



**Alaska Climate Change Adaptation Advisory Group
DRAFT Meeting Summary: Meeting #3**

Tuesday, September 23, 2008 9:00 AM – 2:45 PM
UAA Commons
University of Alaska, Anchorage

Welcome, Approval of Agenda & Self-Introductions of AAG Members.

Brian Rogers (UAF, Acting Chancellor) Facilitator, opened the meeting and AAG members introduced themselves.

Status Report on Stakeholder Process and Update on Immediate Action Workgroup. Larry Hartig, Commissioner, ADEC, & Chair, Governor's Sub-cabinet on Climate Change, provided an update. First, he discussed the addition of ICF to the team via funding and a contract with EPA, which allows the team to refocus the adaptation effort, including achieving better integration between the Immediate Action workgroup and the AAG, and the ability to reach out more to rural constituents. Second, he provided an update on the activities of the Immediate Action WG, recapping the history of the group (beginning with its formation last November), and reviewing the recommendations in the report prepared in Spring 2008. He also discussed ongoing activities, including work to update the report, \$10.6M funded this year for projects such as construction of shoreline protection, a \$1.1 million grant program for villages to analyze vulnerabilities and request assistance, and efforts to help with emergency planning and vulnerability assessment.

Questions/comments:

One member asked if communities will need to request help and assistance, observing that this may be difficult for villages that do not have the expertise necessary to do so. The response was that there are several approaches to engaging villages and identifying those in need of assistance, including the GAO report on vulnerability, vulnerability assessments being conducted by Homeland Security, a survey, and the grant program. In addition, the DEC is looking at other venues by which to engage villages, including upcoming conferences in October and February.

Introduction to ICF Team and Adaptation Facilitators. Fran Sussman, ICF Project Lead, ICF International, presented an overview of the company, key ICF staff involved in the project, and the biographies of the 5 adaptation facilitators. No questions or comments.

SNAP (Scenarios Network for Alaska Planning) Presentation & Discussion. Scott Rupp, University of Alaska Fairbanks, presented information on preliminary decision support tools being developed by the SNAP program. The presentation included the methodology for developing climate projections for Alaska, data / projects that are currently available, and planned/ongoing work, as well as an overview of the temperature and precipitation projections for Alaska, under several different time frames. Scott requested input on the types of data that AAG and TWG members would find useful for their analysis. A preliminary report was handed out at the meeting, with a more detailed report available on the SNAP website.

<http://www.snap.uaf.edu/downloads/statewide-climate-projections>.

They hope that additional information will be available on the website later this fall.

Questions/comments:

One member asked how temperature predictions from the General Circulation Models (GCMs) used in the program compare to current trends. Another member asked whether the difference between actual emissions and the A2 scenario (actual is higher than A2, which is taken to represent high-end emissions projections) causes problems with the model performance review.. On both these issues, Scott replied that he was uncertain and would have to check.

Several members asked questions about the types of effects taken into account in the model. Scott replied that GCMs are dynamic models, and so sea surface temperature is taken into account. CO2 effects could be included, but are not planned for the near future.

Several members asked questions about the types of output that are or could be provided by the model, such as permafrost depth, wind direction, and others. Scott replied that permafrost is a “third order” analysis and is challenging to estimate; results are not expected for a few months. Wind direction is something that can be derived from available data. A member asked if there is a way to develop products to represent the extreme events? Scott provided examples of outputs. Another member asked how hard it would be to add sea level rise to the data set? Scott replied that the current focus is on terrestrial data. SLR could be added but there are no specific plans to do so.

One member pointed out that the model results focus on monthly average temperatures, but ecologically, it's the extremes that are the drivers. Does SNAP provide resolution at a daily or hourly level? Scott explained that the models report information in 6-hour steps, but that not all this information was archived for the models that they have been using for the SNAP. They are going through the data archives and are looking for results at this level of resolution and beginning to work with it. Similarly, a member asked about inter-annual variability: “Paleo-climatology data from Younger Dryas and other periods indicates that its variability that is the problem, not the climate averages. Is there any way to pick up variability from models like this?” Models project significant inter-annual variability, so in Scott's view they do characterize all of the “jumping around” in the climate. This is key with simulating fire regimes. The models do a good job of analyzing this. Once they start working with daily data, they can further improve this.

One member asked, “Given all the complexity in the systems, and the tendency of the models to rely on linear characterizations of non-linear phenomena, do the models provide useful estimates?” Scott replied that the models are quite complex and they do represent non-linear relationships. Model output should not be interpreted as the “real world”, but needs to be related to the “real world” in order to interpret it. It is possible to quantify uncertainty and variability, and they are working to provide that information. Subsequently, a member pointed out that presenting info on the models is useful. In particular, info on margin of error/ uncertainty in models would be useful. A peer review process would also be useful. Scott responded that all of the underlying GCMs have been thoroughly vetted. Details on SNAP itself are being published in peer-reviewed lit and they're working to get more review.

A member pointed out that the observed trends for precipitation don't agree with the model predictions for some regions, and asked whether there is a way to reconcile the model results with recent trends? Scott responded that this would have to be looked into, but in general, the model results can't be revised.

A member asked whether there are links to existing weather stations? Scott said that there are no references now, but that PRISM data layers could be used to make these links; once the 2007 PRISM data are available in a couple of months. A related question asked, “When we go to using the new PRISM climatology, do you expect any significant changes?” Scott indicated that current PRISM changes are for base period that differs from the new base period (1970-2000) and so the results could change. Spatial resolution will also impact what the current maps look like. However, in terms of long-term trends, the big picture – warmer, dryer climate – will not change.

Several members commented on the differences between real world data and simulations. One said that both were needed, because models didn't predict changes in sea ice. Another pointed out that it would help if the locations of real-world measurements could be superimposed on the predicted measures.

A member asked why SLR, storms, and flooding are not a priority in the modeling, since are important for coastal villages? Scott replied that the priorities in SNAP have not so far been driven by priorities in the Climate Strategy process. He also pointed out that these second and third order variables are more difficult to estimate.

Several members provided feedback and/or indicated info needs: snow pack and winter temps would be needed for looking at some of the vegetation/ entomology analysis so if that could be moved up in priority, it would be good. This will also be useful from the standpoint of pollen counts; shifts in vegetation will affect human health (allergens). Scott indicated that he welcomed thoughts on prioritizing 2nd and 3rd order variables.

A member commented that the new round of work should emphasize more interpretation, less raw data. For land managers, commissioners, this would cause eyes to glaze over. Need to emphasize “so what” – how does the SNAP process yield info that can support decisions. Response: they’re data heavy because that’s where it starts. Scott said he can interpret the data set for fire impacts in AK, but not for health or other impact areas. So they want feedback from AAG on what endpoints are needed. A member commented that it would be helpful to get SNAP folks together with engineers to hammer out what’s needed, and to coordinate with related NOAA and Corp of Engineers activities. Another member suggested that SNAP needs feedback on key analyses, high priority variables. Jackie Poston observed that it would be helpful if AAG would provide specific comments. Commissioner Hartig observed that SNAP is only one tool in the tool box, and asked that everyone think about what tools can be brought together with SNAP, as we go forward with options.

In addition, throughout, Brian kept track of key items that were raised on a FLIP CHART. These included (some of which are discussed above):

- Insect/winter minima/snowpack
- Pollen impact and deciduous change
- Storm/sea surge/flood
- SNAP with engineering community
- More interpretation / less data crunching
- Include historic points for reference
- Quantify accuracy (margin of error)
- Peer review process
- Integrate 1st, 2nd, 3rd order with future products.

Report from TWG: Health and Culture. Kris Ebi and Jason Vogel, TWG Co-Facilitators, presented a summary of the current status and the schedule going forward for the TWG.

Discussion/Questions/Comments

One member observed that it is important to shore up processes that are in place and build on current efforts.

Kris pointed out that some interventions may be helpful for a variety of health issues, and that some issues (such as an ombudsman group) will cross-cut the TWGs. One member commented that there is overlap in issues among the TWGs, and also across mitigation and adaptation TWGs.

One member asked a question about air pollution and air corridors, and Kris observed that this was an important issue.

Brian asked that, as the members listen to the reports from the TWGs, they think about the level of granularity and detail that they want to see in the policy options.

Report from TWG: Natural Systems. Jan Caulfield, TWG Facilitator, presented a summary of the current status and schedule going forward for the TWG, with the assistance of Terry Chapin, AAG member and member of the NS TWG.

Discussion/Questions/Comments

The presentation provided example policy options in each of several areas and specifically requested feedback from AAG on whether the “level of granularity” was correct. In response, one member observed that it is important to create opportunities where entities with shared decision-making authority can work together to address a focused issue or set of issues. The member pointed out that “umbrella” items are useful for getting different entities to cooperate and work together (e.g., such as the model of the North Slope Science Initiative). A member also mentioned considering opportunities to partner with international efforts, when that is appropriate.

Jackie Poston pointed out that it is important to take options involving monitoring, surveillance, and/or research and funnel these back to the Research Needs workgroup, which is looking at both short term and long term needs. The co-chairs of the workgroup suggested that, in providing information on research needs, TWG members should think in terms of “specific problem statements”, and what information is missing, what products they would like to see, and/or what information agencies need in order to do jobs.

One member pointed out that policy options should satisfy two criteria: accountability and actionable.

One member pointed out that, in developing policy options, the TWG should think first about what they want to accomplish and, second, what policy can use to get to goal and what data are needed to get there.

One member pointed out that it is important to think both short term and long term in looking at policy options. The member pointed out that, in the short term, policy options involving community impact could be referred to the immediate action workgroup. In the longer term, actions might require an integrated response that goes beyond the NS TWG and looks at “ensuring viability of rural communities.”

Report from TWG: Public Infrastructure. Barbara Sheinberg, TWG Facilitator, presented a summary of the current status and schedule going forward for the TWG

Discussion/Questions/Comments

There was some discussion among AAG members of the overlap between the IAWG and the PI TWG. A summary of the Immediate Action WG summary was provided by IAWG co-chair, Mike Black.. Noted close relationship with public infrastructure TWG. One member spoke of recent appropriations from the legislature to work with communities, develop hazard plan and emergency operations plan, and to cover training, exercises at the 6 communities identified by the IAWG.

One member raised the distinction in time frame between the two groups, with the IAWG looking at immediate actions (a 12 to 18 month time frame) and a longer term focus for the TWG, and the importance of collaboration across agencies. Another member pointed out that the IAWG is focused largely on coastal erosion and relocation issues, whereas the PI TWG has many more issues, which should not be overlooked. Another member pointed out that secondary impacts also need to be considered in the PI TWG. Another member pointed out the need for a “comprehensive suite” of actions and a new approach that looks more broadly at community needs.

One member pointed out that monitoring is extremely important, in order to identify the next wave of communities to be addressed after the six identified for immediate action.

Report from TWG: Other Economic Activities. Nancy Tosta, TWG Facilitator, presented a summary of the current status and schedule going forward for the TWG.

Discussion/Questions/Comments

There was some discussion of the range of options being examined, ranging from some that are highly site specific to those that are very broad (e.g., information collection and monitoring). One member pointed out that nation as a whole needs to recognize that there are benefits to the US of infrastructure development in Alaska. The importance of coordination with the mitigation Transportation/Land Use TWG was noted, because of options that relate to marine transportation.

Next steps for the AAG and TWGs. Jackie Poston of DEC provided an overview of the schedule going forward.

- The next October 27 meeting (coinciding with the AK Tribal Conference) will include in-person TWG meetings and presentations by the TWG facilitators in a round-robin during a 2-hour timeslot. The meeting will also include presentations during a lunch hosted by USCCSP and USGS, where the agencies will solicit recommendations for adaptation.
- The next AAG meeting is scheduled for November 7 (which may be moved). At this meeting, all adaptation TWGs should have their catalogs of options complete, and most should have completed balloting.
- Between November and February, the TWGs should begin to flesh-out their options (aiming for 4-5 page descriptions for 6 to 10 priority options). .)
- Coinciding with the AK Forum on the Environment, MAG and AAG meetings will be held on February 5 and 6, respectively, and provide feedback to the TWGs on their priority options (for those that have made sufficient progress). There will be short sessions for each TWG earlier in the week. AAG and TWG members are requested to think about outside speakers that might present at these TWG sessions, as part of panel style discussions with 2-4 speakers each panel.
- There will be a meeting in March (time to be specified) of the AAG and MAG, to provide feedback to the TWGs on their priority options (those that did not present in February).
- Between February and April/May, the TWGs will revise their proposed options, based on feedback/endorsement from the AAG, and prepare 4-5 page descriptions of high-priority options, including a description of the option and how it interacts with other activities, why it is high priority, and what actions will be needed to implement the option. These options will then go to the sub-cabinet members as part of a report, in early summer.

Discussion of Evaluation Criteria. Kris Ebi presented draft evaluation criteria, for TWG members to use in balloting and selecting high priority options. . The three criteria presented were (1) benefits and effectiveness, (2) cost, and (3) feasibility. They also noted that each TWG may wish to adopt and use additional criteria that are relevant to their area of adaptation analysis.

Discussion/Questions/Comments

One member suggested adding in a fourth criteria: “significance” as one of the key criteria that TWGs should consider using.

Public comment period

One public comment discussed the importance of hydrogen energy sources and population control, and highlighted the interdependence of energy with all the options.

One public comment from the US Forest Service stressed the need to “push back” against the desire on the part of AAG and TWG members for increased certainty in climate and impact modeling results, and to be willing to make decisions within the context of uncertainty. The commenter also suggested that the members think about risk and allowing room to fail. Specifically, the commenter suggested adopting the USFS principle of “adaptive management” in which decision makers take action, monitor, and adapt as needed.