroup Priority Actions

Richard Feely, NOAA Pacific Marine Environmental Laboratory

Action 1.1 Measure trends in local conditions at high spatial and temporal resolution using established best practices. Collect high-resolution time series of physical, chemical, and biological data at a smaller number of sites.

Action 2.1 Construct budgets for carbon and nitrogen to quantify key anthropogenic and natural processes contributing to acidification.

- A definition for "budget" was requested. Budget in this context means identifying the primary carbon and nitrogen sources, and the extent to which they affect acidification. Sources, sinks *and* rates are considered.

Action 3.1 Understand the association between water chemistry variables and shellfish production and survival in hatcheries and in the natural environment, promoting collaborations between scientists, managers, and shellfish growers.

- Sediment chemistry, and how it may affect shellfish should be added to this action, or to Action 1.1.
- Pink shrimp are an important Washington fishery; this species should be included as species of interest in this context

Action 4.1 Conduct laboratory studies to assess the direct effects of OA on Washington species.

- It was suggested that there should be an emphasis on economically important species, but the current list of species under this action should be expanded

Action 5.1 *Establish ability to make short-term forecasts of corrosive conditions for application to shellfish hatcheries and growing areas and other areas of concern.*

- To what degree does this action overlap with Action 3.1? Answer: it shares some of the same modeling components, but this action applies those models to identify conditions that would affect hatcheries.
- Although hatcheries are already tracking some correlative indicators (i.e. monitoring wind patterns to anticipate upwelling), this action would greatly expand that effort. Scientists will continue to work with hatcheries and the UW Climate Impacts Group if this effort goes forward.

General comments:

- Richard was asked if an assessment of the impact of local CO₂ emissions on local water chemistry is included in these recommendations. It is part of Action 2.1
- The Final Report should emphasize that these Research and Monitoring recommendations are not redundant with other efforts.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftPriorityActionRec.pdf

Adaptation and Remediation Workgroup Priority Actions

Brad Warren, Sustainable Fisheries Partnership

Action 2.1 *Continue water quality monitoring at six existing shellfish hatcheries and rearing areas.*

- Crosscheck against Research & Monitoring Action 1.1; eliminate potential redundancies.

Action 2.2 *Investigate efficacy of water treatment strategies and/or hatchery design to protect larvae from corrosive seawater.*

Action 2.3 *Investigate potential to breed and/or select OA-tolerant strains of shellfish and other vulnerable marine species.*

Action 3.1 *Prioritize investment in adaptation & remediation actions that provide future shellfish habitat capable of enduring a full suite of anticipated environmental changes.*

- The scope of this action seems very broad; can it be more narrowly defined?
- Can this workgroup suggest a couple of near-term pilot projects, and identify potential project sponsors?
- This action seems to promote engineered environments over natural ones. It is reminiscent of trying to solve the salmon problem with hatcheries.

General comments:

- This workgroup is not completely comfortable that they have prioritized the right set of actions, and is willing to revisit their decision; Panel feedback welcome.

- The shellfish industry representatives on this workgroup are supportive of the strong industry focus of this prioritized set of recommended actions, but they recognize the need to take care of non-hatchery organisms.
- The Panel’s charge is broader than the just protecting the shellfish industry. It includes ecosystem protection and impacts. There should be greater emphasis on the natural world.
- The Final Report should clarify what “shellfish” means. To scientists and ecologists, the term is much broader than within the industry.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftPriorityActionRec.pdf

Public Education and Outreach Workgroup Priority Actions

Betsy Peabody, Pacific Shellfish Institute and Puget Sound Restoration Project

The following actions are listed in order of sequence. Noted that an otherwise high-priority recommendation (*Develop and communicate key messages to the Governor, panel members and others who will act as ambassadors on ocean acidification.*) was not ranked among these Top Four Actions because it is already embedded in the Dept. of Ecology’s communications plan.

Action 2.3 Conduct public opinion research. Use results to develop an effective communication and outreach strategy about ocean acidification.

Action 2.1 Conduct personal outreach to key influencers and stakeholder groups to educate them about current and projected ocean acidification impacts that require some level of response at the local and state level.

- Contact with key influencers and groups needs to happen in the next four months.
- Education contacts should be added to this action.
- Add language “work with local community organizations” to capture groups like Beachwatchers

Action 2.2 Develop outreach strategy and materials consistent with policy recommendations.

- Could Action 2.1 could be rolled into 2.2?

Action 2.4 Reinforce/reinvigorate actions that help address OA through existing planning efforts and programs.

- This action is very broad; consider making this an ‘Integrated Strategy’ (applicable to multiple workgroup’s recommendations).
- Opportunity for consolidation: some of these issues come up in Local Source Reduction Actions 1.1 (*Limit nutrient discharges from point sources*), 2.1 (*Assess the effects of nutrients from agricultural lands on shellfish*) and 3.1 (*Control pollution from on-site sewage systems*)

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftPriorityActionRec.pdf

Local Source Reduction Workgroup Priority Actions

Ted Sturdevant, Washington Dept. of Ecology

Action 1.1 Limit nutrient discharges entering marine waters from wastewater treatment plants and other point source facilities....

- Carbon loading should be included in this action. Carbon inputs can actually influence pH directly, which may make carbon (particularly ‘particulate organic carbon’ or POC) an even more important driver of acidification than nutrients. is more likely to enter via storm drains. The Panel scientists should be included in revision of Action 1.1.
- A mechanism is needed to prioritize sources of nutrients (and carbon), so that the state can invest in reduction strategies intelligently over a period of time. Broad ecosystem impacts (not just shellfish impacts) should be included as criterion for prioritization.

Action 1.2 Review and revise water quality standards for pH and other parameters based on results of modeling efforts quantifying human contributions to ocean acidification (see recommendation on research and monitoring).

- The scientific community is advocating that other parameters besides pH be used to assess water quality. It was suggested that the EPA host a conference to determine which parameters are most appropriate.
- Opportunity for consolidation: this action is a local Source issue, but it connects to research and monitoring needs.

Action 2.1 Further assess the effects of nutrients from agricultural lands and practices on shellfish and other marine organisms and implement effective water quality best management practices using regulatory and voluntary incentive-based programs targeted to owners of small-acreage and working farms....

Action 3.1 Manage and control pollution from small on-site sewage systems and large on-site sewage systems by expanding funding for on-site system maintenance repair and replacement and by providing incentives to homeowners to adopt new nitrogen-removal technologies....

- Even functional septic systems are not designed to control nutrient load; this action would provide an incentive for people to adopt new nitrogen removal technologies.
- Research and Monitoring Actions 3.3 and 5.4 would provide information for cost/benefit analysis of this action.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftPriorityActionRec.pdf

Post Panel Workgroup Presentation

Bill Ruckelshaus, Panel Co-Chair

This workgroup did not prepare a prioritized list of actions. Workgroup Chair Bill Ruckelshaus presented this workgroup’s ideas for advancing the Panel recommendations post-Oct. 1.

It will be necessary to establish some kind of state-level mechanism to coordinate implementation of the Panel's recommendations, as these will be housed in number of different agencies and non-governmental organizations. This entity could be within or outside the government. Potential models for a coordinating entity are President Obama's Joint Oceans Commission, or California's Ocean Protection Council. The focus of this entity could be just ocean acidification or it could be broadened to ocean health in general, which might raise its profile. The entity should also be charged with holding various players accountable for implementation. The workgroup will share other ideas with Panel members soon. The Panel co-chairs plan to work closely with the Governor's office on development of a Post-Panel recommendation.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_DraftPriorityActionRec.pdf

Next Steps

Lara Whitely Binder, Panel Facilitator, UW Climate Impacts Group

A first draft of the Final Report will be sent during the week of Aug 24-28. The Panel faces a very short turnaround on the next phase to meet this goal. Comments on the full set of draft recommendations prepared for today's meeting should be submitted to Lara by August 10th. She will compile these for the Panel workgroups by COB Aug 13th; they should return revised, streamlined versions of all actions on Aug 17th. Try to identify and consolidate redundancies within and between sets of Actions.

Related presentation slides:

http://www.ecy.wa.gov/water/marine/oa/20120808_NextSteps.pdf

Document Appendix

August 8, 2012 Blue Ribbon Panel on Ocean Acidification Meeting Agenda

http://www.ecy.wa.gov/water/marine/oa/20120808_agenda.pdf