

**ESCOP Science & Technology
Call Notes: January 25, 2016**

Committee Members:

<p>Chair: Marikis Alvarez (ARD)</p> <p>Delegates: Larry Curtis (WAAESD) David Thompson (WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD) Chair Elect ? (WAAESD)</p> <p>Executive Vice-Chair Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p>Liaisons: Terry Nelsen (ERS) TBD (OSTP) Robert Matteri (ARS) Charles Allen (Pest Mgmt Subcom) Edwin Price (ICOP) Dwayne Cartmell (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p> <p>*Chair elect</p>
---	--

Participants: Marikis Alvarez, David Thompson, Deb Hamernik, Cameron Faustman, Adel Shirmohammadi, Nathan McKinney, John Yang, Robert Matteri (Midwest ARS Director), Denise Eblen, Ian Maw (APLU), Chris Hamilton (recorder)

Action Items:

1. Encourage participation on NCDC230: Antimicrobial Resistance and its renewal project, especially for social scientists, to come up with a robust 5-year plan. Chris Hamilton will resend the participation invitation through NIMSS.
2. Next call scheduled for Monday, February 22 at 4 pm ET.

Call Notes:

1. Roll Call – See participants list above
2. Minutes (review and approve) - Approved
3. Agenda (review and adopt) - Approved
4. APLU antibiotic resistance report discussion with Ian Maw (APLU)
 - a. Robert Matteri gave a brief introduction as the new ARS representative to the ESCOP S&T committee.
 - b. Chase Crawford unable to join this call as originally intended, so Ian Maw joined in his place and gave the committee some background information on the formation of the

Joint APLU/AAMVC task force and report on antibiotic resistance. Ian discussed some of the Task Force Recommendations:

- i. Outreach and education needs:
 1. New curriculum development for veterinarians and vet schools is necessary
 2. Improved outreach and education for producers and the general public, via Cooperative Extension, especially
 - ii. Research needs:
 1. Need more and improved research on effects of antibiotic resistance, mechanisms of antibiotic use, as well as the development of new antibiotics
 2. There is a need for interdisciplinary, multi-institutional research efforts, including both animal and human health.
 - iii. Establishment of an independent University Research Organization (URO) that operates as a non-profit, 503c organization is also necessary (503c status recent allowed by recent omnibus bill).
- c. Open committee discussion on the APLU task Force Report ensued. Major points include:
- i. Partnering with medical schools (Human Medicine and Public Health) is critical for success on this effort, as well as across agencies, NIH, USDA, etc.
 - ii. Development of a national health symposium that would include medical researchers, agricultural directors, etc., perhaps later this spring, 2016.
 - iii. Use the APLU report to encourage researchers to work on these topics
 - iv. This is a long-term effort; we need to engage many groups, create some UROs, and move forward. The problem cannot be solved in a year or two.
 - v. This complex human health issue needs to be more visible to Congress and needs to be made more understandable by the general public. This is why we especially need Cooperative Extension to help with outreach and education.
 - vi. What role should ESCOP/LGUs in general play in this topic?
 1. Perhaps a session on the topic at the next Fall ESS meeting?
 2. Encourage participation on NCDC230: Antimicrobial Resistance as they develop their full, five year project.
 - vii. Increased funding for USDA on AMR

Call Adjourned at 4:58 pm ET

**ESCOP Science & Technology
Call Notes: March 28, 2016**

Committee Members:

<p>Chair: Marikis Alvarez (ARD)</p> <p>Delegates: Larry Curtis (WAAESD) David Thompson (WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD) Chair Elect ? (tbd WAAESD)</p> <p>Executive Vice-Chair Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p>Liaisons: Terry Nelsen (ERS) TBD (OSTP) Robert Matteri (ARS) Charles Allen (Pest Mgmt Subcom) Edwin Price (ICOP) Dwayne Cartmell (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p>
--	---

Participants: Marikis Alvarez, Joe Colletti, Deb Hamernik, Cameron Faustman, Nathan McKinney, Harald Scherm, Robert Matteri, Dwayne Cartmell, Adel Shirmohammadi, Jeff Jacobsen, Chris Hamilton (recorder)

Action Items:

1. Chase Crawford will send out the APLU/AAVMC Curriculum Working Group roster to the group (done)
2. Jeff and Chase will further discuss APLU's roll in sharing AMR information, events, etc. more widely.

Call Notes:

1. Roll Call, see participants above.
2. January 25 Minutes (review and approve): Approved
3. Today's agenda (review and adopt): Approved, moved Item 8 up to next item.
4. APLU antibiotic resistance (AR) report discussion with Chase Crawford (APLU)
 - a. Chase Crawford introduced himself and discussed the basics of his position at APLU, a veterinarian working in the area of antibiotic resistance to bring agriculture and other stakeholders together.
 - b. Extension will be involved through the development of curricula for veterinarians/vet schools, as well as special messaging for youth and the public through a special messaging package.

- c. A key facet of the APLU AAVMC report that connects with AES programs is the potential establishment of pilot University Research Organizations (URO) as well as potential pilot projects. Models are being explored such as the recently formed Soil Health Institute (supported by the Noble Fdn and Farm Fdn). Numerous activities are being discussed. An emerging pilot project was mentioned.
 - d. Chase also mentioned the North Central AR roundtable meeting in May as an initial example.
 - e. APLU is also planning congressional briefing, looking at different sectors involved with AR.
 - f. Question from group: What is the role of NCDC230 in the UROs and pilot projects group? NCDC230 is still just a development committee at this time and will likely include AES and Vet Med faculties with less probabilities of Human Medicine faculty. The group plans to meet and further discuss a more comprehensive, five-year approach before the NC AR roundtable.
 - g. Question from group: Will FFAR thematic areas include AR? What about the inclusion of plants as well as bees in this larger discussion. Please contact Chase if you have other groups he should involve in this effort. Suggestions are welcome.
 - h. Question from group: What is the international awareness of AR with our trading partners? It's variable, depending upon countries. There is awareness, but not always ability to enforce. Human health traditionally was the focus, but many are moving towards improved livestock husbandry and biosecurity efforts.
 - i. Suggestions going forward: Share as much information as possible and involve private industry, commodity groups, etc., in addition to universities to ensure a highly functional community. Anything we can do to facilitate this AR information sharing would greatly improve efforts. Perhaps this is something APLU can be involved with? Jeff will loop back with Chase on this concern and what APLU's role might be. Jeff will also discuss AR opportunities with the research EDs at their next annual meeting in May.
5. NIPMCC update (Jeff Jacobsen): NIPMCC was created as a formalized path for ESS and CES to discuss IPM issues at a national level. NIPMCC is connected to S&T, but is also a whole different group. We'll start to hear more as the group is populated. Charles Allen, NIPMCC Chair, will join these calls as the group comes together.
 6. Social Science Subcommittee (Dwayne Cartmell): Group met in early February. In the past, they have reviewed NIFA RFPs and the Science Roadmap for social science language/topics. Recent meeting focus was on communicating impacts, messaging, etc. way to engage as a group to help improve social science dialogue.
 7. NIFA Update (Parag Chitnis/Denise Eblen): N/A, neither Parag nor Denise were able to join the call.
 8. ARS Update (Robert Matteri): FY17 Presidential budget includes recommended increases to priority areas, including a \$22M to AR, and increases to climate change, water, and animal health (avian influenza). Other FY2016 priorities that have some funding still are pollinator health, environmental sustainability, big data approaches to bioinformatics/genomics data storage. ARS is strongly collaborative with AES and they appreciate that.
 9. Other: (Horizon item) Revisit Riley Foundation report (hold for April 25 call)

Call adjourned at 4:08 pm CT

ESCOP Science & Technology
Call Agenda: 4 pm ET, June 13, 2016
215-446-3656, ACCESS CODE: 1442561

Committee Members:

<p>Chair: Marikis Alvarez (ARD)</p> <p>Delegates: Larry Curtis (WAAESD) David Thompson (WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD) Chair Elect ? (tbd WAAESD)</p> <p>Executive Vice-Chair Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p>Liaisons: Terry Nelsen (ERS) TBD (OSTP) Robert Matteri (ARS) Charles Allen (Pest Mgmt Subcom) Edwin Price (ICOP) Dwayne Cartmell (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p>
--	---

Participants: David Thompson, Nathan McKinney, Denise Eblen, Deb Hamernik, Harald Scherm, Marikis Alvarez, Cameron Faustman, Jeff Jacobsen, Chris Hamilton (recorder)

Action Items:

1. S1060 unanimously approved as the S&T winner recommendation by all voting members on the call.
2. Chris and Jeff will formalize the ranking and comments and send to the ESCOP Executive Committee for final approval via electronic ballot.
3. Cameron Faustman, Dave Thompson, Harald Scherm, and Marikis Alvarez will assist Jeff and Chris in the creation of a revised multistate award nomination form for 2017.

Call Notes:

1. Roll Call, see above.
2. Discussion of 2016 Excellence in Multistate Research Award (see final summary below).
 - a. S1060 and W3122 at 1.9 and 2.0 are very close; is the difference real?
 - b. S1060 and W3122 were both excellent, but perhaps didn't follow the guidelines in the announcement
 - c. S1060 had more quantitative, clear indicators and was more multidisciplinary
 - d. Broader participation with S1060, with Canada, ARS, private sector
 - e. Action Taken: S1060 unanimously approved as the S&T winner recommendation by all voting members on the call.

- f. Committee agreed with all other nomination rankings.
 - g. Moving forward, Chris and Jeff will formalize the ranking and comments and send to the ESCOP Executive Committee for final approval.
 - 3. Discuss edits to the 2017 call for nominations
 - a. Jeff suggested that the committee re-evaluate the 2017 call and update the nomination format based on the award criteria to make evaluation more clear and straightforward.
 - b. Cameron Faustman, Dave Thompson, Harald Scherm, and Marikis Alvarez agreed and volunteered to assist in reevaluating the submission requirements and S&T evaluation processes.
 - 4. NIFA Update (Denise Eblen): NIFA is starting work on the FY2018 budget, next Farm Bill program updates, and transitioning into a new administration. Parag is chair of the NIFA committee that is working on NIFA concepts for the next Farm Bill.
 - 5. Other business, as needed
 - a. Topics for next call, scheduled for Monday, July 25 at 4 pm ET:
 - i. NIFA update, focusing on next FY budget and Farm Bill programs and priorities and how the Experiment Station can best participate in this process.

Call adjourned at 4:30 pm ET.

**2016 National Multistate Research Award
Science and Technology Committee Nominee Rankings and Comment Summary**

Survey Responses Received: 8/12 voting S&T members

Ranking Means (where 1 is the best, based on award criteria)

Reviewer	Project Number			
	NCERA3	W3122	S1060	NE1227
A	3	2	1	4
B	4	2	1	3
C	2	3	4	1
D	4	1	2	3
E	2	3	1	4
F	4	3	1	2
G	4	1	2	3
H	2	1	3	4
Ranking Means	3.12	2.00	1.88	3.00
FINAL RANKING	4	2	1	3

Comment Summary

S1060: Well-written, interdisciplinary project with strong outcomes, impacts, and accomplishments. This project shows good partnerships with the public and private sectors, exhibits excellent evidence of external funding and is strong on outreach and information dissemination.

W3122: Successful, diverse, interdisciplinary project with many substantial accomplishments and broad collaborations. W3122 has strongly leveraged external funding, but more details on funding sources would be useful. Some concern was expressed with the impact list reading more like outcomes. In addition, additional context would help the impact narratives and also go beyond a singular publication count.

NE1227: NE1227 presents a nice summary of accomplishments with clear goals. This project has made excellent contributions to basic and applied dairy science associated with infertility in dairy cattle. Training efforts were impressive. Reviewers felt that more outcomes were presented than impacts. Evidence of value-added from interdependency could be stronger and examples of sources of external funding would be helpful.

NCERA3: NCERA3 this is a long-standing soil survey project with good integrated/Extension linkages and diverse membership. The project exhibits many strong accomplishments has strongly influenced NRCS and other public policies and priorities. S&T members felt however, that the illustration of scientific, measurable impacts and outcomes could be stronger. In addition, there was limited evidence of interdisciplinarity and quantifiable metrics would have enhanced the application. Finally, several reviewers expressed concern over the lack of quantifiable of external funding presented.

ESCOP Science & Technology
Call Agenda: 4 pm ET, September 26, 2016
215-446-3656, ACCESS CODE: 1442561

Committee Members:

<p>Chair: Marikis Alvarez (ARD)</p> <p>Delegates: Ken Grace (WAAESD) David Thompson (Chair-elect; WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD)</p> <p>Executive Vice-Chair Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p>Liaisons: Terry Nelsen (ERS) TBD (OSTP) Robert Matteri (ARS) Charles Allen (Pest Mgmt Subcom) Edwin Price (ICOP) Dwayne Cartmell (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p>
--	---

Participants: John Yang, Adel Shirmohammadi, David Thompson, Cameron Faustman, Marikis Alvarez, Parag Chitnis, Jeff Jacobsen, Chris Hamilton (recorder)

Action Items:

1. Jeff Jacobsen will contact Tim Fink of SoAR to find out more information on the group and its report, to perhaps encourage the inclusion of more LGUs in the future and to discuss where supporting investments in infrastructure for the whole system might fit.
2. Parag Chitnis will send the contact information for SoAR and the other, AFRI supporting group, to Jeff

Call Notes:

1. Welcome and Roll Call taken
2. David Thompson was identified as our Chair-elect. He will become S&T Chair on 10/1/2017 and serve through 9/30/2019. All officer positions on the S&T are for two years.
3. Group discussion of "Retaking the Field" at <http://supportagresearch.org/retakingthefield/>:
 - a. Visit the website for more information on the SOAR group. Board: <http://supportagresearch.org/board-members/>; contact administrator@supportagresearch.org

- b. The Committee found this report to be impressive and very well done, focusing on AFRI accomplishments, competitive programs, commodity group funding, and mainly big programs and larger universities; target audience appears to have been Congressional staffers. Documents like this are something S&T would like to see more of from APLU.
- c. However, we wish it would have included additional smaller institutions to better support our AES and EXT unified message. Our perspectives were recently reinforced at the 2016 ESS CES Joint Meeting in Wyoming.
- d. What can we do, as LGUs, to better reflect our entire community in reports like this?
 - i. Perhaps include a tag line, of sorts?
 - ii. Include all states by name, especially those who receive Ag appropriations, on a final page.
 - iii. Action: Jeff will contact Tim Fink of SoAR to explore their motivations, find out more information, and see if there would be further opportunities to include more LGUs in these types of reports in the future.
 - iv. Parag will send Jeff the contact information on this and another, similar AFRI group to reach out to.
 - v. Infrastructure needs mentioned at the end of the document; this is relevant to us, Jeff will discuss with Tim.
- 4. Exploration of S&T topics important to the 1890s – John and Marikis will check with Alton Thompson to identify issues for future S&T calls.
- 5. NIFA update – Parag Chitnis
 - a. Data summit in Chicago in a few weeks. Parag encouraged S&T members to attend. Contact Parag for more information or search on the NIFA website.
 - b. Online stakeholder prioritization input opportunities will continue to be online (e.g. previous animal agriculture issues) as well as with selected national meetings.
- 6. Other – Marikis Alvarez: At the recent UN Leaders session, antibiotic resistance was a big issue

Call adjourned at 4:45 pm ET.

ESCOP Science & Technology
Call Agenda: 4 pm ET, October 24, 2016
215-446-3656, ACCESS CODE: 1442561

Committee Members:

<p>Chair: Marikis Alvarez (ARD)</p> <p>Delegates: Ken Grace (WAAESD) David Thompson (Chair-elect; WAAESD) Joe Colletti (NCRA) Deb Hamernik (NCRA) Cameron Faustman (NERA) Adel Shirmohammadi (NERA) Nathan McKinney (SAAESD) Harald Scherm (SAAESD) John Yang (ARD) Ed Buckner (ARD)</p> <p>Executive Vice-Chair Jeff Jacobsen (NCRA ED) Chris Hamilton (NCRA AD; Recorder)</p>	<p>Liaisons: Terry Nelsen (ERS) TBD (OSTP) Robert Matteri (ARS) Charles Allen (Pest Mgmt Subcom) Edwin Price (ICOP) Dwayne Cartmell (Social Sci Subcom) Parag Chitnis (NIFA) Denise Eblen (NIFA)</p>
--	---

Participants: Marikis Alvarez, David Thompson, Joe Colletti, Cameron Faustman, Nathan McKinney, Harald Scherm, John Yang, Robert Matteri, Parag Chitnis, Denise Elben, Jeff Jacobsen, Chris Hamilton (recorder)

Action Items:

1. Bob Matteri will connect with ARS Chief Information Officer, Dr. Brian Scheffler, for more examples of concrete, working Big Data applications.
2. Committee members are asked to reach out for a list of online data science/analytics graduate courses and training certificates to share with 1890s and others.
3. Jeff Jacobsen will continue to reach out to Dr. Fine for more information and to see if Dr. Fine would be able to join a call, discussing the SoAR report with this committee.
4. Next call will be Monday, November 28 at 4 pm ET, same call-in number. December 26 call canceled due to the holiday.

Call Notes

1. Welcome and Roll Call taken, Marikis Alvarez and Chris Hamilton
2. NIFA Update, Parag Chitnis/Denise Eblen:
 - a. Parag gave a brief summary of the 10/10/2016 Data Science in Agriculture Summit. See <https://nifa.usda.gov/event/data-science-agriculture-summit> for presentations and link

- to the “Online Idea Engine” at <https://usdanifa.codigital.com/c/usdanifa/user/login>.
Accepting stakeholder contributions until 10/31/2016.
- b. The AFRI Foundational program permits applications for workshops on numerous thematic areas such as big data and cyber infomatics for food and agricultural enterprises.
 - c. NIPMCC meeting occurred last week, see: <http://escop.ncsu.edu/MeetingDetail.cfm?mid=416> for agenda and linked presentations
 - d. An announcement was made of a future conversation (invited only) on 2/15-16 on Tactical Sciences (e.g. CPPM, IR-4, NPDN, FADI, FARAD) will occur with NIFA and UMD.
3. ARS and Big Data, Bob Matteri
- a. Supercomputers at national animal disease center in Ames, Iowa and six other locations across the country to enhance data transfer and processing. Training on the software is occurring now.
 - b. ARS is working well with universities to enhance data management and many collaborative opportunities with ARS exist in this area.
4. Group discussion of C-FARE’s “Advancing U.S. Agricultural Competitiveness with Big Data and Agricultural Economic Market Information, Analysis, and Research” at http://www.cfare.org/UserFiles/file/10-7-2016BigData_v1.pdf
- a. Informative, broad, and well-presented document on current issues with Big Data in agriculture with a focus on a multitude of precision agriculture elements
 - b. Clearly from written from the perspective of Ag Economists, but is somewhat narrow and misses a lot of the current collaborations going on at LGUs and with ARS.
 - c. The “Looking Forward” section at the end (pg. 14) might be good for other LGU colleagues to look at first, and then read the rest of the material.
 - d. Private sector data and IP implications section was especially important. Data transparency might be an issue.
 - e. Consumer analytics could have been emphasized more.
 - f. Need and challenges with connectivity in rural areas addressed
 - g. Perhaps there is a need for concrete examples on how to build and apply Big data solutions
 - h. Other documents that might be useful to read?
 - i. NSF Big Data Hubs (4 regions) good place to see how the community around Big Data is being developed in these regions. Video presentations cover some areas, pitfalls, etc. GODAN (Global Open Data for Agriculture and Nutrition), as well.
 1. <http://midwestbigdatahub.org/>
 2. <http://www.southbdhub.org/>
 3. <http://westbigdatahub.org/>
 4. <http://nebigdatahub.org/>
 5. GODAN: <http://www.godan.info/>
 - ii. Chief information officer with ARS Dr. Brian Scheffler – Bob Matteri will reach out to him for information on building successful big data applications and collaborations.
5. Exploration of S&T topics important to the 1890s. Some thoughts:
- a. Big Data, especially training in the use of related technologies – perhaps this committee should reach out to LGUs to find and share online training programs/certificates in data science.
 - b. Plant Phenotyping, germplasm repositories
 - c. Phytobiomes

- d. Nutrition and food security
- 6. Other, as needed
 - a. Gary Thompson (ESCOP Chair-elect) is forming a program planning committee for Fall ESS 2017. Thoughts on an AR workshop? Great idea; perhaps an overview of big issues across disciplines? Are the details appropriate for a big meeting, though? Identify experts outside of the immediate family to gain additional perspectives.
 - b. Jeff reached out to Dr. Fine re: SoAR report. He will continue to work on this and get a response.
 - c. Scheduling of November and December calls (November 28 and December 26)
 - i. Go ahead with November 28 call
 - ii. Cancel December 26 call, due to the holiday

Call adjourned at 4:50 pm ET.