

## NOAA Education Council Meeting

Date/Time: August 11, 2010 (1:00–4:00 pm)  
 Location: SSMC3, Room 14836  
 Dial-in: 866.901.0711  
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 Contact: Luis Leandro - work: (202) 482-3139

### AGENDA

- 1:00 Welcome/Opening Remarks
- 1:10 NGSP education evidence of progress – Steve Storck (*input request*)  
 (10 min presentation/15 min discussion)
- 1:35 National Ocean Policy Executive Order – Marlene Kaplan (*input request*)  
 (15 min presentation/15 min discussion)
- 2:05 Connects group technology in education survey – Paulo Maurin (*input request*)  
 (5 min presentation/10 min discussion)
- 2:20 10 min stretch break!
- 2:30 NRC Review of NOAA Education response and next steps – Luis Leandro (*input request*)  
 (10 min presentation/15 min discussion)
- 2:55 Corals Communication Education and Outreach Strategy – Paulo Maurin (*informational*)  
 (15 min presentation/15 min discussion)
- 3:25 Updates & Announcements

### Upcoming Council Meetings:

**September 15, 2010**

**October 20, 2010**

### Attendance

**In person:** Louisa Koch (LK), Marlene Kaplan (MK), Thanh Vo Dinh (TVD), Ron Gird (RG), Bob Hansen (BH), Molly Harrison (MH), Chris Hayes (CH), Nina Jackson (NJ), Luis Leandro (LL), Chelsea Lowes (CL), Paulo Maurin (PM), John McLaughlin (JM), Christos Michalopoulos (CM), Bruce Moravchik (BM), Maria Murray (MM), Frank Niepold (FN), Dan Pisut (DP), Bronwen Rice (BR), Steve Storck (SSt), Tracey Thompson (TT), Audrey Trotman (AT), Laura Wittman (LW), Sarah Yue (SY), Dani Zupic (DZ).

**On the phone:** Jennifer Hammond (JH), Carrie McDougall (CMc), Paula Keener-Chavis (PKC), Carla Wallace (CW).

### Announcements (MK/LK)

- Dani Zupic is a graduate student doing a year-long internship with NOAA at the Pacific Sciences Center. She is doing a month detail with us to get the headquarters perspective. She will be working on Science On a Sphere, Hawaii B-WET, and B-WET evaluation.
- Tracy Thompson is in a leadership program with Fisheries.
- Chris Hayes, from National Sea Grant, is staffing the Priority Objective Team for the NOCC.
- Copies of the final National Research Council report on NOAA Education are available at the Outreach Center. Jeannine Montgomery can send out copies if need be.
- We received the DOC passback. We proposed \$16M in increases, but received \$0. We still can look forward to OMB and the Senate appropriation. Climate also did not get anything and is appealing it.

### NGSP education evidence of progress – Steve Storck (*input request*)

Review of the NGSP sections relevant to education and how to tweak the “evidence of progress” language. See PowerPoint slides.

- SSt: We should be looking at these statements to see if they are written specifically enough and in a way for which we could develop performance measures. Please send your comments on wording to me or MK.
- RG: In the NWS mission statement, we talk about saving lives and improving the national economy. In an informed society, wouldn't this lead to improvements in the national economy? Could we tie an educated public to an improvement in economy? This is particularly relevant because we are in the Commerce Department.
  - MK: How would you measure this?
  - LK: The emphasis is the impact of an informed citizen. It answers the so-what question.
  - MH: I think this gets at behavior change.
  - SSt: Do we have any ways to measure behavior change or will we in the next 5 yrs?

- MH: We could measure intent for behavior change.
- PM: In corals, we were wrestling with where to measure along the series: awareness, attitude, and behavior change. We settled on the middle because it necessitates awareness for attitude change. We have a longitudinal study of surveys of the general public every three years to measure changes in awareness and attitude.
- SSt: How many others are measuring attitude changes?
  - FN: We are doing it or making sure it is done. We could have a baseline.
  - MK: We have a baseline for environmental education.
- FN: NOAA cannot improve public understanding by itself. This would be impossible to track. NOAA could contribute to improving understanding, but many other factors can also contribute. The GLOBE Program evaluator is using a contribution model to show you are effectively contributing to the end state, but not that you did it.
- LK: I am not sure if the survey that AZA is doing gets at public attitudes.
  - MK: I'm sure it does or intention to act. They were focused on behavior.
- CMc: Several of our ELG projects are measuring behavior changes. We don't have these numbers immediately because some of these are new grants. We could have this in a few years. It goes beyond understanding and awareness.
- TVD: You would need these numbers at the end of the five years for the NGSP.
- RG: The NWS of the future is trying to introduce the concept of social scientists and the impact of forecasts on behavior. We are just taking baby steps in social science.
  - CW: With StormReady and TsunamiReady we have some measures and verification of behavior. I don't know what the time frame is, but we will check on this.
- CH: Is the implementation of NGSP supposed to coincide with the new SEE process?
  - TVD: The SEE is the decision-making process to implement the plan, which is the NGSP.
- MK: There is only one real reference to education here. You have to go to the education plan to actually see what we're doing. Should there be more in the NGSP to reflect our plan in order to go for budget requests?
  - TVD: No. It will be in your implementation plan.
- TVD: We tried to solve the problem that PPBES created, an uncontrolled, imaginative thing we could never get to. This should not be open to all your dreams, but be realistic.
- CM: I do not think we should be too ambitious. We need a better sense of what we'll be responsible for. A subset of our performance measures should find their way into the NGSP. We have to pick supportive measures that we contribute to the NGSP. I agree with MK that there should be a reference to indicate that NOAA is mandated to do education. Right now, I cannot tell how much we should put in this and for how much we'll be held accountable. We need more direction from PPI before we go down the path of developing a bunch of performance measures for this.
  - TVD: We've scheduled a meeting with LK to address the level of detail and the concerns of the Office of Education and the Education Council.
- LK: My sense is that people want to take this one step further: why we care about public understanding and the benefits of it. It may not be behavior change, but I think we can go one step further.
  - FN: If you take the understanding component and the making informed decisions, it's pretty much what we already use. It is very weird that informed decision-making is not included in the evidence. You need both understanding and skill in decision-making.
- CM: Given how important this is, we cannot commit to something we cannot measure.
  - FN: We don't have to measure all of this. Only one of the list in Objective 1 is "education."
  - LK: Does SG have metrics of this, especially for extension?
  - CL: We don't have national measures, but there may be at the state level. I would have to go back and look.
  - LK: Let's look at the SG metrics to see if there's something there to help us make the language a little stronger.
- FN: We tried to recommend stronger language for the climate objective's evidence.
  - LK: This one strikes me as incomplete. Can you work on this?
  - FN: Yes. I'll go back to my originally submitted language.
- SSt: The last one on underrepresented groups is not ours, but it could be.
  - MK: This is ours. We have talked about broadening this to students, not just underrepresented groups. I sent this in to hold a place for EPP. AT could help with this language.
  - AT: As the language is, we don't do this. We focus on STEM fields relevant to NOAA. I don't see an education goal here, just workforce.
  - LK: We should broaden this. AT will work on alternative wording. The deadline is Friday.
  - SSt: The other option is to add a fourth item to Objective 1.
  - MK: Let's work on moving this.
- **SSt: Please send MK and me your comments by noon on Friday.**

### **National Ocean Policy Executive Order – Marlene Kaplan (*input request*)**

An overview of the education section of the NOPEO and discussion of outcomes and metrics. See PowerPoint slides.

- FN: In the metrics, the number does not relate to a target. Should this be a percentage? How do you know what is a good number?
  - LK: I think this is a process metric, with no right or wrong answer.
- CL: The terminology is a bit confusing. In Sea Grant, we say that metrics are something after the fact and performance measures are something for which you plan.
  - MK: Right now, the question is what we are going to measure, not the target. We will need milestones and to state what we will measure.
  - LL: A lot of our performance measures actually capture outputs.

- CL: They can be tweaked to become actual performance measures.
- MK: The question is if we want to draw this to behavior or attitude changes.
  - CM: I think it is too early. Output-based metrics are the best we can do right now. Things will be very complicated to get metrics across agencies. We need to go back to the Academic Competitive Council report, which identified and recommended metrics and performance measures, and draw some from there. All of the agencies signed off on that, though it was from the previous administration.
  - LK: I agree. Some of these are K-12 metrics, where these are actually outcomes, not just outputs.
  - FN: The key to improving student learning is to improve teacher core knowledge.
- PM: Should there be any coordination with the evidence of progress in the NGSP?
  - MK: Yes. We need these to line up. There should be one set of measures that satisfies both.
- PM: Where are we in comparison with the other agencies in planning?
  - MK: There is a range in organization for this and in metrics. We are in a position to potentially influence other agencies. The goal is to come up with a couple of things that we can implement.
  - CM: There are other agencies like EPA that are a bit ahead in metrics. Perhaps we could see those.
  - MK: In theory, the Interagency Working Group should be ocean education (IWG-OE). This will be difficult to break out. NSF has some measures, too.
  - CMc: For NSF, this is more discrete. Lisa Rom is adamant that they will not do K-12 measurements for the ocean education portfolio. I have a feeling NSF will have a very different take on this.
  - MK: It will be difficult to line these up across agencies. We started talking about this at our IWG-OE in August. It will continue in September.
- PKC: One strategy is to explore and characterize ocean and Great Lakes. The issue will also be addressed under the ocean exploration priority.
  - MH: The ecosystem goal team has contacted me as well.
- LW: Many things have come up with EGT about how education and socioeconomic issues will be coming to the forefront of ecosystems-based management.
  - LK: There is a shortfall in Baccalaureate-trained sciences. There is a huge education component.
- MK: So is the consensus for output measures?
  - LK: If you look at the ACC, many of those metrics are outcomes.
  - CM: These in your list are things we're measuring now. I would start with this, what we can deliver now, and then get input from other agencies.
  - CH: Our team is a bit ahead of other Priority Objective Teams.
- LW: Is there any way for education to support other teams?
  - MK: Yes, for example the research portfolio. The POT teams are getting together to resolve any overlaps among teams. This is just coming together and will be evolving over the next year.
  - LW: This is what we're observing with EGT, that it touches on many of the other fields.
- MH: The Priority Teams should develop a shared definition of education.
- MK: Each Priority Team will be asked to develop its own education plan and incorporate this with other agencies.
- LK: On the metrics for students, we want to highlight underrepresented groups, but to broaden this to pick up our full effort on other groups. I propose: "the number of students, especially from underrepresented groups."
- FN: We also need to distinguish between majoring in STEM fields and choosing STEM fields for careers.

### **Connects group technology in education survey – Paulo Maurin (*input request*)**

Introduction to the Connects survey on technology use in education programs. See PowerPoint slides.

- CL: I don't do education, but I coordinate our network of educators. I can't do this without going to the network. I could go to Vicki.
  - LK: You want to use metasources and reduce the stress on the network.
  - PM: You can designate someone to coordinate this and get the top five resources your network uses.
- CM: There are cases of innovative technology that do not have direct contact to EC members, for example, Second Life.
  - LK: PKC is the direct line for this.
- PM: I'd rather have more information than not enough. You can only do the survey once per computer. You could send the link to someone else.
- JM: 1) Do these have to be projects run in-house by NOAA, or can they be funded by NOAA, like through grants or contracts? 2) Must they be existing projects, or do you also want projects that are about to launch?
  - PM: If you are in the planning stages, there is a field to let us know that it's in the early stages. If it is internal, definitely include it. If it is external, only include it if there is heavy NOAA involvement. This is more internal as a first step.
  - BM: Static programs are also a possibility.
- MK: Have Kate and Atziri been involved in this? Usually this takes a few iterations to knock out the kinks.
  - PM: Yes, we've done this internally in Connects and gone through iterations. This is a first run with the Council.
- PM: This will be due before the next Council meeting, which is September 15.
- LK: Do Council members think they can get this done within the next month?
  - NJ, BM, BR, CM, RG, MH, CL, PKC, JH, and FN all say yes.
- FN: Should I be answering from an NCS perspective or a Climate Goal perspective?
  - LK: Both.
- MK: It's worth noting what works and what doesn't while taking the survey.

### **NRC Review of NOAA Education response and next steps – Luis Leandro (*input request*)**

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Introduction to the NOAA response. See PowerPoint slides.

- LL: The Academies review panel will be on the Hill to talk about the major results and recommendations in September. LK will be there to speak on behalf of NOAA about what we are doing in response to the NRC review.
- LK: Anyone who's interested can attend this public meeting with the STEM Caucus on Sept. 22.
- **LL: Comments on NOAA's response to the NRC review of NOAA education are due by COB Wednesday, Aug. 18.**
- PKC: The last I heard, we were going to gather some questions for the NRC. Are we still doing that?
  - LL: We did this and received a response.
  - PKC: I did observe some changes in the final report, perhaps in response to our questions.
- PM: In our comments, should we mention activities we have that address some of the recommendations?
  - LL: Yes, please make sure these are listed. Currently, our response is aligned to our implementation plan.
  - LK: We want to take credit for anything we're doing. If something is missing, please add it.
- LK: Kat Hazelwood is the new staff member in Senate Commerce. She thinks Senate will be interested in having a similar meeting with the Academies review panel.
- CM: At the AGU meeting, there will be a session with the John Farrington, Michael Feder, a colleague from NASA, and myself. We will be using the report and the response.
  - FN: Can people submit abstracts? The early deadline is early September.
  - CM: Yes, I am planning on making an announcement.

### **Corals Communication Education and Outreach Strategy – Paulo Maurin (*informational*)**

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Overview of the program and its strategic plan. See PowerPoint slides.

- BH: Will you be able to contribute performance measures for education?
  - PM: Yes. We are working with a social scientist. This is that longitudinal study that I was talking about earlier.
- MK: How do you define the conservation public?
  - PM: This is slightly narrower than the general public, those people who are already involved or receptive to getting information on ocean conservation. There are many national ocean surveys. It may be worthwhile for the Education Council to consider reaching out to the survey groups to influence or add questions in the surveys for coming up with the numbers for our metrics.
  - LK: You should contact Sarah Schoedinger or Stacey Rudolph to get a look at the questions we've been sponsoring to see if there is any connectivity and to be able to propose things for additional connectivity.
- RG: Do you have plans to showcase this at Ocean Hall in the Smithsonian so the public is aware of the program and what it does? We have a monthly opportunity to have a booth in Ocean Hall to engage the public on topics of interest.
  - LK: RG has experience with this.
- BR: Are you developing the database internally or contracting it out? B-WET is about to undertake an evaluation contract.
  - PM: A great database is essential for evaluation work. We developed the parameters internally; a former SG fellow worked on this. The actual building of the database will be contracted.
  - CM: Maybe BR and I can talk with you about this. NOAA education needs a database to track our efforts.
  - BR: As much as possible, groups that are doing similar things should coordinate, especially for fields in these databases.
  - PM: Many of the components of the database come from my experience with the Education Council.
  - SS: There's a standing action item in the M&E working group to inventory database efforts.
- LK: What will the coral iPhone app do?
  - PM: It's in its early stages. Fishing is one of the main threats. The app would provide geographically relevant fishing regulations and bleaching events. It will also provide the ability for people to report back to us on what they are seeing. Hopefully, it will also allow people to take pictures of fish and provide measurements.
- PKC: How are deep sea corals included in your program?
  - We are transitioning to the NOAA Coral Program to include deep sea corals. These should be included, but the integration hasn't fully happened. We are mostly thinking about shallow-water coral reefs right now.

### **Updates and Announcements**

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- LK: In the DOC passback, they asked for education funding levels for FY12. We will flatline this.
- MH: We released our Quest to Nest game at a gaming conference in June. We got good feedback. Peg is implementing an evaluation plan for the game. Fisheries will have an education portal going up at the end of the month that will provide links to what you have. Fisheries is undergoing a reorganization of their communications function.
- RG: NOAA supported the Boy Scout Jamboree. We estimated we gave out 200 weather merit badges, and we gave presentations and did weather launches. The third generation of the Owlie Skywarn is an online training manual, which gives kids certification as a young meteorologist. The rollout will be in two weeks at New Orleans to commemorate the 5<sup>th</sup> anniversary of Hurricane Katrina. The Whitaker Center will have an Expedition Chesapeake online module to make people aware of the challenges facing the Chesapeake Bay. There will be a movie beginning next year. We're also trying to involve Nauticus at the base of the Bay.
- CL: We went to the NMEA conference. We had one of our educators elected the new president. Dianne Lindstedt from LA conducted a survey of Gulf educators to find out what they want related to the oil spill. Teachers don't want materials that are oil spill-specific, rather things like why wetlands are important. We're working on this. We're also developing a strategic plan. Leon will be back after a quintuple bypass in September.

- FN: The CLEAN network is building a comprehensive list of reviewed web assets. NODE showed up as an exemplar. Some of the original GLOBE materials showed up, too. The first public release of this information will be October or November. The Student Climate Research Campaign will be launching next year through GLOBE. Diane Stanitski is on the science review team for this and the JASON project. Climate.gov is progressing quite well. We had a couple days of meetings about this. The Climate Literacy document has been redesigned as an 8.5x11 in. and hopefully will be translated by the State Department into the 6 UN languages for COP 16. We're hoping for a Presidential Task Force on climate, communications, and education.
- NJ: We have a NOAA dictionary with 250 science terms. This CD also has five games as students learn the terms. The dictionary is in Spanish, English, and American Sign Language. We also have a new skies activity book, the first in NESDIS, for 3-6 grade and are in the process of doing another on hurricanes. We had a workshop in TN, where I included questions regarding NOAA education materials and resources on the survey. If anyone would like a copy of the evaluation, contact me. They said the easiest website we have was Climate.gov.
- BR: All six of our regional funding opportunities are open. They close in September and October. These are listed on the Office of Education and regional websites. Thanks to those who contributed to our information gathering meeting for the Chesapeake Bay Executive Order. This is an ongoing effort.
- LL: We have a presentation template for those who will make future Council presentations. This is for the layout, content, and components, not design.
- PKC: We just finished our Indonesian expedition. It was very successful, and 52 new species discovered. We did four webcasts in partnership with the Exploratorium. These are archived on the Exploratorium webcast site, explo.tv. In the fall we'll offer an online course on deep sea exploration resources in Gulf of Mexico. We are developing a packet on this.
- CMc: The ELG opportunity has been announced and is focused on formal K-12. There's a particular emphasis on increasing climate literacy and a focus on two project types: service learning, and professional development. We are requiring the use of NOAA assets and encouraging partnerships with NOAA, so you may be getting calls. In September, I will have a briefing on the new grants from the FY10 FFO. We are pursuing installing Science On a Sphere (SOS) in Silver Spring and are soliciting funding from the line offices. Most have already contributed. This will be in the former Project Impact space or, as a backup, in the NOAA Science Center. Hopefully, this will be installed in the next six months. If you have ideas on this or want to be involved, please speak with BH, JM, or me.
- CW: I attended the First African American Methodist Episcopal Church Summer Youth Academic Camp. The NWS team organized a field trip and gave presentations and quizzes. We plan to do this next year. We also plan to go to Council members of DC Public Schools to create a STEM pipeline. I will be attending the SACNAS (the Society for Advancement Chicanos and Native Americans in Science) convention at the end of September.
- AT: There is an open announcement to establish five cooperative science centers, closing Nov. 15. We had our first informational session through the One NOAA Science Seminar series. We're also calling for reviewers. We had more than 130 students come back from their summer research experiences and present posters and presentations. We also are participating in the SACNAS meeting.
- BH: Laura Furgione was very active in asking for docents for the Silver Spring SOS. Plans are underway for the USA Science & Engineering festival in October. Right now there will be over 1000 exhibitors. We have an area in the Mellon auditorium for DC WeatherFest. It will be all hands-on science activities.
- SSt: We're progressing very quickly on education.noaa.gov. We're adding more collections. I can provide you with the full list of ten collections.
- JM: For the Association of Science-Technology Centers conference in October, we'll be hosting a pre-conference session at Bishop Museum with C3 focusing on resources to communicate climate, including SOS. Please recommend this to people for registering. We've gotten Chicago Museum of Science and Industry to co-host our upcoming SOS Workshop. We attended the GLOBE annual conference. Our presence and materials were very successful. We have a long list of recommendations for GPO that we will address at our upcoming site visit.
- LW: Our office is still functioning. We are submitting comments to PPI on the Healthy Oceans goal. The AGM is due out in early September.
  - LL: Have you gotten any guidance from PPI for what the new structure and goals will be?
  - LW: No.