

INVASIVE SPECIES ADVISORY COMMITTEE MEETING
July 12-14, 2016
Smithsonian Institution
National Museum of the American Indian (NMAI)
Fourth Street and Independence Avenue, SW
Washington, DC 20560

MEETING MINUTES¹

Day 1: Tuesday, July 12, 2016

ISAC MEMBERS PRESENT

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| ROBERT WILTSHIRE (Chair) | Invasive Species Action Network |
| JOHN PETER THOMPSON (Vice Chair) | Maryland Nursery and Landscape Association |
| SUSAN ELLIS (Secretary) | Retired, California Department of Fish and Wildlife |
| SCOTT CAMERON | Reduce Risks from Invasive Species Coalition |
| CHARLES BARGERON IV | University of Georgia |
| EDWARD CLARK | Wildlife Center of Virginia |
| OTTO DOERING | Purdue University |
| SLADE FRANKLIN | Wyoming Department of Agriculture |
| BONNIE HARPER-LORE | Minnesota Invasive Species Advisory Council |
| WILLIAM HYATT | Connecticut Department of Energy and Environmental Protection, Bureau of Natural Resources |
| MARSHALL MEYERS | Meyers & Alterman |
| LAURA MEYERSON | University of Rhode Island |
| BLAINE PARKER | Columbia River Inter-Tribal Fish Commission |
| CAROL OKADA | Hawaii Department of Agriculture |
| SEAN SOUTHEY | PCI Media Impact |
| BRENT STEWART | Hubbs-SeaWorld Research Institute |
| NATHAN STONE | Engle-Stone Aquatics, LLC |
| ROBERT VAN STEENWYK | University of California, Berkeley |
| DAMON WAITT | North Carolina Botanical Garden, UNC-Chapel Hill |
| JEFF WHITE | Newmont Mining Corporation/Elko Land and Livestock Company |

COMMITTEE MEMBERS ABSENT

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| PAT BURCH | Dow AgroSciences |
| JANIS McFARLAND | Syngenta Crop Protection, LLC |
| ED MILLS | Cornell University |
| DAVID STARLING | Aqueterinary Services |
| GARY TABOR | Center for Large Landscape Conservation |

¹ The meeting minutes have not been transcribed or reported as direct quotes. Statements have been paraphrased.

NISC CO-CHAIR PRINCIPALS PRESENT

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| CHRISTINE DAWSON | Acting Deputy Assistant Secretary for the Environment, United States Department of State |
| THOMAS NOVOTNY | Deputy Assistant Secretary for Health (Science and Medicine), United States Department of Health and Human Services |
| MARK RUPP | Deputy Associate Administrator for Intergovernmental Relations, United States Environmental Protection Agency |
| KRISTEN SARRI | Principal Deputy Assistant Secretary for Policy, Management and Budget, U.S. Department of the Interior |
| CARRIE THOMPSON | Deputy Assistant Administrator, Bureau of Economic Growth, Environment and Education, United States Agency for International Development |

NISC SECRETARIAT STAFF AND POLICY LIAISONS PRESENT

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| ROBERT BOYD | NISC Secretariat |
| KELSEY BRANTLEY | NISC Secretariat |
| GENEVIEVE BRUNE | NISC Secretariat |
| STAS BURGIEL | NISC Secretariat |
| CHRISTOPHER DIONIGI | NISC Secretariat |
| AMY FERRITER | NISC Secretariat |
| WENDY FINK | NISC Secretariat |
| JAMIE REASER | NISC Secretariat |
| SARAH VEATCH | NISC Secretariat |
| VICTOR BULLEN | U.S. Agency for International Development |
| DOUGLAS BURKETT | U.S. Department of Defense |
| HILDA DIAZ-SOLTERO | U.S. Department of Agriculture |
| CAMILLE MITTELHOLTZ | U.S. Department of Transportation |
| CAROLINE RIDLEY | U.S. Environmental Protection Agency |
| JOHN SAGLE | U.S. Department of Homeland Security |
| JENNIFER SHINEN | U.S. Department of State |
| HILARY SMITH | U.S. Department of the Interior |

The meeting was called to order by ISAC Chair Bob Wiltshire at 8:34am.

WELCOMING REMARKS AND BUILDING ORIENTATION

David Penney, Assistant Director for Research and Scholarship, NMAI

Mr. Penney welcomed everyone to the museum, provided a brief history of the museum, and encouraged everyone to explore the exhibits.

OPENING REMARKS, MEETING OVERVIEW AND PURPOSE, INTRODUCTIONS, AGENDA AND DESIRED OUTCOMES, APPROVAL OF MINUTES, AND DISCUSSION OF NOMINATION PROCESS FOR ISAC OFFICERS

Bob Wiltshire, Invasive Species Action Network (ISAC Chair)

Opening Remarks

Mr. Wiltshire thanked David Penney for his remarks. He also welcomed everyone, specifically acknowledging the eight (8) newly appointed members in attendance.

Meeting Overview and Purpose

Mr. Wiltshire provided the group with a meeting overview, details regarding the change in meeting format, and procedural rules for the general session:

- ISAC's role is to provide advice on invasive species issues to NISC. This is best accomplished when the federal agencies ask for advice. In the past, ISAC has largely been generating its own agenda because advice was not being requested. Going forward, ISAC will be responding to NISC priorities.
- NISC has determined that the work of the Council is a priority and should have involvement at a higher level throughout the federal agencies. While ISAC provides advice and does not set policy, the important role this Committee will play in helping set policy for the federal government on invasive species is very exciting.
- PowerPoint presentations are no longer the main focus of meetings. Instead, we will be putting everyone to work dealing with specific problems. We will talk about task teams further on in the meeting.
- This is a meeting of ISAC – a FACA Committee with FACA rules. We are the people the government wants to hear from. We welcome everyone in the room, but it's the Committee's meeting.
- We have gone over the facilities and name cards. Put your cards up in order to be recognized to speak. Open by speaking your name. When it's your turn to talk, press the button for the microphone to speak. If the light is on, your microphone is live and can be recorded.
- It is vitally important that we have everyone sign in every day.
- Decision making process: we will look to approve products and recommendations to the government or an agency. We strive for consensus. Sometimes we cannot quite get there and we will take a vote when we cannot reach consensus. The bylaws do not require a quorum; however, no action can be taken without at least half the members of ISAC. If only half of the members are present, we will need a unanimous vote. At this meeting, we will need a 14 member consensus since there are 21 members in attendance.
- We will do a brief introduction of each of the members, including name and expertise of the members. We will do more in-depth introductions during lunch.
- The agenda is straight forward and includes reporting and catch up. After break we will hear from the NISC Principals. Then, we will discuss task teams, break for lunch, and reconvene in task team meetings.
- The Member's Forum will be during lunch. You will be asked for: (1) a brief bio about yourself; (2) the work that you do, especially anything unique; and (3) since we are out there on the ground, are there any emerging issues that you see – something that you think will be a big issue down the road. The challenge is not to come up with an emerging issue, but rather to let everyone know if there is something that has already been identified that can/should be run up the chain.

Approval of Minutes

The minutes from the previous meeting have been posted online. Are there any comments or corrections on the minutes? (None were raised) Marshall Meyers moved to approve the minutes. The motion was seconded by Otto Doering. Minutes are approved by unanimous Ayes.

The ISAC Charter has been renewed and is good for the next two years. The bylaws became effective yesterday (7/11/16).

Nomination Process for ISAC Officers

Mr. Wiltshire will step down as ISAC Chair at the end of this meeting; therefore, new officers will be elected and put forward for NISC approval before meeting adjournment on July 14. Officers serve a one year term and may be reappointed for a second term. The position of ISAC Secretary has been eliminated, and those functions (e.g., note taking, etc.) will be assumed in other places. Members of the nominating committee are Susan Ellis (Chair), Bill Hyatt, and Marshall Meyers. Any ISAC member may nominate themselves or a fellow member, and nominees have the right to decline a nomination. The nominating committee will collect the names of nominees submitted and tally the votes. Results will be announced before meeting adjournment.

PRESENTATIONS AND DISCUSSIONS

Mr. Wiltshire introduced ISAC member Dr. Bob Van Steenwyk and recognized his efforts on White Papers.

ISAC White Paper on Biocontrol

Bob Van Steenwyk, UC-Berkeley (ISAC Member)

Genesis of this Paper: The idea for this paper was originally generated by the old Control and Management Subcommittee led by former ISAC member Joe DiTomaso. When problems were identified, Joe spearheaded the biological control and pest management paper that ISAC reviewed and approved in October 2015. Many complaints were received about biocontrol and how it is managed, so I developed the White Paper in consultation with experts on biocontrol and the biocontrol community. It initially began as one very large paper, but the decision was made later to divide it into two separate papers – one on Integrated Pest Management (IPM), the other on biocontrol.

The first paper on IPM was completed on October 30, 2015. It received ISAC approval with all corrections incorporated and should be in publication soon. This second white paper on biocontrol is a carryover, which ISAC members were given the opportunity to review in advance of this meeting. If approved, it will get hammered out sometime in November and then go into the publication process. Questions arose regarding whether the paper and corresponding recommendations needed to be approved separately or together as one package. The White Paper and recommendations were voted on separately.

No discussion was needed on the document as written. There was a motion to approve the White Paper on Biocontrol. Bob Van Steenwyk moved; seconded by Otto Doering.

The ISAC White Paper on Biocontrol was approved unanimously.

Biocontrol White Paper Recommendations: Recognizing that classical biological control plays an essential role in the suppression of invasive species in both natural and agricultural ecosystems, ISAC recommends that NISC agencies:

1. Develop transparent criteria to prioritize those invasive species for which classical biological control is the most cost-effective control option.
2. Provide sufficient resources to fully support the development, implementation and monitoring of classical biological control programs for high priority invasive species.
3. Identify and establish collaborations with local scientists in the country of origin to facilitate collection and shipment of new biological control agents in areas of limited accessibility (e.g., due to political instability).
4. Work with the International Organization for Biological Control of Noxious Animals and Plants Global Commission and the Convention on Biological Diversity (Nagoya Protocol) to exclude biological control agents from the list of organisms regulated by access and to benefit sharing procedures.
5. Encourage APHIS and DHS to continue their efforts to streamline shipping and entry requirements for the importation of biological control agents approved for testing and/or quarantine rearing.
6. Institute a holistic ecological risk/benefit analysis in the regulatory decision-making process that assesses the threat, treatment options, and benefits (economic, environmental, social, and cultural) of the release of biological control agents.
7. Establish a defined process and timeline for the approval or disapproval of requests to import and release new imported biological control agents.
8. Improve communications regarding biological control decision-making among the TAG, APHIS, and FWS and the classical biological control petitioner.
9. Review federal permitting requirements, such as the interstate movement of fully established classical biological control agents and associated host material and the movement of not fully established biological control agents with the aim of improving the implementation of biological control.

Questions/Comments:

Question (B. Parker): With regard to Rec. #6, is it a cost or ecological?

Answer (B. Van Steenwyk): It's risk, not cost.

Dr. Van Steenwyk entertained a motion to approve; seconded by Bonnie Harper-Lore.

Recommendations from the White Paper on Biocontrol were approved unanimously. Having produced this deliverable, the ISAC Subcommittee on Control and Management is hereby disbanded.

Update from the NISC Secretariat

Jamie Reaser, NISC Secretariat Executive Director

Dr. Reaser provided an overview of some of the changes since last meeting and gave an update on work initiated since the last meeting.

Staffing

1. *Position Titles:* Position titles within NISC-Sec have been changed to reflect updated portfolios:

- Stas Burgiel is now the Assistant Director for Policy and Program Coordination.
 - Kelsey Brantley’s position has been expanded. She is now the Coordinator for NISC Secretariat and ISAC Operations.
2. Departures: After making significant contributions to NISC, two veteran staff members have moved on to opportunities with USDA/APHIS.
 - Phil Andreozzi is now focusing on the Pacific.
 - Chris Dionigi is now working on weed risk assessment.
 3. Staff Additions: NISC-Sec has brought on new team members and is currently advertising vacant positions.
 - Jason Kirkey has been hired as Director of Publications and will be on-boarded in late July 2016.
 - Assistant Director for Interdepartmental Coordination (senior level) has been advertised.
 - Senior Coordinator for Science Technology Initiatives (Chris’s old position) will be advertised in late July 2016.
 - Hiring of a Policy Analyst (2 year term) and a Project Manager are in process.
 - A detailee is on staff from the DOI Office of Insular Affairs:
 - Wendy Fink is looking at authorities for early detection and rapid response (EDRR) and crises management. For crises management, she is looking at various models and how those models may feed into some invasive species response model for EDRR.
 - Four interns are on staff this summer:
 - Amy Ferriter, University of Idaho
 - Genevieve Brune, University of Maryland, Baltimore County
 - Sarah Veatch, American University
 - Robert Boyd, College of William and Mary
 4. Other Staffing Opportunities: NISC is also looking at bringing others from the Administration in through Senior Executive Service (SES) rotational opportunities.

Major Initiatives

1. Federal Policy Options Paper (Aquatic): Completed August 2015. Agencies adopted the template and are reporting on actions. They are looking at gaps and consistent messaging. There will be a discussion in November at the Aquatic Nuisance Species Task Force (ANSTF) meeting. If any members have interest, please reach out to Stas Burgiel, NISC-Sec; Craig Martin, FWS; or Hilary Smith, DOI.
2. EDRR Framework: Recognition is given to Hilary Smith, DOI and Stas Burgiel, NISC-Sec for their critical contributions to the completion of this report, which was released February 2016. Emphasis is on increasing leadership, tools, capacity, and decision making to support a national EDRR program. There are five recommendations to the NISC Co-Chairs, which are tied to currently existing programs and resources within the agencies. For questions or interest in authorities, please contact Stas Burgiel, Hilary Smith, Wendy Fink, or Jamie Reaser.
3. Arctic Council: A “sub-group” of the Conservation of Flora and Fauna (CAFF) Working Group met in Akureyri, Iceland March 30–April 1, 2016 to work on an action plan. There are three categories of recommendations: 1) inspire urgent and effective actions; 2) advance capacities for well informed decision making; and, 3) undertake prevention and EDRR initiatives. Review by the CAFF board will take place in August, followed by Arctic Council Ministerial review in May 2017. Sarah Veatch is playing a substantial role for NISC. There is discussion about a possible campaign, “Arctic Invasive Alien Species: not cool”.

4. *Invasive Species Documentary*: Filming began during several National Park Service/National Geographic Society BioBlitz events held in Washington, DC on May 20–21, 2016. This full-length film makes personal linkages to invasive species and encourages personal action. The goal is to have initial screening during National Invasive Species Week in February 2017, followed by release to the general public.

Question (B. Wiltshire): Re: Outreach and Education. Where does it fall under staff assignments?

Answer (J. Reaser): Contractors are handling most of the work right now with NISC staff assisting with coordination.

5. *U.S. Territories Invasive Species Coordinating Committee*: A workshop and training course for the Pacific region was held in Hawai'i in June 2016. One senior official and staff member from each of the invited territories attended, and each area is creating a high-level Territorial Action Plan. The Office of Insular Affairs is taking the lead on formalizing the body. For more information, please contact Jhoset Burgos Rodriguez.
6. *North American Leadership Summit*: In part, there were significant efforts to collaborate at a North American level, including through the Commission on Environmental Cooperation (CEC), which was created through a side agreement to NAFTA. Such cooperation has waned in the recent past, but over the past few months there have been multiple senior level discussions between the U.S., Canada, and Mexico that have addressed invasive species. Additionally, more technical discussions progressed in the margins of the Convention on Biological Diversity's scientific meeting in April, as well as at the Trilateral Committee for Wildlife and Ecosystem Conservation and Management in May. These efforts culminated at the North American Leadership Summit held on June 9, 2016. The presidents/prime ministers from the three countries met and adopted a statement on climate change, clean energy, and the environment that included a commitment to work together in establishing a tri-level working group to initiate a survey of existing trans-boundary invasive alien species projects and initiatives. Next steps: Waiting for the CEC to release its call for proposals for trans-boundary projects. For more information, please contact Stas Burgiel or Jamie Reaser.
7. *Crosscut budget*: This has been ongoing since 2004. This year (2016), 12 departments responded. The crosscut has been slightly delayed given the extra time needed to assist additional agencies. 2015 actual expenditures rose slightly less than \$100 million. 2016 enacted projections provide an additional \$50 million. HHS is going to be providing input. The final version is expected in July/August. For more information, please contact Stas Burgiel.
8. *NEPA guidance*: There is a need for guidance to federal agencies for NEPA as it relates to invasive species. CEQ sent out a data call in early December 2015. NISC-Sec is fully engaged with CEQ to get it over the finish line. NISC intern Genny Brune is working on this project. Next steps with CEQ will be determined after their analyses are complete.

Question (S. Cameron): Will this lead to a decision about categorical exclusions?

Answer (J.Reaser): Yes, it could lead to discussions about categorical exclusions.

9. *Reviews of 2001 and 2008 Management Plans*: Reviews in the past were piecemeal. Congress, et al., recognized the need for a comprehensive review. Both plans are being reviewed to answer the following:
 - a. What has been implemented, completed, or not completed?
 - b. What outputs exist for what has been completed, and how can they be accessed?
 - c. What are the lessons learned regarding making management plans more effective in the future?
 - d. Are there any outstanding issues/action items that still warrant completion, and how do we accomplish it?

Chris Dionigi was the lead on this task. Stas Burgiel and Jamie Reaser take over upon his departure.

10. Progress on the 3rd Management Plan: Kris Sarri will provide remarks on the Management Plan during the presentations made by the Principals.
11. World Conservation Congress: Next meeting will be September 1-10, 2016 in Honolulu, Hawai'i, during which time the NISC-Sec will lead a day-long training course on institutionalizing invasive species programs, provide a brief introduction to the invasive species documentary, and collect more footage for the production. Several federal agencies are contributing to other programs and poster sessions on invasive species.
12. NISC Website: NISC-Sec will be overhauling the website. Once on board with NISC staff, Jason Kirkey will make website revision a priority. He will have the recommendations for improvement received thus far. More input is welcome.
13. NISC Annual Report: The NISC-Sec will be producing an annual report. It will be more like a magazine than a typical government document.

Break taken at 10:05am. General Session resumed at 10:30am.

Discussion with NISC Principals

Kris Sarri, U.S. Department of the Interior (DOI)

Christine Dawson, U.S. Department of State (State)

Thomas Novotny, U.S. Department of Health and Human Services (HHS)

Mark Rupp, U.S. Environmental Protection Agency (EPA)

Carrie Thompson, U.S. Agency for International Development (USAID)

Remarks from Kris Sarri, Principal Deputy Assistant Secretary – Policy, Management and Budget, Department of the Interior

Ms. Sarri provided comments on behalf of the other co-chairs, as well as a DOI update.

NISC Co-Chair Remarks

Robert Bonnie (United States Department of Agriculture) and Michael Weiss (United States Department of Commerce, NOAA) could not join us today. Big thank you to Bob Wiltshire for his leadership on ISAC and all his work. Chris Dionigi has been a force at NISC, and I'm sorry he could not be here this morning. USDA is very lucky to get him. Kris acknowledged his great work as he moves on.

Great news...we have a management plan! Between late last night and early this morning, we got approval from all the federal agencies. Jamie Reaser and Kelsey Brantley will work quickly to get it to all the members of NISC and ISAC. Big thank you to the NISC member agencies and the NISC-Sec staff for getting it cleared before this meeting. Really appreciate it. It's a strategic, high-level plan that aligns with the executive order and provides strategic initiatives that reside within the authorities of agencies. It looks at interdepartmental coordination and at leveraging resources – human, technical, financial, etc. It reflects that there is work the federal government can do as well as ISAC, states, localities, and tribes. It really looks at what everyone can do and winds up actions that can be accomplished in two years. It is ambitious, but it strikes a balance between the achievable and pushing the envelope. We are making sure we have the resources to do the action items. Many have existing resources behind them. The entire federal team has been involved, so if you have any questions, please feel free to ask.

NISC is in a process of change. Robert and Michael, who were able to join the last meeting, helped set the changes. In keeping with the original intent of Executive Order 13112, NISC engagement is again being elevated to the principal level. Please see background papers for what each agency is doing.

DOI Update

DOI work on invasive species: In recent meetings, ISAC shared recommendations on early detection and rapid response (EDRR) and biological control, so I wanted to briefly comment on the Department's response to those recommendations.

EDRR was an important recommendation. At its 2015 spring meeting, ISAC recommended that NISC member agencies develop the EDRR Framework and engage non-federal stakeholders in developing that framework. In February of this year, the interagency team released the EDRR Framework. Because of the large focus, we bring a lot of that work into the management plan. The EDRR Framework highlighted the critical need for preparedness to detect and respond to emerging invasive species. It also reinforced the importance of working with partners across jurisdictions.

We are working with USDA colleagues, state agencies, and other organizations in Hawai'i to minimize the impact of Rapid 'Ohi'a Death disease, a devastating fungal disease causing mortality in 'ohi'a trees, an ecologically and culturally significant native tree.

We also are collaborating with HHS and across the Federal government on a coordinated response to the Zika virus. We are looking at how to look at it from a public health and wildlife perspective. We are looking at the work this team is doing and how it translates to what we are doing.

Biological controls: ISAC recommended that FWS assess opportunities to create efficiencies during its Section 7 consultations for biological control agents. FWS is collaborating with APHIS and the Technical Advisory Group. It's identifying a process for coordinating internal FWS review among a number of subject matter experts and has completed a number of reviews of Biological Assessments for various species and is preparing concurrence letters for the release of these biological controls. ISAC made a number of recommendations and those were shared across DOI. FWS generally agrees with those recommendations and their integrated pest management (IPM) policies and practices are in alignment.

Introduced Hilary Smith—she has helped bring together a DOI Invasive Species Task Force. The Task Force serves as an inter-agency leadership team to help guide high-level, cross-cutting invasive species initiatives. Its primary responsibility is guiding implementation of the DOI Invasive Species Action Plan. We are also working on a departmental management chapter, evaluating information management needs and opportunities for interoperability, and assessing performance metrics to evaluate performance effectiveness.

FWS proposed various rules regarding injurious wildlife under the Lacey Act to help minimize the risk of introducing harmful species. In October, FWS proposed to list 10 potentially invasive freshwater fish based on Ecological Risk Screening Summaries they developed. A final rule likely will be published in August.

In January, FWS published an interim rule to list 201 species of salamanders as injurious because they pose a serious threat to native salamanders as carriers of *Batrachochytrium salamandrivorans* (Bsal), a lethal fungus commonly referred to as Bsal. The Service anticipates publishing a final rule early in the next Administration.

The Department recognizes the value of and promotes landscape-level approaches. Invasive species are a key component to how to make sage brush ecosystems more resilient to fire and cheatgrass.

In January, we were pleased to welcome Dr. Susan Pasko as the Executive Secretary of the Aquatic Nuisance Species Task Force. Susan is based at FWS, which co-chairs the ANSTF with NOAA.

The President's FY 2017 request included \$106 million for invasive species programs, including \$1.5 million for implementation of recommendations in the EDRR Framework. We did not get the \$1.5 million for EDRR though. We will continue to work within the Department, across the Federal government, and with partners to leverage resources necessary to address invasive species more effectively.

Remarks from Christine Dawson, Acting Deputy Assistant Secretary – Conservation and Water, Department of State

To access the slides accompanying this report, please visit www.doi.gov/invasivespecies.

Invasives are inherently an international issue. Like any rollercoaster, we are on an uphill of national awareness. It's a cross cutting global issue impacting countries around the world.

Invasives do not recognize borders. Control and eradication need international effort. State is seeking to leverage experts within and outside of the U.S. to train other governments on how to manage at a global level.

We have found that regionally-focused efforts have more impact on the ground. Efforts in the Great Lakes are ongoing, as well as those put forth by the Arctic Council. With the goal of expanding regional efforts, we will be looking to ISAC for advice on where expansion may be useful.

Trade is a big issue, and agreement negotiations are high priority. It is recognized though that trade can cause the spread of invasives. The Trans-Pacific Partnership (TPP) has strong language about the spread of invasives. State is working on enhancing collaboration for bilateral and technical collaboration. We are also working with Pacific countries, which are combating climate change, and invasives are making it worse. We have a Caribbean working group in place to combat lionfish. Any ideas on other areas to launch efforts would be greatly welcomed.

Zika is another part of the issue, and State is working on ways to address it. We are doing outreach using every opportunity possible to go out to other governments.

Eight years ago, the Undersecretary of Management started the Greening Council at the State Department. All plantings around State Department facilities are to be pollinating and non-invasive species. Invasives is another way to advance foreign policy. It encourages democracy and free flow of information and science, and opens it up to the public.

When the U.S. speaks in the international arena, people listen and realize we have the best scientific expertise in the world. I deeply appreciate your work and efforts.

Remarks from Mark Rupp, Deputy Associate Administrator – Intergovernmental Relations, Environmental Protection Agency

Thank you for your participation on this committee. I read the minutes from last meeting and was impressed by comments made by Eric Lane of the Colorado Department of Agriculture, about strengthening relationships with states and tribes. EPA has a FACA Committee and is happy to help make connections for ISAC to work with our group. EPA is a fairly small agency with not many resources, but has very smart people. We have some grant money and have done work with the Great Lakes since 2010. It's a way to get resources to the Great Lakes. Some funding has been used to work with FWS on Asian carp, as well as to the states for work on grass carp in Michigan and Ohio. EPA has also resourced out to contractors to develop reports, especially on ballast water management. We are working with the Naval Research Lab on ballast water. Our Regional Carp Committee is updating plans with contingency plans to stop the spread of carp. EPA has lead work on early detection and has been working closely with FWS.

Remarks from Carrie Thompson, Deputy Assistant Administrator – Economic Growth, Education and Environment (E³), Agency for International Development

My team is responsible for one of the three “E”s—Environment. State and USAID work closely together. My NISC policy liaison, Victor Bullen, is with me today. Feel free to ask him questions later. USAID has six ongoing projects with \$2.5 million in 2015 going to invasive species. We allocate funding across the management plan. The majority of funding goes to EDRR and for control and management. One of our projects is focused on Ethiopia and Gambia. Projects in the Caribbean focus on coffee and Lionfish control. Projects in Nepal have elements that touch on six of the seven general categories of activity recorded in the NISC crosscut budget. USAID requires that all projects have an environmental component, and part of that is invasives—it's built into its processes. Some projects are required for mitigation action. USAID also works with other governments to build their capacity to implement free trade agreements that they have with the U.S.

Questions/Comments:

Question (B. Parker): Will PowerPoint be made available?

Answer (C. Dawson): Absolutely. *NOTE: Presentation slides are available on www.doi.gov/invasivespecies/spring-2016-isac-meeting.*

Question (E. Clark): Given ISAC's mandate that it is an advisory committee, is there any way for us to look at eliminating export of invasives to other countries?

Answer (K. Sarri): Very good question. We are very concerned with prevention and response here, and I would like to discuss that side of the issue with the other NISC members.

E. Clark: Bullfrog has had devastating impacts on other countries.

K. Sarri: True of our fish to Latin America, too.

Comment (O. Doering): Re: exporting invasives – We also brought worms during the Bosnia conflict.

Question (O. Doering): More than half of the land is managed landscape. Looking at the different task teams under the Management Plan, you are slicing the apple a particular way, and we used to do it differently. Where does agriculture and forestry fit in? When looking at task teams, we are dealing with—and as we are in the task teams—where do things like agriculture and forestry pop up? Where should we raise it?

Answer (K. Sarri): I'm going to defer to Bob Wiltshire and Jamie Reaser to answer specifics regarding task teams. As a government, we are looking at a land based management approach. A lot of times, we look at skills and resources and let those agencies figure out how to do the management approach. We are looking at tools rather than being specific. Also looking at ecosystems.

Otto Doering: It helps.

Bob Wiltshire: We will discuss task teams after this.

Post Remark Questions/Comments:

To Carrie Thompson

Question (B. Harper-Lore): You are using \$2.5 million worldwide for invasives on six projects?

Answer (C. Thompson): I will share the write up that provides more detail on the six projects. They are modest activities and sometimes invasives are some elements of it.

Comment (S. Cameron): I want to express a hope—Congress and the President have decided to expedite the transition process. I would urge everyone to brief both nominees and transition team so that the new Administration has grounding when it comes in on invasive species.

Question (B. Van Steenwyk): There are active activities abroad looking at potential invasive species that may come into the U.S. There is an example of an invasive that was from Japan and all the literature on it was in Japanese, which made it very difficult to learn about it. Can they take a full look at all invasives that may come to the U.S. and help translate literature in decipherable material?

Answer (C. Thompson): We know getting it right is critical. If there is some particular interest and, if it is a place we are working with, we can collaborate, but we do not have the budget to do the larger scale effort. I am relatively new to the topic... Victor? (deferred to V. Bullen)

Answer (V. Bullen): A lot of their projects are dealing with prevention to specific species, especially with agricultural production. They do not have a strategy for prevention of species coming into the United States. We can work with our trade partners to detect and prevent transmission.

Comment (B. Van Steenwyk): This isn't about detection and prevention. The issue is species coming in and us scrambling to get literature about it and having a very difficult time.

Answer (C. Dawson): There is a challenge of getting documents across the board, because we do not have the budget for translation. It's not something that State can do.

Answer (K. Sarri): Let's take that back to my international staff. Both USDA and Interior have international programs that we may be able to help work with counterparts in State and USAID to look at translation issues.

Answer (Hilda Diaz-Soltero, USDA): Look at invasiveness in other species so they can understand what may come.

B. Van Steenwyk: We need a contact person for translation.

John Peter Thompson: Given the extent of USDA's involvement in invasive issues, I encourage USDA to be at the table at the next meeting.

To Kris Sarri

Question (B. Harper-Lore): You mentioned bio controls and FWS finding efficiencies. I am particularly interested in this issue. There are a number of examples where the process came to a halt. Are you making progress?

Answer (K. Sarri): I defer to Hilary Smith or FWS.

Answer (H. Smith): Cindy Hall has been the FWS coordinator. FWS addressed concerns at the fall 2015 ISAC meeting. The short answer is yes, progress is being made. Biological assessments are being updated, and there is consistency in their review, with concurrence letters. FWS has addressed many of the concerns that ISAC has raised.

B. Harper-Lore: We are not seeing any results on the ground.

K. Sarri: We will continue efforts. You may not be seeing results on the ground yet, but we are moving forward.

To Christine Dawson

Question (S. Southey): \$2.5 million is a tiny proportion of your budget. Has there been any effort how to leverage investments around the world on invasive species? A more proactive look?

Answer (C. Dawson): There is no mandate to control flow back to the U.S. We are working with other countries when invasive species comes in and impact its agriculture. It does raise awareness in that

country. It is an indirect benefit. We have not done a systematic look, but maybe we could. It's a good suggestion.

Comment (E. Clark): I'm frustrated by the "silo mentality." This is a perfect example to leverage benefits, especially with rapid response. There are so many permitting programs that require reporting, but there's no consistency in reporting requirements. We are constantly confronting emerging diseases and are funded in part by the Defense Department. We are looking at bioterrorism. We cannot wait until this stuff is happening. We need a shift in mindset as well as budget.

Answer (C. Dawson): A very good point. Across the board, the Administration has been looking at resilience work, and State gave some seed money.

Ed Clark: Is that a potential role for this advisory committee for synergistic work?

Kris Sarri: Yes. It is helpful when folks are looking in from the outside.

Remarks from Thomas Novotny (HHS), Deputy Assistant Secretary – Health (Science and Medicine), Department of Health and Human Services

The question/comment period was paused to allow remarks from Dr. Novotny, who was delayed due to scheduling conflicts.

HHS recognizes there are health implications to invasive species but has not assessed where it stands right now. We are looking at the budget across the agencies where invasives may have equity. CDC is at the top of the list and has a significant interest, and I am very enthusiastic about opportunities for engagement in issues like Influenza and Zika. Some issues have implications in terms of the vector. Another common issue is the pathways with regard to movement of people and goods across borders. IHS is another place because of the impact on vulnerable population. The Assistant Secretary for Preparedness and Response deals with the crises. I am surveying the agencies within HHS to see what they are doing and how to work together. I want to outline issues seen in terms of human health: 1) direct effects—infected diseases that spread because of invasive species, and whether they can be managed from an ecological side; 2) indirect effects—e.g., fisheries that are destroyed; and 3) health care (access to health care)—ways to evaluate that needs be economically addressed.

Genetically Modified Organism (GMO) trials for mosquitoes so that they cannot carry Zika, etc. are underway. For example, failure in vector control in Puerto Rico is currently being addressed by use of pesticides that may have other adverse impacts, which could potentially be avoided with GM mosquitoes. Use of GMOs to control disease is not futuristic—it's happening now. HHS supports the One Health concept. The CDC facility at Ft. Collins, CO has a One Health initiative on emerging and re-emerging infectious diseases.

I look forward to a more Department-wide approach.

Post Remark Questions/Comments (resumed):

To Mark Rupp (EPA)

Question (S. Franklin): Programs may indirectly impact programs like CWA, etc. How are you including impacts to invasive species when you do those programs? Certification training for pesticide applications

Answer (M. Rupp): Not sure, we will look into that.

To Tom Novotny (HHS)

Comment (S. Cameron): Thank you for your remarks. Re: early detection and rapid response, I highlight the CDC as a model for how to deal with EDRR that could be used in the context of invasive species.

John Peter Thompson applauded and expressed his appreciation to the NISC Principals for attending. Bob Wiltshire echoed his thanks and reminded the group that agency reports are available online at www.doi.gov/invasivespecies/spring-2016-isac-meeting.

OVERVIEW OF ISAC TASK TEAMS

Dr. Jamie Reaser, NISC Secretariat Executive Director

There have been requests for more time during the meetings for task teams. How can we use the meetings more effectively? For this meeting, most of the time will be devoted to task teams, with opportunities for “cross-pollination.” Additional experts have been brought in to provide context for collaborative discussion, which supports ISAC advising NISC. In the past, there have been few requests from the federal side to ISAC, so there was recipient audience for ISAC’s advice. That entire process has now been “turned on its head.” The task teams will address recognized issues from the Management Plan, Executive Order, and/or other documents. Additionally, ISAC can identify emerging priorities and recommend that NISC make them a priority for action.

Task teams are comprised of ISAC members, but may need additional expertise outside of ISAC. Each task team has been assigned a Designated Federal Official (DFO), which is required under FACA. All task team notes become part of the federal record and are included in the meeting minutes.

ISAC members may serve on more than one task team—you are not locked into any specific team. You are welcome to participate in as many task teams as you want. You may reach out to other non-feds as a resource. In accordance with FACA, task teams are considered child committees under the parent ISAC. Therefore, any work produced by task teams must be submitted to the full ISAC for consideration prior to adoption.

The “themes” of the five task teams below were chosen based on NISC priorities and with the following considerations: 1) Is there sufficient talent on ISAC to address a particular issues?; 2) Are there enough people on ISAC that can deal with this?; and 3) Are there clear ways forward?

- **Federal/State Coordination:**
This team will go back to the original Executive Order (should have been done 16 years ago).
- **Federal/Tribal Coordination:**
This team will also go back to original Executive Order (should have been done 16 years ago).
- **Wildlife Health:**
This team will work on identified gaps or lack of clarity, uncertainty related to authorities, and piecemeal issues in the context of wildlife health. There is no clearly defined package of authorities.
- **Infrastructure:**
This team will also work on identified gaps or lack of clarity, uncertainty related to authorities, and piecemeal issues, but in the context of infrastructure. There is no clearly defined package of authorities. Crazy ant, etc.
- **Gene editing:**

This is an emerging issue that DOD inquired about during a conference call, and several other agencies indicated common interest. Stas Burgiel staffing, brought in talent to look at this. Process will be watched nationally and internationally.

To facilitate the task team deliberative process, all task team members have each been provided a flash drive which contains the following:

- Team-specific Suite of Documents
- List of Task Team Participants
- Strategic Planning Table
- Additional References
- Guidance on Crafting Effective Recommendations

Before dispersing to their respective teams, Dr. Reaser gave the group some reminders:

1. Reminder that advice is going to highest level of government. These senior-level officials are not technical experts.
2. Recommendations are likely to be extracted, so they should be short, to the point, and be able to stand on their own.
3. Recommendations should be bold, yet practical.
4. Consider recommendations in the context of a new administration. Recognize that deliverables will be some of the first things that the new principals will see.

Questions/comments:

Question (M. Meyers): Is there a 60-day deadline for completion?

Answer (J. Reaser): It is encouraged, but not required. Scale up to Task Team.

Question (L. Meyerson): How should we use the strategic planning tables?

Answer (J. Reaser): Advised that task teams review the Strategic Planning table format and move through it quickly and see if you want to add anything. Resources, gaps, etc. can be added at Task Team level. Please complete the second page – assignments and deadlines. It’s important that everyone’s roles and responsibilities are clear.

Comment (O. Doering): Key is that this is a changing buffet – not topics that will be longstanding. We work on them and move on.

Response (J. Reaser): Yes, these Task Teams are not standing committees (as was in the past), as one reaches an output, it will sunset and we will take on other issues.

Comment (B. Wiltshire): We don’t want to “silo” anybody, so at the end of each day, teams will give a report to the full ISAC for member input and encourage “cross pollination”.

Task Team Assignments

| Federal-Tribal | Federal-State | Gene Editing | Infrastructure | Wildlife Health |
|-------------------------|----------------------|---------------------|-----------------------|------------------------|
| C. Bargeron | S. Ellis | S. Burgiel, DFO | P. Burch | E. Clark |
| L. Buchanan | S. Franklin | K. Campbell | S. Cameron | C. Martin, DFO |
| M. Falck | A. Gibbs | E. Mills | J. Crossland, DFO | M. Meyers, Chair |
| J. Maroney | B. Hyatt, Chair | J. McFarland | O. Doering | D. Starling |
| B. Parker, Chair | L. King | L. Meyerson, Chair | A. Ferriter | B. Stewart |
| J. Reaser, DFO | C. Okada | M. Stebbins | B. Harper-Lore | N. Stone |
| S. Southey | H. Smith, DFO | B. Van Steenwyk | J.P. Thompson | G. Tabor |
| M. Wright | | | D. Waitt, Chair | J. White |
| G. Zavadzkas | | | B. Wiltshire | |

Bob Wiltshire adjourned the group to get lunch and return for the Members Forum.

ISAC MEMBERS FORUM

Discussion started over lunch on July 12 and then continued later that afternoon and finished during lunch on July 13. ISAC members were asked to describe their background and identify an emerging issue if they chose.

Carol Okada, Hawaii Department of Agriculture: Carol has worked on issues around federal preemption of state regulations as well as the state's right to inspect imported goods. Invasive species has been a key factor in the expansion of the state's port system. In the 1990's, a joint Federal-State Environmental Impact Statement (EIS) identified invasive species introduction as an environmental risk associated with direct overseas flights landing on Maui at Kahului Airport. Because of the concerns on the EIS, DOI asked the CEQ to undertake a review of the environmental assessment and to make recommendations. This led to a Federal-State Alien Species Action Plan, which was expanded statewide to eventually become Hawaii's Biosecurity Plan.

Scott Cameron, Reduce Risks from Invasive Species Coalition (RRISC): Scott formerly worked across a range of federal agencies including USFWS, OMB, and as a deputy assistant secretary for DOI. His work with RRISC is focused on raising the profile of invasive species issues, primarily on Capitol Hill, and has convened a range of Congressional briefings and played a major role in coordinating the National Invasive Species Awareness Week. Emerging priorities including identifying funding opportunities in the next Farm Bill, horizon scanning for emerging species of concern, operationalizing EDRR, getting biocontrol agents to market faster, and facilitating the Lacey Act injurious wildlife listing process.

Jeff White, Newmont Mining Corporation, Elko Land and Livestock Company: Jeff works on landscape management of a ranch complex in the Great Basin that includes more than 400,000 acres of private lands in addition to BLM grazing allotments. Sage grouse conservation and cheatgrass control are major priorities in an overall effort to use rangeland management tools to reestablish and maintain the functionality of that system. He is also developing a partnership with the Nature Conservancy to incorporate their conservation forecasting tools into those efforts.

Bonnie Harper-Lore, Restoration Ecologist (ret.): Bonnie has a history of work with the state of Minnesota and the U.S. Department of Transportation (DOT). At DOT, she was involved in the formation of the Federal Interagency Committee for the Management of Noxious and Exotic Weeds and North American discussions through the Weeds Across Borders effort (now the North American Invasive Species Forum). Currently, Bonnie works on a number of legislative group efforts in Minnesota, as well as on highways and pollinator habitat.

Marshall Meyers, Meyers and Alterman: Marshall has a long history working on the Lacey Act injurious wildlife provisions and with the International Airline Transport Association on the movement of live animals by plane. Marshall was formerly the Executive Vice President and General Counsel of the Pet Industry Joint Advisory Committee.

Laura Meyerson, University of Rhode Island: Early in her career Laura was an AAAS fellow where she was detailed to work with the NISC Secretariat and then the Global Invasive Species Program. Her current focus is on invasive plants with a particular interest in how technology can improve our ability to detect invasions as well as the relation between genome size and invasiveness. A key emerging issue is how biogeography prompts different behaviors of an invasive species across the continent.

Ed Clark, Wildlife Center of Virginia: Through the Wildlife Center of Virginia, Ed has focused on OneHealth approach towards animal health, particularly with the Center's engagement of veterinary students. Ed is interested in the implications of emerging disease for native wildlife species, as well as with the social aspects of public engagement and environmental mediation/facilitation.

Otto Doering, Purdue University: Otto is an agricultural economist who initially worked in Southeast Asia. His research focuses on changing agricultural technology and its risks, resilience, and resistance to pesticides, soil health, and cover crops. He identified climate change and the impact of increased episodic weather events (e.g., on soil erosion) as an emerging issue.

Bob Wiltshire, Invasive Species Action Network: Bob has held a diverse array of jobs, but his focus on invasive species started with work on native cutthroat trout restoration. He came to ISAC as a representative of recreational fishing and is currently focused on inducing behavior change by targeting specific user communities (e.g., recreational boaters). His emerging issue was the recent finding that non-motorized drift boats may be a higher priority risk for the movement of invasive mussels than was previously thought.

John Peter Thompson, Maryland Nursery and Landscape Association: John Peter is a fourth generation nursery-man who had been responsible for handling the operations of his family's nursery business. Through his career he's been focused on bridging the environmental and landscape/nursery communities and is interested in the ecology, history and politics of plants in Maryland. John Peter listed assisted migration as a key emerging issue and highlighted the relevant knowledge base of the nursery industry.

Damon Waitt, UNC Botanical Garden: Damon was formerly a botanist with the Lady Bird Johnson Wildflower Center in Texas. He was instrumental in starting the Texas Invasive Plant Pest Council, and also served roles with the National Association of Exotic Pest Plant Councils and the National Environmental Coalition on Invasive Species. Damon has an interest in outreach and public awareness.

Sean Southey, PCI Media Impact: Educated as an environmental economist, Sean worked with the Canadian Ministry of Environment and the U.N. Environment Programme before turning to social marketing work. He has focused on the development of communication campaigns that target the interface between biodiversity conservation and poverty reduction. He identified communicating around areas of complexity (not just a single message with a single action) as an emerging issue.

Bill Hyatt, Connecticut Department of Energy and Environmental Protection: Bill has a background in fisheries science and initially dealt with invasive species through his involvement with the Northeast Aquatic Nuisance Species Panel. Subsequently he was involved in Connecticut's invasive plant council and currently chairs the invasive species committee for the Association of Fish and Wildlife Agencies. His emerging issue is testing the use of CO² injection to prevent the movement of zebra mussel veliger in small waterways.

Blaine Parker, Columbia River Inter-Tribal Fish Commission: Blaine was introduced to invasive species through his work on white sturgeon and predator control for native salmon. He has a particular focus on aquatic invasive species in the Columbia River Basin with particular attention to EDRR and recreational and commercial watercraft as pathways for introduction. Blaine identified climate change and the continued globalization of national economies as emerging issues.

Nathan Stone, Engle-Stone Aquatic\$, LLC: Nathan started his career doing development work in aquaculture as a Peace Corps Volunteer in the Philippines and at universities in Central America. Subsequently he has worked on the issue in the U.S. with particular attention to the role of biosecurity

plans and state inspections/testing to improve aquaculture operations. He raised the question of how to respond to eDNA detections as a critical emerging issue.

Brent Stewart, Hubbs-Sea World Institute: Trained as a wildlife biologist, Brent has focused on a wide range of issues with the Hubbs-Sea World Institute, including physiology, genetics, acoustics, seal populations in the Channel Islands, whale sharks in the Indian Ocean, invasive species on islands, and most recently brown and golden trout in Lake Zermatt, Switzerland.

Chuck Bargeron, University of Georgia, Center for Invasive Species and Ecosystem Health: Chuck is focused on the use of information technology as a tool to improve invasive species management. He is the chair of the North American Invasive Species Network, which is hosting the next North American Invasive Species Forum (May 9-11, 2017, Savannah, GA).

Slade Franklin, Wyoming Department of Agriculture: Slade coordinates a range of weed control activities and addresses issues with grasshoppers, prairie dogs, and mosquitoes. He serves on the Western Weeds Coordinating Committee and views the impacts of cheatgrass on sage grouse habitat as his key emerging issue.

Bob Van Steenwyk, University of California, Berkeley: Bob is an extension entomologist emeritus. He has worked on a range of invasive insects including the Med fly, olive fly, European grapevine moth, spotted wing drosophila, and brown marmorated stink bug. He identified conflicting laws and regulations that prevent action on invasive species as an emerging issue.

Janis McFarland, Syngenta Crop Protection, LLC: Janis is head of Regulatory Affairs for Syngenta and she also serves on the board of the Weed Science Society of America.

TASK TEAMS

The five task teams met four times over the course of the ISAC meeting; once on Tuesday afternoon, in the morning and afternoon sessions on Wednesday, and again on Thursday morning. Each task team session was followed by a period of status reports and discussion by the entire ISAC. See appendices for summaries of the task team deliberations.

PUBLIC COMMENT

No speakers.

Committee adjourned for the day, and will reconvene Wednesday, July 13, 2016 at 8:30 am.

Day 2: Wednesday, July 13, 2016

ISAC MEMBERS PRESENT

| | |
|----------------------------------|--|
| ROBERT WILTSHIRE (Chair) | Invasive Species Action Network |
| JOHN PETER THOMPSON (Vice Chair) | Self |
| SUSAN ELLIS (Secretary) | Retired, California Department of Fish and Wildlife |
| SCOTT CAMERON | Reduce Risks from Invasive Species Coalition |
| CHARLES BARGERON IV | University of Georgia |
| EDWARD CLARK | Wildlife Center of Virginia |
| OTTO DOERING | Purdue University |
| SLADE FRANKLIN | Wyoming Department of Agriculture |
| BONNIE HARPER-LORE | Minnesota Invasive Species Advisory Council |
| WILLIAM HYATT | Connecticut Department of Energy and Environmental Protection, Bureau of Natural Resources |
| MARSHALL MEYERS | Meyers & Alterman |
| LAURA MEYERSON | University of Rhode Island |
| BLAINE PARKER | Columbia River Inter-Tribal Fish Commission |
| CAROL OKADA | Hawaii Department of Agriculture |
| SEAN SOUTHEY | PCI Media Impact |
| BRENT STEWART | Hubbs-SeaWorld Research Institute |
| NATHAN STONE | Engle-Stone Aquatic\$, LLC |
| ROBERT VAN STEENWYK | University of California, Berkeley |
| DAMON WAITT | North Carolina Botanical Garden, UNC-Chapel Hill |
| JEFF WHITE | Newmont Mining Corporation/Elko Land and Livestock Company |

COMMITTEE MEMBERS ABSENT

| | |
|-----------------|---|
| PAT BURCH | Dow AgroSciences |
| JANIS McFARLAND | Syngenta Crop Protection, LLC |
| ED MILLS | Cornell University |
| DAVID STARLING | Aqueterinary Services, LLC |
| GARY TABOR | Center for Large Landscape Conservation |

NISC STAFF AND POLICY LIAISONS PRESENT

| | |
|---------------------|---|
| ROBERT BOYD | NISC Staff |
| KELSEY BRANTLEY | NISC Staff |
| GENEVIEVE BRUNE | NISC Staff |
| STAS BURGIEL | NISC Staff |
| CHRISTOPHER DIONIGI | NISC Staff |
| AMY FERRITER | NISC Staff |
| WENDY FINK | NISC Staff |
| JAMIE REASER | NISC Executive Director |
| SARAH VEATCH | NISC Staff |
| VICTOR BULLEN | U.S. Agency for International Development |
| DOUGLAS BURKETT | U.S. Department of Defense |
| HILDA DIAZ-SOLTERO | U.S. Department of Agriculture |
| CAMILLE MITTELHOLTZ | U.S. Department of Transportation |

CAROLINE RIDLEY
JENNIFER SHINEN
HILARY SMITH

U.S. Environmental Protection Agency
U.S. Department of State
U.S. Department of the Interior

Bob Wiltshire called the meeting was to order at 8:30 am.

Members were provided ballots for officer elections, and reminded of task team breakout locations.

Chair Nominees

- Ed Clark
- John Peter Thompson

Vice-Chair Nominees

- Chuck Bargeron
- Laura Meyerson

Officers will serve a one-year term with responsibilities outlined in the bylaws. Results will be announced before meeting adjournment on July 14, 2016.

Members deliberated in task teams the entire day. The group reconvened at 5:00 pm for public comment.

PUBLIC COMMENT

No speakers.

Committee adjourned for the day, and will reconvene on Thursday, July 14, 2016 at 8:30 am.

Day 3: Thursday, July 14, 2015

ISAC MEMBERS PRESENT

| | |
|----------------------------------|--|
| ROBERT WILTSHIRE (Chair) | Invasive Species Action Network |
| JOHN PETER THOMPSON (Vice Chair) | Self |
| SUSAN ELLIS (Secretary) | Retired, California Department of Fish and Wildlife |
| SCOTT CAMERON | Reduce Risks from Invasive Species Coalition |
| CHARLES BARGERON IV | University of Georgia |
| EDWARD CLARK | Wildlife Center of Virginia |
| OTTO DOERING | Purdue University |
| SLADE FRANKLIN | Wyoming Department of Agriculture |
| BONNIE HARPER-LORE | Minnesota Invasive Species Advisory Council |
| WILLIAM HYATT | Connecticut Department of Energy and Environmental Protection, Bureau of Natural Resources |
| JANIS McFARLAND | Syngenta Crop Protection, LLC |
| MARSHALL MEYERS | Meyers & Alterman |
| LAURA MEYERSON | University of Rhode Island |
| BLAINE PARKER | Columbia River Inter-Tribal Fish Commission |
| CAROL OKADA | Hawaii Department of Agriculture |
| SEAN SOUTHEY | PCI Media Impact |
| BRENT STEWART | Hubbs-SeaWorld Research Institute |
| NATHAN STONE | Engle-Stone Aquatic\$, LLC |
| ROBERT VAN STEENWYK | University of California, Berkeley |
| DAMON WAITT | North Carolina Botanical Garden, UNC-Chapel Hill |
| JEFF WHITE | Newmont Mining Corporation/Elko Land and Livestock Company |

COMMITTEE MEMBERS ABSENT

| | |
|----------------|---|
| PAT BURCH | Dow AgroSciences |
| ED MILLS | Cornell University |
| DAVID STARLING | Aqueterinary Services, LLC |
| GARY TABOR | Center for Large Landscape Conservation |

NISC STAFF AND POLICY LIAISONS PRESENT

| | |
|---------------------|---|
| ROBERT BOYD | NISC Staff |
| KELSEY BRANTLEY | NISC Staff |
| GENEVIEVE BRUNE | NISC Staff |
| STAS BURGIEL | NISC Staff |
| CHRISTOPHER DIONIGI | NISC Staff |
| AMY FERRITER | NISC Staff |
| WENDY FINK | NISC Staff |
| JAMIE REASER | NISC Executive Director |
| SARAH VEATCH | NISC Staff |
| VICTOR BULLEN | U.S. Agency for International Development |
| DOUGLAS BURKETT | U.S. Department of Defense |
| HILDA DIAZ-SOLTERO | U.S. Department of Agriculture |
| CAMILLE MITTELHOLTZ | U.S. Department of Transportation |

CAROLINE RIDLEY
JENNIFER SHINEN
HILARY SMITH

U.S. Environmental Protection Agency
U.S. Department of State
U.S. Department of the Interior

Bob Wiltshire convened the meeting at 8:30 am.

RESULTS OF OFFICER ELECTIONS

The new officers of ISAC Class 9 are:

- Chair: John Peter Thompson
- Vice-Chair: Chuck Barger

ISAC will submit a recommendation to the NISC Secretariat to officially appoint the elected individuals as ISAC officers. Per the bylaws, the NISC Secretariat Executive Director will take those recommendations into consideration for the official appointment of ISAC officers.

The committee expressed their thanks to Bob Wiltshire for his work as Chair.

NEXT ISAC MEETINGS

- December 6-8, 2016, NMAI. Hotel: Holiday Inn (550 C St. SW, Washington, DC)
- July 11-13, 2017, NMAI. Hotel: Hyatt Place (400 E St. SW, Washington, DC)
- December 5-7, 2017, NMAI. Hotel: Holiday Inn (550 C St. SW, Washington, DC)

The first Innovation Summit may be held on December 5, 2016. Funding and other decisions to be made next week.

Possible themes for future work by ISAC task teams:

- managed relocation/assisted migration
- use of native plants/seeds for habitat restoration
- movement of watercraft across waterbodies (in coordination with ANSTF)

PUBLIC COMMENT

Lori Buchanan, Molokai/Maui Invasive Species Committee: Conveyed deep appreciation for engaging the state and native peoples of Hawai'i in ISAC's task team work. She stated her commitment to endeavor to engage native Hawaiians in key positions for the management of invasive species, most specifically with Hawai'i's Coordinating Group on Alien Pest Species and the Hawaiian invasive species council.

John Hughes, Drexel University: Stressed the need to look at the intersection of invasive species and human health in greater depth. Specifically, he discussed the indirect impacts on health from invasive species, such as power outages by crazy ants that may lead to increased heat stress, as well as the health consequences of reduced tree cover in urban areas caused by emerald ash borer.

Meeting adjourned at 12:00 pm.

Appendices (Task Team Breakout Summaries):

1. Federal-Tribal Coordination
2. Federal-State Coordination
3. Gene Editing
4. Infrastructure
5. Wildlife Health

APPENDIX 1

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Federal-Tribal Coordination Task Team

MEMBERS

| | |
|-----------------------|---|
| Chuck Bargeron | University of Georgia |
| Lori Buchanan | Molokai/Maui Invasive Species Committee |
| Miles Falck | Great Lakes Indian Fish and Wildlife Commission |
| Joe Maroney | Kalispel Tribe of Indians |
| Blaine Parker (Chair) | Columbia River Inter-Tribal Fish Commission |
| Jamie Reaser (DFO) | NISC Secretariat |
| Sean Southey | PCI Media Impact |
| Mervin Wright | Pyramid Lake Paiute Tribe |
| Gintas Zavadzkas | Miccosukee Tribe of Indians of Florida |

The Tribal Coordination Task Team included representatives from diverse Native Communities. These communities include treaty recognized tribes, executive order recognized tribes, State recognized tribes, and unrecognized tribes (e.g., Native Hawaiians). Due to differences in categories, not all Native Communities have the same protection, resources, and rights. Regardless of differences, all Native Communities understand that invasive species are negatively impacting their natural and cultural resources. Native Communities are particularly vulnerable to invasive species since ecosystems are used for subsistence, commerce, traditional knowledge education, and other cultural purposes. With this in mind, the Tribal Coordination Task Team emphasized the importance of including cultural resilience on invasive species management discussions. This would include a human aspect dimension that people can relate to.

Native Communities think and plan for generations ahead (7th generation plan). As such, some Native Communities have implemented programs to detect, respond, control, and manage invasive species. Despite this, Native Communities are still vulnerable because coordination with States and the Federal Government is ineffective, funding is limited, the amount of land to manage is vast, there is a need for capacity building, and sometimes their management plan is different from that of States and the Federal Government (e.g., introduction of non-native fish for recreational fishing on water traditionally used for sustenance fishing). Coordination with the Federal Government is probably the biggest limitation for effective invasive species management. Multiple authorities (e.g., treaty and executive order) mandate a consultation process between the Native Communities and the Federal Government. Nonetheless, Native Communities express their discontent at the consultation process since, in many cases, they are not consulted from the beginning. Rather, management is carried in a top-down manner as they are informed of an end product with limited opportunities to significantly contribute or reject projects. In addition, employees working directly with Native Communities lack the comprehension of the Native Communities-Federal Government relationship, especially the Trust Responsibilities.

Regarding invasive species management, the Tribal Coordination Task Team considers it a priority to address consultation issues, capacity building, and funding availability and flexibility. They estimate that effective consultation protocols—built on existing authorities and added to Federal employees that understand the Trust responsibilities—would significantly improve invasive species management. As a next step, the Tribal Coordination Task Team will: (1) develop a video narrating the story of invasive species impact on Native Communities' cultural resources across the country; (2) create a listserv to disseminate information regarding invasive species and Native Communities; (3) revise available funding for invasive species and ask for already awarded proposals to use as models; and (4) revise existing consultation authorities in order to create a Native Communities invasive species consultation protocol.

APPENDIX 2

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Federal-State Coordination Task Team

MEMBERS

| | |
|--------------------|--|
| Bill Hyatt (Chair) | Department of Environmental Energy and Protection |
| Hilary Smith (DFO) | Department of the Interior/Office of the Secretary |
| Susan Ellis | Department of Fish and Wildlife (Retired) |
| Slade Franklin | Wyoming Department of Agriculture |
| Ann Gibbs | Maine Department of Agriculture |
| Linda King | Florida Fish and Wildlife Conservation Commission |
| Carol Okada | Hawai'i Department of Agriculture |

Members of the Task Team began by calling for a more effective allocation of federal funding to state governments for conservation issues, pointing to the fact that state governments reallocate funds at administrative levels, leaving less for in the field management programs. A suggestion was made that a specific amount of money be designated for reallocation so that a consistent amount is available for in-the-field conservation programs.

An inconsistency was identified between various invasive species programs across each state, with zones of divergent regulations within larger western states due to their geographical size (which in some cases makes them as large as several eastern states). Researching prior initiatives to promote state to state coordination and state to federal coordination, such as state invasive species councils, was suggested; however, there is difficulty in connecting state councils as they may not share analogous structures and modes of operation. The Yellowstone Coordination Committee in Wyoming was mentioned as an example of effective state to county coordination, which may be applied towards federal to state coordination. However, there is inconsistency in the level of involvement given by each individual county with a subset of the entire group doing a majority of the work. The State provides counties with funding for conservation efforts without specific guidelines for allocation. This leads to differing (and in certain cases, ineffective) use of these funds. It was suggested that funding should be given under the condition that it is unilaterally allocated towards furthering explicit goals across the various counties (or states in the case of federal to state interactions) involved.

Perspectives from a variety of fields must be taken into account, such as agriculture and marine fisheries; however, different areas of the country experience different problems with invasive species, requiring a federal alliance of state-level conservation groups to focus on issues affecting a majority of the participating members.

Three (3) of the Task Team's key outcomes will be revised:

1. Revise by committee members and send to Robert
2. Update objective to include U.S. territories (later clarification by Jamie that U.S. Territories are addressed through U.S. TISCC, so ok to focus on state coordination)
3. Identify other contacts for Marine coordination, FL (Bill will reach out to Nick Wiley, FWS or Kristine Somers in FL)

The Task Team reviewed the guidance on preparing effective recommendations provided by the NISC Secretariat. It was suggested that the team review past documents that may make recommendations for improved state/federal coordination. Additionally, there may be ad hoc groups, such as CGAPS (Coordinating Group on Alien Pest Species) that could be used to show how they increased coordination between federal, state, and private entities. The group briefly explored the interactions between state

agencies and NGOs, with mention of The Nature Conservancy as an example of State and Federal government/NGO coordination.

The Task Team discussed the value of selecting case studies to showcase successes, challenges, and outcomes of state/federal coordination. The lack of consistent communication between federal government and local governments was a concern, i.e., knowing points of contact and having consistent engagement. Encouragement from leadership resulted in more participation in certain programs; however, federal staffing (and the resulting culture) often change too quickly and unpredictably to establish a unilateral culture of encouragement across the country.

The group designated the following as potential case studies:

1. CGAPs
2. Building Consensus in the West
3. Florida Invasive Species Partnership (FISP)

The group agreed that federal-state coordination often arises from a specific issue (e.g., Building Consensus in the West) or from a need for overall coordination on various invasive species issues (e.g., Florida Invasives). There was discussion of a possible recommendation that further assessments of federal/state coordination be explore. It was noted that the state/federal task team provides an opportunity for states to provide those recommendations for consideration, if so inclined, rather than delaying for others to evaluate and prescribe. Feedback from federal agencies on recommendations is a necessity, as their opinions of a “successful” case study may differ from those of state government. The need for liaisons to facilitate communication between federal and state governments was reiterated, noting that the National Plant Board has a Federal liaison in each state and could serve as a successful case study, despite its specificity of issue. Several group members then pointed out that not all groups share this structure, citing organizations such as the NSDA.

Several preliminary recommendations were identified by the task team:

1. Identify federal agency contacts at the national, regional, state, and local levels
2. Use an analysis of case studies to design a template that could be customized to enhance Federal-State coordination on invasive species issues
3. Explore options for NISC Secretariat staff dedicated to enhancing Federal-State coordination and communication on specific invasive species issues or programs

The group reviewed and edited Key Outcomes/Recommendations for the Federal/State Task Team. One of the initial steps of the group is to develop case studies which will be analyzed and inform recommendations for NISC, opting away from the term “template” to instead focus on recommended elements of successful coordination. In addition, there was an identified need to collaborate with the Federal-Tribal Coordination Task Team to identify mutually beneficial recommendations. This could also result in a specific recommendation.

Tasks Assigned

Chair Bill Hyatt was tasked with completing the “Objectives” section by August 1st. Slade Franklin and Bill Hyatt were tasked with completing the “Problem Statement” section by August 30th. Slade Franklin was tasked with preparing case studies involving the Sage Brush and Greater Yellowstone by August 30th. Carol Okada will prepare a case study on CGAPS, and Linda King on Florida Invasive Species Partnership (FISP). A case study involving Asian Carp was not assigned at this meeting but may be assigned at a future date. All group members were tasked with reviewing each case study in preparation for the 1-2 conference calls planned for September. By August 30th, members were tasked with further fleshing out additional items the group discussed that were identified in notes prepared by Bill Hyatt and categorized under “Additional Findings.” Slade will work on items a) and b). Linda King was tasked with item c) by August 30th. Ann was tasked with item e) in the “Findings” section between September 15th and 30th. Bill was tasked with synthesizing the case studies by the first week of October.

APPENDIX 3

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Advanced Biotechnology (Gene Editing) Task Team

MEMBERS

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|------------------------|------------------------------------|
| Stas Burgiel (DFO) | NISC Secretariat |
| Karl Campbell | Island Conservation |
| Janis McFarland | Syngenta Crop Protection, LLC. |
| Laura Meyerson (Chair) | University of Rhode Island |
| Mike Stebbins | Laura and John Arnold Foundation |
| Bob Van Steenwyk | University of California, Berkeley |

The ISAC Advanced Biotechnology Task Team convened (7/12/2016-7/14/2016) for the purposes of addressing Action 6.3.1 from the National Invasive Species Council Management Plan: “*Conduct an assessment of the potential ecological, socio-economic, and political benefits and costs of gene editing technology in the context of invasive species prevention, eradication, and control.*” It met for four work sessions and was also informed by dialogue with the full ISAC during in-session progress. The following summary provides an overview of the structure of discussions and topics addressed by the Task Team, including its next steps.

The Task Team reviewed the extent and purpose of the charge laid out in Action 6.3.1 and determined that extended analysis and explanation in the form of a white paper was necessary to accompany recommendations to National Invasive Species Council member agencies on the use of advanced biotechnologies for invasive species management. The Task Team recognized that the issues identified by member agencies in the context of invasive species prevention, eradication, and control relate to a broader range of advanced biotechnologies beyond gene editing. Consequently, the Task Team determined that the scope of the white paper would include identification and analysis of additional advanced biotechnologies that have the potential to provide solutions to invasive species issues where current approaches and technologies have failed. The additional advanced biotechnologies to be analyzed include gene drive technology, RNAi technology, gene barcoding, environmental DNA, and other technologies as deemed appropriate by Task Team members. The Task Team determined that the scope of the white paper will be limited to current and upcoming technologies focused on invasive species management, including their ecological, socio-economic, and policy/regulatory implications.

The Task Team worked to outline the necessary information for the identification of relevant technologies, including the name of the technology, what it is, how it works, how it was developed, how it became popular in use, what technology it replaced, implications of its use, limitations of the technology, risks (where known) and risk management measures, examples of its use, and its link to invasive species. An analysis and synthesis section will then follow that will highlight relevant discussions on ethical, social, economic, environmental and governance concerns (as well as research gaps and needs) related to current and future use of advanced biotechnologies in invasive species prevention, eradication, and control. Additionally, the Task Team determined that it will be necessary to acknowledge relevant considerations for the use of advanced biotechnologies that are beyond the scope of the white paper in order to provide decision makers with a balanced understanding of the extensive considerations necessary for responsible decision making.

A range of considerations and concerns were identified by Task Team members and ISAC members during the working and reporting sessions that will be incorporated into the white paper. During a reporting session, concern was raised around the ethical considerations that apply to advanced

biotechnologies and how the Task Team would address such questions as “even though we can use such technologies, should we use them in the context of invasive species management and control?”

This includes consideration of the various contexts in which society, the research community, and Federal agencies decide when and how to use advanced biotechnologies. From here, the Task Team identified the consequent need to consider how these arguments and information should be presented to the public. In addition to general ethical considerations, the Task Team discussed concerns related to relevant environmental and social justice issues surrounding the use and development of such technologies.

The Task Team further identified discussion topics such as tribal and international stakeholder considerations, economic barriers, intellectual property rights, national security concerns, and biosecurity/safeguarding issues. The Task Team reached out to ISAC members with expertise in tribal relations to identify tribal concerns and interests in advanced biotechnology use for invasive species management and control. International issues were raised in considering the cross-boundary implications and risks of the use of advanced biotechnologies in relation to invasive species management, including accidental or intentional introductions of genetically modified species, among others.

Discussions around economic considerations extended to exploring market failures and the feasibility of creating markets for invasive species-related advanced biotechnologies. Considerations for this included state-level markets, federal investment and incentives, national economic analyses of the economic impact of invasive species, and defining the role of the federal government within these markets. Additional points raised included concerns over intellectual property rights; safeguarding against related consequences of the technology’s use (such as containment and confinement, off-target effects, and tracking exposure levels, frequency, and duration); and potential national security concerns that include highlighting the importance of understanding and leading the development of these cutting-edge technologies as a form of defense against future risk.

Beyond the explanatory portion of the white paper, the Task Team will provide recommendations to Council member departments involved in the use or regulation of advanced biotechnologies to address invasive species. Task Team priorities throughout this process include clear definitions, balanced discourse, and relevant, feasible action items and recommendations for member agencies. The Task Team aims to complete a draft paper for the ISAC by the December 2016 meeting.

APPENDIX 4

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Infrastructure Task Team

MEMBERS

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| Pat Burch | Dow AgroSciences |
| Scott Cameron | Reducing Risks from Invasive Species Coalition |
| Jeremy Crossland (DFO) | U.S. Army Corps of Engineers |
| Otto Doering | Purdue University |
| Amy Ferriter | University of Idaho |
| Bonnie Harper-Lore | Restoration Ecologist (Retired) |
| John Peter Thompson | Maryland Nursery and Landscape Association |
| Damon Waitt (Chair) | University of North Carolina Botanical Garden |
| Bob Wiltshire | Invasive Species Action Network |

The ISAC Infrastructure Task Team convened (7/12/2016-7/14/2016) for the purposes of addressing Action 4.2.1 from the National Invasive Species Council Management Plan: “*Compile case studies of the invasive species impacts on infrastructure in the U.S. The case studies should address: a) biology of the organism in native and introduced ranges; b) locality, date, and pathway of introduction into the U.S.; c) documented impacts to infrastructure (including a timeline and economic costs); d) documented non-infrastructure impacts (including a timeline and economic costs); e) measures taken to eradicate/control the species and associated Federal costs; and f) projected needs (including technologies and funding) to eradicate the species from the U.S.*”

The Task Team defined infrastructure as manmade, physical structures. The Task Team worked to provide an analysis that summarizes the impact of invasive species on four infrastructure systems: power systems, water systems, transportation systems, and housing systems. The Task Team recognized that there are dozens of invasive species affecting infrastructure, and several of them affect multiple systems. The resultant Task Team paper will describe each system of infrastructure and in turn, provide an overview of key invasive species affecting that particular system. The Task Team paper will also present in-depth case studies for key species. The Task Team also discussed the need for providing conclusions and making detailed recommendations for what the federal government can do to reduce the risks to infrastructure from invasive species. Multiple federal agencies—and their stakeholders—are affected by infrastructure problems caused by invasive species, and this will be described.

The group discussed the problem of invasive species on multiple sectors of society. In most cases, the U.S. lacks the authorities necessary to effectively prevent, eradicate, and control invasive species that impact infrastructure. This prevents rapid response to some of the U.S.’s most damaging invasive species. It also limits the ability of agencies to prioritize and allocate the resources necessary to control invasive species that threaten public security (e.g., zebra and quagga mussels [*Dreissenid* spp.] incapacitating power plants), undermine costly Federal programs (e.g., the Raspberry/tawny crazy ant [*Nylanderia fulva*] impacting electrical systems at the Port of Houston and NASA Johnson Space Center in Houston), and cause home owners to incur substantial repair and maintenance costs (e.g., Formosan termite [*Coptotermes formosanu*]).

The Task Team co-chairs made assignments to members during the meeting. The Task Team members will work on assigned sections with the goal of providing a draft paper to the ISAC for review before the December, 2016 meeting.

APPENDIX 5

Breakout Session Summary Invasive Species Advisory Committee (ISAC) Wildlife Health Task Team

MEMBERS

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|--------------------|--|
| Ed Clark | The Wildlife Center of Virginia |
| Craig Martin (DFO) | U.S. Fish and Wildlife Service (DOI) |
| M. Meyers (Chair) | Meyers and Alterman |
| David Starling | Aqueterinary Services, LLC |
| Brent Stewart | Hubbs-Sea World Research Institute |
| Nathan Stone | Engle-Stone Aquatic\$, LLC |
| Gary Tabor | The Center for Large Landscape Conservation |
| Jeff White | Newmont Mining Company/Elko Land and Livestock Company |

The Wildlife Health Task Team was convened on (7/12/2016-7/14/2016) to address Action 4.3.1 of the National Invasive Species Council Management Plan: *“Compile case studies of invasive species impacts on wildlife health in the U.S. and make them available through the NISC website or other public domain. Address (as feasible): (a) the biology of the organism in native and introduced ranges; (b) locality, date, and pathway of introduction into the United States; (c) documented impacts to wildlife health (including a timeline and economic costs); (d) measures taken to eradicate/control the species and associated Federal costs; and (e) projected needs (including technologies and funding) to eradicate the species from the United States.”*

The Task Team had to define the scope of wildlife health that they would be looking at. The group determined that the focus for wildlife health should be on the impacts of diseases, pathogens, and parasites on native wildlife health. In addition to this, the Task Team also discussed some of the current focuses on wildlife disease issues. They acknowledged that there is greater consideration and Federal authority for wildlife diseases affecting human health and agriculture, but there are gaps in Federal authorities when it comes to wildlife diseases affecting native wildlife health. Some of the gaps identified during the Task Team meeting were the inability to filter out animals that act as carriers of diseases, a lack of information and information sharing about wildlife health diseases, and limitations in authorities. A lack of coordination, communication, and consistency across various government agencies creates a number of issues that prevent action from being taken on the introduction and spread of pathogens in the U.S. These gaps are allowing diseases to be moved around the world on a daily basis fairly easily.

The Task Team will develop a paper that compiles case studies that portray the impacts invasive species have on wildlife health. The case studies will be representative of different taxa serving as vectors of wildlife diseases that significantly affect wildlife health, as well as the different pathways that need to be dealt with. The pathways are an important focus point because no matter the impact, whether it is on human health, agriculture, or wildlife health, it is the pathway that may be responsible for the introduction of wildlife disease and its spread. In addition to this, the case studies will identify gaps, look at the magnitude of the risks, and discuss risk management techniques, both pre- and post-import. At the end of the paper, recommendations will be made to NISC about resources that are needed and changes that need to be made in order to help control the movement of the pathogens and parasites that cause disease and significantly impact wildlife health in the United States.

The Task Team distributed assignments to members during the meeting in order to complete the paper. The members will work on their assigned sections and compile all the information with the goal of providing a draft paper to the ISAC for review during the next ISAC meeting in December 2016.