

NATIONAL INVASIVE SPECIES COUNCIL

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INVASIVE SPECIES ADVISORY COMMITTEE

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MEETING

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TUESDAY,  
OCTOBER 11, 2005

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SUMMARY

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The Committee met in the New Hampshire Ballroom at the City Center Hotel, 1143 New Hampshire Avenue, NW, Washington, DC, E. Shippen Bright, Acting Chair, presiding.

ISAC MEMBERS PRESENT:

E. SHIPPEN BRIGHT	Maine Lakes Conservancy Institute
K. GEORGE BECK	Colorado State University
GARY M. BEIL	Minnesota Crop Improvement Association
DAVID BRUNNER	National Fish and Wildlife Foundation
ALLEGRA A. CANGELOSI	Northeast Midwest Institute
DIANE COOPER	Taylor Shellfish Farms
JOSEPH CORN	University of Georgia
MICHELE DIAS	California Forestry Association
WILLARD "BILL" DICKERSON	North Carolina Department of Agriculture and Consumer Services
PATRICIA DOERR	National Governors Association
STEVE HENSON	Southern Appalachian Multiple-Use Council
JEROME A. JACKSON	Florida Gulf Coast University
NELROY E. JACKSON	Monsanto Company
MARILYN B. LELAND	Prince William Sound Regional Citizens' Advisory Council
RONALD LUKENS	Gulf States Marine Fisheries Commission
KATHY J. METCALF	Chamber of Shipping of America

N. MARSHALL MEYERS  
CHARLES R. O'NEILL  
CRAIG REGELBRUGGE  
JOHN RANDALL  
SARAH REICHARD  
JEFFREY D. SCHARDT  
DUANE SHROUFE  
JEFFREY STONE  
JOHN PETER THOMPSON  
KEN ZIMMERMAN

Pet Industry Joint Advisory Council  
New York Sea Grant Program  
American Nursery and Landscape Association  
The Nature Conservancy  
Center for Urban Horticulture  
Florida Department of Environmental Protection  
Arizona Game and Fish Department  
Oregon State University  
The Behnke Nurseries Company  
Lone Tree Cattle Company

NISC STAFF PRESENT:

PHIL ANDREOZZI  
KELSEY BRANTLEY  
A. GORDON BROWN  
ANNA CHERRY  
HILDA DIAZ-SOLTERO  
CHRISTOPHER DIONIGI  
RICHARD ORR  
DEAN WILKINSON  
LORI WILLIAMS

Program Specialist  
Program Analyst / ISAC Coordinator  
DOI Policy Liaison  
Public Affairs Coordinator  
USDA Policy Liaison  
Assistant Director, (Domestic)  
Assistant Director, (International)  
DOC Policy Liaison  
NISC Executive Director

SPEAKERS:

Dorn Carlson, Invasive Species Program Manager, NOAA  
Bill Gregg, USGS  
Tom Stohlgren, USGS

**NISC STAFF REPORT: EXECUTIVE DIRECTOR LORI WILLIAMS**

Lori Williams reported that Mary Josiah is taking the lead on coordinating the NISC newsletter. The newsletter will be sent out electronically every two to three weeks. It is organized in such a way that the topics can be easily reviewed. Almost anything the advisory committee recommends can be put in the newsletter, except for job announcements for non-federal persons. If anyone has any suggestions regarding the newsletter, they should be directed to either Mary Josiah or Lori Williams.

Ms. Williams also reported that Richard Orr provides a monthly international calendar of meetings. NISC staff and policy liaisons also sent out alerts about Federal Register announcements coming up when they are invited to comment on announced policies. NISC Staff welcomes suggestions on how to highlight the announcements to make it easier for people to determine whether or not they pertain to their areas of interest.

At the last full NISC meeting, the first version of the Guidelines for Rank and Control, Actions

in Natural Areas, was approved. NISC also supported continuation of the crosscut budget and approved the FY 2007 crosscut.

The Council authorized NISC staff and policy liaisons to draft NISC Operating Guidelines, in order to delineate and clarify their operating procedures, consolidate and clarify reporting requirements, and describe clearance and review processes for NISC documents.

The most important action that the Council took was to approve the five-year review of Executive Order 13112 on invasive species, a printed version of which will be available soon. This document is longer than what was originally planned, as NISC came to see it as an opportunity to showcase the problem and provide step-by-step description of the duties of the Council as outlined in the Executive Order (EO). It is a good catalog of what NISC and ISAC have been doing over the last five years, and a useful reference document. They did not provide it to ISAC for comment, because it had to go to OMB first as a formal recommendation from NISC. However, if ISAC members have anything to say about it after having read it, NISC would be very interested to hear their comments. The overall recommendation to OMB on the Executive Order was that it is an important tool, particularly for coordination and improved Federal collaboration. There is no need to amend the Executive Order at this time. The issues that have been identified could be addressed within the context of the current Executive Order, and through revisions to the management plan. Ms. Williams also reported that there has been a great deal of activity at the state invasive species council levels. Idaho and Arizona, for example, now have invasive species coordinating bodies.

NISC has staff working on a number of the high profile crosscutting species efforts, including efforts regarding the brown treesnake, tamarisk, and emerald ash borer. There is also government-wide concern over zoonotic diseases, such as the so-called bird flu. NISC members are involved in these discussions, although they also go up to the very highest levels in the Administration.

Mr. Lukens asked if the five year review of the Executive Order might be used as a jumping board for revising the Executive Order and through revision and update of the Management Plan. Ms. Williams replied that this is certainly a possibility, although they had determined that a lot of issues could be dealt with within the context of the current Executive Order.

## **APPROVAL OF MINUTES FROM FEBRUARY 2005 MEETING**

**Chair Bright called for a motion to approve the minutes from the February 2005 meeting.**

Ms. Diaz-Soltero noted that several action items from the meeting had been left out of the minutes. Ms. Williams commented that it is not the duty of the Secretary to capture everything. Instead, it is the duty of each individual Committee member to make sure that their action items are on the list. It is a FACA requirement that they distinguish between individual requests and ISAC overall recommendations. Dr. Nelroy Jackson said that the request for "Do No Harm" reports from the member agencies had also been left out of the minutes.

Dr. Jerry Jackson suggested that the minutes be reviewed at another time. This way, they will not have to consider each of the errors separately. NISC staff members nodded their heads in

agreement. Ms. Cooper commented that it would make her job as Secretary easier if the Committee members would be clear as to when they are suggesting an action item.

Mr. Dickerson asked if they could delay approving the minutes until everyone has had a chance to review them and provide additional comments. Chair Bright replied that they could either delay the approval of the minutes, or approve them with the understanding that further corrections will be made. Mr. Dickerson suggested that they tentatively approve the minutes with the option of coming back to them before the meeting adjourns. Dr. Nelroy Jackson suggested that Ms. Cooper's action items be included as a part of the minutes. Ms. Williams said that they will be attached to the minutes.

**Chair Bright called for a motion to tentatively accept the minutes of the February meeting, pending review of the substantive issues that have been brought up, as well as a grammatical and syntactic review. Mr. Meyers made the motion, Mr. Lukens seconded, and the motion passed unanimously.**

## **NISC MEMBER DEPARTMENT REPORTS**

### ***DEPARTMENT OF COMMERCE: DORN CARLSON***

Dorn Carlson talked about several components of NOAA's invasive species program: the National Sea Grant College Program, the Ballast Water Technology Demonstration Program, the National Centers for Coastal Ocean Science, and the Great Lakes Environmental Research Laboratory.

The Sea Grant College Program is a government/university partnership. There are 30 university programs that are Sea Grant Colleges. There is approximately one per state, and their job is to interface with the local community, identify priority issues, turn research and science into something useful for the communities, and interact with the national office. They cover areas from invasive species, to coastal development, to seafood processing, to natural hazards. Their priorities are set by what is locally important. About five percent of their budget is spent on invasive species activities. The Sea Grant Program also has National Strategic Investments in a couple of areas, one of which is invasive species. They have a national competition for research and outreach projects in aquatic invasive species every other year. Generally, \$2 million to \$3 million per year are spent on this. By law, every dollar they give out in a grant has to be matched by fifty cents of nonfederal money; so that when they put out \$3 million worth of federal money on projects, about \$4.5 million is actually being spent. One of the keystones of the Sea Grant effort is that it marries research with utility. Typically, they devote about 70 percent of the budget to research projects and the other 30 percent to outreach projects. The main requirement for investigators applying for the research competition is that they address aquatic invasive species of concern to NOAA. For example, the Sea Grant program does not typically deal with river-based invasive species unless that invasive species somehow has a link or poses a threat to the Great Lakes or the other coasts. They usually get control and prevention research proposals. In general, everything that the NOAA program does is geared towards protection of resources from invasive species. They have had these priorities for at least six years. By 2007, they will probably have some additional, more focused priorities.

Mr. Carlson said that, last year, he had asked the regional panels of the Aquatic Nuisance Species Task Force to start providing their priorities to him. In return, he promised that, if they are really relevant to NOAA, he will put them into the next request for proposals for the Sea Grant Program. The priorities that the panels give him are not necessarily going to be their highest priorities, since the panels cover areas that are not relevant to NOAA, such as rivers. They are also looking for specific priorities from the other NOAA programs.

The Ballast Water Technology Demonstration Program is a multi-agency program that's funded out of Congressional earmarks each year. The Fish and Wildlife Service, NOAA and the Maritime Administration are partners in this program, which has been going on since about 1998, and has a competition almost every year. However, they have had to cancel the competition once or twice because Congress didn't come through with the money. Up to and including this year, they've funded over 50 proposals on ballast water treatment technology and related research with about \$12 million in funds. Although they don't require matching funds in this competition, they use them as evidence that other people think their idea is worth investing in. Typically, they focus on a number of different technologies. They're also looking into areas such as environmental impacts, toxicity testing for biocides, and computational fluid dynamics. One of the things they've decided after a few years is that they are casting their net too broadly. Consequently, they do not get as much continuity in projects as they would like. The ways that the system is set up now results in a dynamic tension which might raise issues about quality control and conflict of interest. To address this problem, they recognize that they need to standardize the test protocols, as well as create independence between the investigators and the vendors. They have also been trying for several years, with some success, to engage ship and port interests in participating in this effort, and would like that to continue. To accomplish this, they put out a request for proposals for a multi-year cooperative agreement for a regional R&D test facility, which will be run in the Great Lakes. If this works in the Great Lakes, then they may consider trying something similar in other regions. In addition to the R&D facility, they are also planning to continue with their individual project grants, should funding permit.

The National Centers for Coastal Ocean Science (NCCOS) are working on integrated assessments of ecosystem conditions. They are looking to get enough information to predict what is going to happen in the future. After they have made decisions, they will then evaluate the effectiveness of these decisions. The guidance for specific management actions includes outreach and education.

The Great Lakes Environmental Research Laboratory (GERL) has recently been doing research on the No Ballast On Board situation; as well as research on environmental and ecological impacts of invasive species in the Great Lakes system. They completed a seminal report on No Ballast On Board vessels in April. One of the conclusions that came out of this report is that the sediment in the bottom of a tank from which the water has been pumped out is a potential vector for invasion. Salt water might be a significant way to mitigate this threat. GERL also does a great deal of invasion biology and ecology. They are hoping that their research will become more strategic than it's been in the past. They are in the process of writing a strategic plan for NOAA's invasive species program, in which they have identified the priorities and how to reach them. GERL is also working with the Habitat Matrix program, as well as with other programs, to integrate their strategy with NOAA's, and coming up with prioritization rules. In conclusion, Mr. Carlson said that their research has always been results driven, and will continue to be so.

Dr. Nelroy Jackson asked Mr. Carlson what progress had been made in terms of the evaluation of the cost of no action, and if it had become a part of the culture to always look at what happens with the consequences of no action. Mr. Carlson replied that the whole concept of economic and socioeconomic benefit versus loss is becoming more prevalent throughout the Federal Government. In their program as with all Federal programs, they have to come with performance measures that they will be evaluated against. However, it will take a significant investment for them to develop the capability to be able to make these decisions on a routine basis.

Ms. Metcalf commented that this effort is seriously under-funded, but that it may provide some real solutions if they can get it funded. Mr. Carlson added that, because of the way that NOAA's invasive species program is set up and gets funded, each of the individual components can vary in its level of funding from one year to the next by as much as an order of magnitude. This forces them to be very flexible in their planning. However, the cost of this flexibility is the loss of long-term continuity and the carrying out of strategic goals.

Mr. Henson asked Mr. Carlson if he has any standards for peer review for the research projects. Mr. Carlson replied that they have a pretty elaborate process for peer review, which is one of the reasons they have to start the process this year if they want to fund things for next year. Mr. O'Neill commented that, because Sea Grant has such an extensive peer review process, many researchers consider a small grant from Sea Grant to be a feather in their cap.

#### ***DEPARTMENT OF AGRICULTURE: HILDA DIAZ-SOLTERO***

Ms. Diaz-Soltero reported that USDA had continued its efforts in education and public awareness. They have shown the Invaders film in various forums, and held a special invasive species part of the Agricultural forum. They have also helped to resolve the issues between the National Agricultural Library and the Council, so that they now have the roles of each of them defined on their websites. They have also continued to help produce the species of the month. The Forest Service is assisting NISC to develop a strategy to help them with cataloging all the education materials on invasive species. APHIS has given a presentation regarding the revisions that they proposed on Quarantine 37, plans for planting. ERS has continued their program of research on economics and invasive species management, and has allocated over \$3.4 million in extramural research.

The agencies have continued to identify additional grant programs. USDA is updating information on grants and posting in on their website. There are two new grant opportunities from NRCS. USDA will also make printed copies available at the National Weed Awareness Week in February of 2006. The Noxious Weeds Act has been delegated to APHIS. It has not yet been funded.

The Healthy Forest Initiative was designed to expedite administrative procedures for hazardous fuel reduction and ecosystem restoration projects on Federal lands. They have expanded what they call the stewardship contracts to be able to focus on getting a piece of the forest or range land back to health, which includes not having invasive species. The Health Forest Restoration

Act is new legislation which contains a number of provisions for expediting the treatment of insect and disease epidemics. The Forest Service has also created an early warning system for invasive species, which includes the program for the North American Exotic Forest Pest Information System, the Rapid Pest Detection Program, and the Forest Health Monitoring Program. They have also created two new research centers to generate the knowledge to provide prediction, early detection and quantitative assessment of the environmental threats of invasive species.

The Office of the IG in USDA requested APHIS to stop allowing hand carrying of permitted materials into the U.S., because of concern for biosecurity. The research community, on the other hand, is concerned that, as a result of this prohibition, many organisms are dead by the time they reach the scientist. For this reason, the prohibition has been modified to allow a permit holder to hand carry securely packaged organisms. However, they must surrender that package to Customs and Border Protection inspectors as they get to the port of entry. The only exception to this rule would be a permit holder that has a high security clearance or a confidential security clearance. This issue is still being addressed by the agencies.

A pilot project has been completed on the Gambian pouched rat control effort. Twenty-nine Gambian rats were captured and euthanized using different baits and toxicants, some of which were very effective. APHIS is requesting that these be officially approved by the Florida state agencies. APHIS is also developing an e-permit system to streamline the permit process to move organisms.

Ms. Diaz-Soltero then highlighted what is new in the third version of the “Avoiding Harm from Invasive Species” report. CSREES has created an IPM training consortium for Federal employees in collaboration with the universities. NRCS has published their agency invasive species policy, as well as their conservation practice standards, in order to deal with invasive species in a much more thorough way. The Forest Service has started an early detection/rapid control/rapid response effort. They have a new website on invasive species, and have done many sudden oak death surveys. In terms of prevention, Forest Service has created best management practices for heavy equipment operation to prevent weeds. Finally, the invasive species compendium is off and rolling. The Compendium already has the commitment of four programs in USDA: APHIS, Forest Service, ARS and the USDA Invasive Species Coordination Program.

Mr. Dickerson asked Ms. Diaz-Soltero if any study is underway within the USDA on the economic impact of emerald ash borer. Ms. Diaz-Soltero replied that she was not aware of one. Ms. Reichard requested a copy of the NRCS Plant Material Center’s environmental evaluation to assess potential invasiveness. Mr. Henson asked if the litigation to stop the Forest Service from using pesticides on their projects was impeding any progress on control of invasive species anywhere in the country. Ms. Diaz-Soltero replied that the litigation has not yet been finalized.

Dr. Nelroy Jackson commented that the level of restriction on the movement of biological control organisms is unacceptable if it inhibits legitimate research. Ms. Williams replied that, although this is a legitimate concern, the other side of the issue must be taken into account, as well.

Mr. Schardt asked if Ms. Diaz-Soltero was satisfied that the agency is on course to resolve the biocontrol importation issue. Ms. Diaz-Soltero replied that the next step will be to involve ARS, CSREES and representatives from stakeholders that are concerned, as well as the Department of Homeland Security and APHIS in this issue. This will help them to find the right balance between the concerns of those on both sides of the issue. Mr. Schardt also asked if there is anything further that ISAC could do to facilitate this process. Ms. Diaz-Soltero said that they should just keep bringing up the issue. Chair Bright suggested that they come up with a written action item statement that can be placed in the record and used in discussions with their member agencies, saying that ISAC has brought up this issue on numerous occasions and would like to see something done about it. He then suggested that Dr. Nelroy Jackson write this statement on behalf of ISAC. Ms. Metcalf added that, along with this action item, they would need a DHS representative, since it will be very interesting to hear what DHS has to say about the way they're interacting on the invasive species issues. Dr. Beck asked if APHIS had requested any funds for the Noxious Weeds Control and Eradication Act in the next budget cycle. Ms. Diaz-Soltero said that she could not answer this question.

Dr. J. Jackson commented on the potential of the recent hurricanes to introduce and spread exotic invasives, and asked if USDA was doing anything about this. Ms. Diaz-Soltero replied that they are taking measures on species that are of major concern.

Mr. Dickerson remarked that the National Plant Board has been working with both Customs and Border Protection and APHIS on streamlining the process of importing biological control agents. He said that he volunteered to make several calls, and then inform Dr. N. Jackson of the status of the issue so that they can make their letters as precise as possible.

Ms. Cangelosi commented that, on the hurricane response issue, it's very unlikely that management of invasive species is ever going to be high on the list of things to do after a hurricane strikes. She then suggested that it is best to take the precautionary approach relative to harboring invasive species or species that are potentially invasive.

#### ***DEPARTMENT OF THE INTERIOR: GORDON BROWN***

Mr. Brown reviewed several documents, beginning with the Executive Order 13112. Section 2 of the Executive Order calls on agencies to identify the actions that they undertake related to the introduction and spread of invasive species. The Department of the Interior, through its bureaus, has begun to take a more in-depth look at this process for two reasons. One is that they are arriving at the time to update the management plan, which is also a good time to look at what their strategic abilities are, as well as what the areas are where they could provide some help in pursuing future opportunities. In pursuit of this end, they met as a group of 10 or 15 to begin the discussion of a strategic DOI approach, and produced the first draft. They now intend to vet this document with others in their department and their bureaus to begin a strategic planning process.

Mr. Brown then highlighted the five bureaus that have historically devoted the most manpower and funding to the issue of invasive species: the Fish and Wildlife Service, the Bureau of Land Management, the National Park Service, the Bureau of Reclamation and the US Geological Survey. He also briefly described the involvement of several other bureaus. These other offices will get treatment as the document is developed.

The document is divided into the areas that correspond with the current management plan: leadership and coordination, prevention, early detection/rapid response, control and management, restoration, international cooperation, research, information management, and education and public awareness.

The Department of the Interior is predominantly a management organization responsible for land and water management. However, they also have a strong tradition of science and service to that management. The Interior facilitates the transfer of information from scientists to land and water managers, and is also responsible for coordinating with other departments. They are also testing how well codes of conduct and best management practices might help them to fulfill their mission goals. They also have concerns for water, fire and healthy forests. With regard to their report to the Council, they want to work on codifying and formalizing the process of looking at Section 2. They plan to use their strategic planning process as a way to report back to ISAC on a more regular basis, and look forward to gathering their data after the close of the fiscal year.

There are many areas in which the Interior is engaged in promoting efforts in education and public awareness. These campaigns are focused on leveraging beyond where they could go with any sort of regulatory program. This is because these programs not only inform the public, but try to get them to change their behavior, even if their behavior cannot be regulated or controlled.

Mr. Brown said that they were working very closely with the Forest Service, the Fish and Wildlife Service, and the Tamarisk Coalition to create a preliminary report on the economic component by the end of the calendar year. He also said that they were using the management plan to address the implementation of Section 2 of the EO.

The Refuge System is working with the National Institute of Invasive Species Science to target their invasive plant management. They use the hazard analysis and critical control point methodology to improve efficiency and avoid costs. The Park Service uses a contingency cost analysis method to analyze what happens to their natural areas management efforts if they fail to immediately address a pest issue.

The Interior agrees that it should commit more resources to screening, and is doing the best that it can with available staff to implement the injurious wildlife provisions of the Lacey Act. It will continue to update its list of existing grant programs. It has given an update on the Senate bill. As for the compendium update, the Interior is suffering from limited budgets. Therefore, most bureaus are committed to funding their own efforts. They are implementing the draft guidelines. With regard to implementing the invasive species early detection/rapid response fund, the Interior is doing its best within a limited budget. Wildlife Services, APHIS and the Florida Wildlife Commission have taken the lead with regard to Gambian pouched rats.

Finally, Mr. Brown suggested that the EDRR Committee look into the issue of pets, and said that the release of pets is always an issue of concern to the Interior.

Mr. Brunner asked if there is anything that ISAC can do to aid in the establishment of a fund into which both federal and nonfederal monies could be deposited, and then made available when the need arises for them in tight budget times. Mr. Brown replied that, in order to do this, they would

need more engagement from outside the government.

## **NISC RESPONSE TO ISAC RECOMMENDATIONS: LORI WILLIAMS**

Ms. Williams began by saying that NISC is responding to a number of action items from the last meeting that dealt with the Definitions Task Team, and that this work is on schedule. She then said that she believed that the various departments had all responded to the Gambian rat issue to the best of their ability.

Ms. Williams said that, at ISAC meetings, she would work on making sure that it is clear when people are making suggestions for agenda items for future meetings.

One of the ISAC recommendations that NISC still needs do more to address providing ISAC members with an update on their current status. They are also in the process of drafting a Federal Register notice to ask for nominations for the next ISAC cycle. She said that, along with the draft, they would also send a chart showing the current status of each member, and when their terms will expire. NISC will need ISAC members' help to get new nominees to submit their applications.

NISC also needs to do a better job of integrating the subcommittee work across committees. They have had some very good response on the grant programs, although they would still like to talk to other agencies and departments that have not yet provided information on them.

Ms. Diaz-Soltero added that it would be helpful if, at future ISAC meetings, Ms. Williams would also address the USDA "Do No Harm" report, as well as the invasive species strategy plans that the agencies are required to prepare, and, finally, the annual update of the agencies' activities in complying with the NISC management plan.

Ms. Cooper suggested that the new Secretary compile a list of action items that had been raised over the past several years, but had never been revisited.

Mr. Lukens said that Williams should continue reporting on the NISC response, since some administrative issues do not get covered in the agency reports. With regard to member terms, he said that it would be helpful to know the number of terms for which they continue to be eligible.

Mr. Zimmerman requested that, when a letter is requested in the action plan, the ISAC members get a copy of the letter.

Ms. Metcalf stressed the importance of generating an action item list of a manageable length. She also advised that ISAC refrain from pushing so many issues up to NISC, since ISAC is supposed to be subordinate to NISC.

**Dr. Nelroy Jackson moved that ISAC request specific reports from EPA and DHS for their next meeting. The motion was seconded, and passed unanimously.**

## **UPDATE OF INVASIVE SPECIES MANAGEMENT PLAN: LORI**

## WILLIAMS

Ms. Williams began by saying that they had received input on the development of the management plan from GAO, OMB, and a number of agencies, as well as from individual ISAC members. They have tried to incorporate these suggestions into their thinking of the revision.

They began with the understanding that the management plan is a very solid document. It is not, however, very strategic. The process of making the plan more strategic is being managed by a small steering committee.

The steering committee is meeting, and they've had discussions with all the policy liaisons. They now need to identify four or five broad strategic goals that deal with clear and direct actions linked to invasive species outcomes. They are also proposing three to five major overall strategic goals in the areas of direct invasive species operation. These will be proposed in the following areas: prevention of both introduction and establishment of invasive species, early detection and rapid response, control and minimizing the impacts of wide-spread invasive species, restoration and rehabilitation of areas impacted by invasive species, and maximizing and enhancing coordination and collaboration among all other levels of government and the private sector. There will also be support activities with clear links describing how the actions in these areas would relate to or underpin the strategic goals. These will include international cooperation, research, education and outreach, and information management.

Everything the steering committee does will be submitted to a much broader review committee. They will also receive input from all the ISAC/NISC subcommittees on the specifics. Ms. Williams then suggested that, over the next several days, ISAC look at the relevant sections of the plan in the context of this idea. They hope to have a working draft of the revised plan by early spring. In general, the goal of the revision is to build on the existing plan, rather than reinvent it, and to link agency and department efforts in a much more coordinated way.

Dr. Beck stressed the need to increase public outreach efforts, since most Americans are completely ignorant of invasive species. In particular, he suggested that they do outreach in the context of the serious human health issues that are making the news.

Mr. Lukens said that there needs to be some clear recognition within the revision of the management plan that it is vital that NISC and the Federal agencies that comprise NISC be prepared in some way to work with state programs. Mr. Wilkinson said that the steering committee had already determined that this should be made a priority in the revised plan. Mr. O'Neill further emphasized how NISC and ISAC need to proactively reach out to the state groups, particularly in terms of assisting them with their organizational structures.

Ms. Cherry agreed with Dr. Beck on his suggestion that they do more outreach related to serious human health issues that are making the news. She also suggested that, besides EPA and DHS, it might also be a good idea to encourage more involvement on the part of HHS and CDC.

In terms of state processes and state interaction with ISAC, Mr. Shroufe said that he had been trying to set up a committee through the International Association of Fish and Wildlife that will meet twice a year, and bring in input from the states. Ms. Doerr said that the Center for Best

Practices side of NGA would be pulling together a meeting on invasive species and state best practices.

In response to Ms. Cherry's comment about HHS and CDC, Dr. Nelroy Jackson commented that any of the NISC agencies can prepare reports and submit them to ISAC at any time. In terms of the management plan, he stressed the importance of planning regionally, since most action takes place at the local level.

Ms. Cangelosi asked if the management plan can accommodate the emergence of the avian flu issue as a wildlife pathogen-specific problem on which ISAC can help advise the NISC agencies. Ms. Williams replied that the issues of emerging zoonotic diseases and early detection/rapid response should definitely be encompassed in the management plan, but in such a way that shows people why it's important to have a detection system in place all the time, and not just when they are worried about a specific problem. Ms. Diaz-Soltero suggested that ISAC create a subcommittee on avian influenza. This team can then develop specific recommendations that can be sent by NISC to the task force that is working in the Department of Homeland Security on this issue. Dr. Jerry Jackson remarked that there are a number of issues regarding the avian flu that an ISAC committee could look at that may not be directly addressed by other agencies. He also said that they should have the Departments of the Interior, Agriculture, Homeland Security and State actively involved in this endeavor. Chair Bright suggested that the EDRR committee take a look at this issue in the context of the Management Plan and make a specific response on it within two weeks of its electronic dissemination to ISAC. Mr. Orr remarked that a system is now being set up to track the avian flu on a global scale. Mr. Meyers requested that others who are not on the EDRR committee, but who are working on avian flu issues, also be included in the process of reviewing the plan. Dr. Randall suggested that they look for volunteers who might be interested in joining the EDRR committee on account of this issue.

### **TAMARISK ECONOMIC IMPACTS: CHRIS DIONIGI**

Dr. Dionigi began by saying that ISAC has been recommending for a long time that an increased number of complex economic analyses be conducted. In response to this recommendation; an economic study is being conducted on tamarisk. The spread of tamarisk causes a number of concerns, chief among which is water utilization.

The study was established as a task team under the Control and Management Committee, and since its inception, they've had some fairly serious setbacks, particularly with regard to the team's membership. Four major products will come out of this committee: an extensive literature review on tamarisk and its impacts focusing on wildlife, fire and water, a description of the process by which the natural resource people and the economists are brought together to produce a particular product, the analysis itself, and the identification of critical data gaps and recommendations. The study is approximately halfway finished. They are currently firming up the dataset that they will be using for the study. The literature reviews have been drafted, and a great deal of work has been done by USGS. They are beginning the analysis phase of the project and are looking at a due date of early 2006.

So far they have learned that the impacts of tamarisk are highly contextual. In terms of water utilization, tamarisk's ability to reach water at greater depths than willow or cottonwood allows

it to grow in far more extensive zones, and thus to use more water.

However, the complexity of the hydrological systems in which tamarisk grow make it difficult to measure the amount of water that would theoretically be retained were tamarisk no longer present. Tamarisk may or may not increase fire frequency, although it tends to increase fire intensity. The relation of wildlife to tamarisk is also complex; some species have adapted to it, while others have not.

Dr. Dionigi ended by suggesting that the committee members consider whether or not the process they are going through with tamarisk makes sense to them as a model for regional scale planning.

## **TAMARISK EXPANSION AND RATE OF SPREAD: TOM STOHLGREN**

Mr. Stohlgren began by saying that he is currently collaborating to start a non-governmental consortium called the National Institute of Invasive Species Science, since a coordinated system has not yet been put in place to deal with the significant damages caused by invasive species. He then reflected on the difficulties they had experienced in getting information on tamarisk, due to the fact that people do not share their databases. Their customers told them that they needed a web-based database solution to the non-sharing issue. They said that this system should include early detection and rapid response capabilities, as well as more information about native and non-native species than whether or not they are present in a given area. They also wanted forecasting capabilities, living maps of species, and decision support tools. The system that's being proposed spawns from some work they've been doing along the lines of risk assessment. The concept is that you need to know more than the current distribution and abundance of a species. You also need to know something about the potential distribution and abundance, the past and potential rates of spread, and the risks and impacts to the economy, environment, and human health. If you're going to set up a strategy for multiple species, you need to understand your opportunity cost.

Tamarisk gave them the impetus they needed to develop this concept of a database creation of living maps that can constantly monitor organisms. They will also be doing some literature studies, and have found over 320 databases in the United States that might be useful for detecting tamarisk. They are going to do remote sensing for tamarisk, since they can only monitor a small portion of any landscape. They have some tests going on with the Park Service near Grand Junction, and are conducting a biomass study to help them understand water use. The Tamarisk Economic study is creating tools in early detection and rapid response capability. They found that it is possible to affordably sample less than one percent of any landscape. Now they need to learn to extrapolate in both space and time.

In the case of tamarisk, they wanted to focus their efforts on 5 or 6 percent of the area, and speed up the process of sharing so that they could begin tracking. Two years ago, they began sharing databases and creating the living map. Soon they will have an automatic hot map button, which will allow people to zoom in on particular areas of the map. Again, data sharing is crucial to the creation of a model that offers both breadth and depth of information on invasive species populations. They also need to integrate field sampling, remote sensing, satellite imagery, and some high resolution data, as well as the coarse resolution data, into a predictive model. NASA is now investing about \$12 million over a six year period to help them design and create an

invasive species forecasting system. They do this by taking field data and adding in remote sensing data. Using spatial statistics, they can then help to locate the highest priority areas to go to within any size landscape. Mr. Stohlgren explained how they will use spatial auto-correlation and the locations of seed sources to predict invasion patterns. He then showed a map illustrating the green-up of the Rocky Mountains National Park over the last two years. The map integrates energy, solar radiation, and temperature, as well as primary productivity. By creating detailed maps of environments, as well as of the target species, MODIS data will help them to learn about a habitat's vulnerability to invasion ahead of time. There are other satellites, too, that will be equally useful.

As for the Tamarisk Economic study, they still want to get some crews on the ground. They also called in expert witnesses to try to get a rough estimate of where the top five priority sites are. Mr. Stohlgren said that the economists were helpful in that they simplified the issues. This will allow them to make decisions based on available information. They have begun to collect height measurements of tamarisk, and will have a relationship between cover and height within a couple of weeks. The bottom line is that they want to go beyond presence maps to find out where the hot spots are. They also want to be able to overlay these with the maps of cottonwoods, willows, and some other species, as well. While creating these tools for tamarisk, what they really started doing was creating a capability for early detection and rapid response that should work across species, across taxa, and from local scales to regional scales.

Ms. Cooper commented on the importance of knowing whether land is private, state or federally owned in the context of early detection, rapid response, control and management. Mr. Stohlgren replied that they always ask for permission before doing surveys or ground truthing. Even with public information, however, they can still develop watch lists for landowners, which may be a very important step in early detection.

Mr. Brunner asked what the primary obstacles are to moving this project forward, and what ISAC can do to help. Mr. Stohlgren replied that they need to institutionalize the sharing of information across agencies.

Mr. Lukens asked Mr. Stohlgren to what degree he runs into issues of propriety as barriers to data sharing, and how he overcomes them. Mr. Stohlgren replied that they eventually hoped to make the scientific community understand that their findings can be of greater value if they share them. **He then suggested that they have an action item saying that each agency will designate an aggressive data sharer.** Mr. Schardt suggested that they make an ISAC recommendation by the end of the day saying that they need better coordination and cooperation. Chair Bright suggested that they make this into a motion, instead.

Ms. Dias asked Mr. Stohlgren if they took into consideration in their modeling the differences in the ways that public and private lands are managed. Mr. Stohlgren replied that this will show up in a vulnerability or sensitivity analysis if enough samples are provided from private land owners. He then added that he believed that most people would be willing to help, since they have a personal interest in knowing what invasive species are on their lands.

Dr. Randall asked if data sharing was also being pursued on the international level. Mr. Stohlgren replied that they are beginning this process of globalization now.

Ms. Cangelosi asked if there is any way to protect scientists who need to publish from giving up all their data. Mr. Stohlgren replied that it is possible to publish and to share data at the same time. Ms. Cangelosi suggested collaborating with the journals that publish the scientific papers. Mr. Stohlgren said that this is a good point, and that they need to reward those who share. Ms. Cangelosi then asked Mr. Stohlgren if they had seen a difference in distribution patterns of different taxa. Mr. Stohlgren replied that they had, and that they had identified the barriers and corridors that affect the current distribution, the potential distribution, the current pathway for spread, and the potential rate for spread of various taxa.

## **DRAFT OF DEFINITIONS WHITE PAPER: COMMITTEE DISCUSSION**

Dr. Beck explained that the goal of this discussion would be to reach an agreement on how they will convey their definition of invasive species to the rest of the world. One of the things requiring clarification is what they mean by harm. In particular, the issue of the tendency or the potential to cause harm is critical to issues of early detection and rapid response. He then explained that they have been tasked by Dr. Jim Tate to produce a White Paper, which is a freestanding policy interpretation. In doing this, they will work with the existing definition in the Executive Order. Creating a good definition is important in ensuring that the species that they attempt to control are, in fact, invasive. He then reminded the committee that the Executive Order is intended to improve the internal management of the Executive Branch of the federal government, but is not intended to create any right, benefit, trust, or responsibility. He asked them to bear this in mind. They need to provide a definition that can be understood by a non-expert, which is a significant challenge. Jim Tate suggested that they use weeds as an example, since they are understood by many people. Dr. Beck himself, however, feels that the definition of weeds is contentious, since one person's weed is the next person's wild flower.

In their first committee meeting, they determined that some ambiguity is necessary to remain flexible, although the number of ways in which the definition can be interpreted must be limited. They also realized that their biological and ecological definitions of harm were not going to parallel a regulatory definition. Instead, they are trying to develop an explanation of invasive species that will provide guidance to the federal agencies, and will also be accepted by industry. Their goal for the day will be to agree that the White Paper is functional.

The preamble to the definition white paper explains how the original definition of an invasive species was simply a species that is not native. The definition was then expanded to take into account the species' impact on the ecosystem. This, however, is an area of contention, since, while some people consider a particular organism to be invasive, others consider it to be highly beneficial. In the preamble, they also address the rights of various groups, including private property owners, and those involved in agriculture and horticulture, since they might be affected differently depending on how the definition is put forth and used. At the end of the preamble, they concluded that the uncertainty of the definition is standing in the way of making progress towards policy development. They also say that their explanation will have utility for education, conflict resolution, and management. Finally, they recommend that NISC adopt the White Paper. Dr. Beck then called for comments on the preamble.

Dr. Randall suggested that instead of saying that the definition in the Executive Order does not completely align with biological and ecological definitions, they be more precise, and say that it is a narrower definition.

Mr. Lukens said that the definition might be easier to understand if it focused more on invasive situations than on invasive species. This would account for more of the outside factors that come into play in determining invasiveness. Dr. Randall cautioned against using the terms invasiveness and invasiability unless they are specifically defined. Dr. Beck asked if they should go ahead and define these terms or not. Dr. Randall said that they should not do this because it would add unnecessary complexity. Ms. Cangelosi and Ms. Metcalf agreed. Dr. Corn disagreed, saying that these terms might help to clarify the definition. Mr. O'Neill and Mr. Thompson agreed that adding new terms would add unnecessary complexity. Mr. Thompson suggested that they explain key ideas in the definition in an appendix. Dr. Randall suggested that they reference their work, and recommend that those who would like to see the scientific community's definitions of invasive and of related terms read the paper by Richardson. Ms. Metcalf objected to the addition of an appendix, since a White Paper should be as short as possible. She agreed, however, that they should provide suggestions for further reading.

Dr. Stone suggested that several grammatical changes be made to the paragraph in question. No one objected to these changes. Mr. Lukens commented that, if the White Paper would be submitted only to NISC, and would not be generally distributed, then making changes to the style of the Paper may not be relevant. Ms. Cherry replied that the Paper will, in fact, become an ISAC document for distribution. Ms. Cangelosi suggested that they treat the document only as a discussion paper with their recommendations to NISC, since, if they are also trying to generate a document for public consumption, there will be no end to the "wordsmithing". The committee concurred.

Dr. Beck asked what the committee thought of moving the weeds example into a sidebar in order to make the body of the paper more continuous. Mr. Schardt said that he liked the idea of the sidebar. He also commented that the example of an invasive plant spreading six yards in three years is counterproductive, since a plant spreading at this rate would not be a significant problem. Dr. Beck suggested that they replace this example with Tamarisk, which has a much higher rate of spread. Mr. Thompson said that the addition of the sidebar would allow the paper to flow more naturally, while still including the weed example. Dr. Randall suggested that they take out the examples of minimum rates of spread, but without adding the tamarisk example, which falls at the other extreme.

Dr. Jackson commented that the headings of "Geographical Barriers, Survival Barriers, Establishment Barriers, and Dispersal Barriers" are confusing, and that their meanings overlap. In talking about invasive animals, geography, climate, time, and distance are usually listed as barriers.

Mr. Thompson said that he thought the weeds example would be sufficient to help the public understand barriers. Chair Bright suggested that they find an example that the public can relate to, regardless of its scientific merit. Ms. Cangelosi suggested that, in addition to the sidebar dealing with weeds, they also add a sidebar showing the progress of an aquatic invader. Dr. Reichard said that the weed example is a good one because just about everyone understands it.

Going back to Dr. Jackson's comment about the barrier language, Dr. Reichard said that the terms "geographical barriers" and "dispersal barriers" sound too much alike, and suggested that they be changed to "large scale geographical barriers" and "dispersal and spread barriers."

Mr. Brown emphasized the importance of using examples that demonstrate the role of people in moving species across barriers, either intentionally or unintentionally, and not just the plant or animal moving on its own.

## **MEMBERS FORUM**

Mr. Thompson reported that his organization has been continuing to talk about invasive species to Industry. They also continue to write about invasive species in a newsletter which reaches about 40,000 people who work for the federal government. They also did a radio show on invasive species over the weekend.

Dr. Stone reported that he is doing research on the sudden oak death pathogen *Phytophthora ramorum*. Next week he will go to New Zealand to do research on Douglas Fir diseases.

Mr. Dickerson reported that he had spent a good deal of time last year working with the nursery industry, PPQ, and the state regulatory agencies on the control of sudden oak death. The tropical spider wort, which is resistant to most herbicides, is another big issue that is on the forefront with the state regulatory agencies. They are currently trying to procure funding from Congress to deal with this issue.

Mr. Brunner reported that the Executive Director of the National Fish and Wildlife Foundation has stepped down to accept a position at the Smithsonian as the head of the National Zoo. Jeff Trandahl will begin as their new Executive Director at the end of the year. Mr. Brunner then asked the Committee what sort of information they would like from the Foundation about what they're funding. After he receives their input, he will be able to provide some responses to them on Thursday. He also said that he would like to hear back from the members of ISAC on what they think of the initiative to do a prioritization scheme of eradication for non-native vertebrates on U.S. islands, after hearing the presentation that will be given on this topic on Thursday.

Dr. Jerry Jackson reported that he continues to do a daily radio program titled "Wild Things" on a public radio station in southwest Florida. About 30 percent of the program is spent talking about invasive species. They have also done research projects on the black spiny tailed iguanas, which have become established on Gasparilla Island off the west coast of Florida. He described some of the problems that this species is causing. The Nile monitor, which has become very well established on Cape Coral, is an even more serious threat. These animals are being dispersed by the hurricanes, as well as by people who catch them and release them elsewhere.

Dr. Nelroy Jackson reported that he had given talks at the Mid-Atlantic EPPC meeting, the California Invasive Plant Council meeting, and at the North American Weed Management Association. Just last week, they printed the California Noxious and Invasive Weed Action Plan. National Invasive Weed Awareness Week is scheduled for February 26th to March 3rd. WSSA

is going to be talking to wildlife groups about the interaction between invasive weeds and wildlife, and the effect invasive weeds have on habitat for wildlife.

Dr. Reichard reported that, on account of a number of issues, the first large scale meeting for the Pacific Northwest on invasive species is going to be pushed back to September 2006. The idea of this meeting is to build partnerships, and to really focus on these partnerships as a way to deal with invasive plants. Dr. Reichard just completed a project in which participating nurseries were asked to promote native alternatives to a list of five invasive species that they sell. Over a three month period, they found that the sales of all of the invasive species had declined, while sales of the alternates had increased. In the lab, they have been looking at how invasive plants shift nitrogen cycles within ecosystems, and have come up with some interesting results.

Ms. Metcalf reported that they are just beginning the National Sea Grant proposal review process. In February of last year, they finally got an International Treaty on Ballast Water Management and Treatment at the International Maritime Organization. They are now in the process of working on 14 sets of guidelines that will assist states in implementing and administering the requirements of the convention. She then described several of these guidelines. In terms of legislation, she said that they have a lot of activity going on at the Hill. They also have three on-board testing programs aboard three of their member ships. Finally, they are trying to serve as a broker between ship owners and potential technology vendors.

Dr. Beck reported that a new weed law had been passed a couple of years ago in Colorado.

Ms. Cooper reported that she continues to work internally in her industry to educate them on what's happening in other industries, as well as on the responsibility of their industry to minimize the pathway of aquaculture, and to develop and comply with best management practices. One of the issues that the aquaculture industry has is defining invasive species. She will also be speaking on invasive species issues at Aquaculture America. A new sea-squirt tunicate has been found in Puget Sound, and they believe that it has been there for at least 40 or 50 years.

Ms. Leland reported that they have been doing research for a number of years on what species are coming into Prince William Sound through the ballast water and the oil tankers. Now, however, they are trying to determine how to deal with the problems they have discovered. Ms. Leland attended a Ballast Water Technology Workshop over the summer, where they discussed setting standards for the technologies. Several years ago, in conjunction with the Smithsonian, they started a green crab monitoring program in Valdez. This year, in cooperation with the Fish and Wildlife Service, they are expanding that program, and taking it to all of the other communities in their region. She will be attending a Fish and Wildlife Service briefing on shipwrecks in Alaska, which will have some focus on invasive species.

## **ISAC ADMINISTRATIVE ISSUES**

Mr. Regelbrugge reported that the names they have to propose for the ISAC steering committee are Ken Zimmerman, Gary Beil, Jerry Jackson, Joe Corn, Sarah Reichard, Lou Eldredge and John Peter Thompson. They are still seeking nominations for Secretary, although Ms. Leland has agreed to fill the position should no one else volunteer. For Vice-Chair, they are proposing

George Beck. A vote will be taken on Thursday to elect either Ron Lukens or Nelroy Jackson to recommend as Chair.

On term limits, Chair Bright reported that ISAC-three members will be able to re-apply when the notice is sent out. ISAC-one and ISAC-two members cannot re-apply, unless they wait until the end of the next term. Chair Bright then suggested that the future Chair find a way to schedule a second meeting in 2006, before two thirds of the members' terms expire on October 10th. Ms. Williams said that they would like to distribute the draft of the Federal Register notice seeking nominations for new members by next week, and that she would really appreciate everyone's input on this. She also encouraged outgoing members to come back to ISAC at a later point, or to serve on the task teams and committees that report back to ISAC. Dr. Jackson asked for further clarification on which members will be allowed to reapply. Ms. Williams said that they would provide a chart with this information. Dr. Beck asked for an explanation as to why the ISAC-two members serve 18 months fewer than the other members. Ms. Williams explained that this is because the system they had originally put in place was not done so in time. Chair Bright asked if there was any way this problem could be fixed. Ms. Williams replied that there wasn't much that they could do at this point, since the policy liaisons and principals had not approved their suggestion to abandon the term limits.

Ms. Cooper asked if the committee would continue to maintain the same balance of representation of various industries and other groups in coming up with a new slate of ISAC members. Ms. Williams replied that they would attempt not only to maintain, but also to improve this balance, bringing as many key stakeholders to the table as possible. Ms. Leland expressed a concern that the committee will lose momentum when it loses its longer term members. Mr. Meyers asked what the time frame will be for doing nominations. Ms. Williams said that she would like to get the draft out next week, and get a notice in the Federal Register within the next month. This will give people a little extra time to get nominations in. Ms. Metcalf urged all the committee members to contact their industries and tell them that the notice is coming out, and that they need to get their applications in.

Ms. Metcalf suggested that they try to hold the second meeting in 2006 after the new appointments, but before October 10th, since it might be helpful in terms of continuity to bring the new members together with the old members for one meeting. Ms. Williams said that this is a good idea. Mr. Dickerson said that it will take some time for the new members to catch up to the old ones, and suggested that they find a way to partner new members with old ones to expedite the orientation process. Dr. Jackson said that they needed to include more ISAC-three members in the slate of potential officers, so that they can provide leadership in the future. Ms. Williams said that this shouldn't be a big consideration, since the new ISAC will have an opportunity to re-choose officers. She would, however, advocate getting newer people on the steering committee.

## **REVIEW OF DAY 1 ACTION ITEMS**

Ms. Cooper captured five action items. One: ISAC requests resolution of the biocontrol issues as presented by the USDA report. Two: ISAC requests of NISC staff that a summary of responses to ISAC actions be provided, which also includes prior actions. Three: NISC staff will disseminate administration's response plan on the avian flu issue if, in fact, it can be distributed

to ISAC subcommittees. Another possible action item relates to the issue of International Prevention with EDRR. A current subcommittee list will be distributed to ISAC members so that members can participate on this issue. Four: it is requested of ISAC that members look at the tamarisk model and evaluate it as it might be applied to other types of issues. The fifth action item is a placeholder for an action item relating to a data sharing effort. Specific language on this action item will be provided to Ms. Cooper at a later point.

Ms. Cooper also captured one recommendation. ISAC recommends that the Environmental Protection Agency and Department of Homeland Security present their respective invasive species efforts and activities at the next ISAC meeting in Puerto Rico in April, 2006.

Ms. Diaz-Soltero captured other action items. Dr. Sarah Reichard requested to get a copy of the environmental evaluation by the Plant Protection Centers of NRCS. It was requested that DHS be added to the meetings between AFIS, CSREES, and ARS. Ship Bright asked for a presentation from DHS on this issue for the next meeting. On reporting for future ISAC meetings, Ms. Diaz-Soltero suggested that Ms. Williams have a one page paper saying which agencies have done their "Do No Harm Reports", and which agencies have strategy plans on invasive species. Whenever it's appropriate, she should give the committee an update on the agency activities and the progress that's being made on implementing the NISC plan. Mr. Zimmerman requested that ISAC members be sent copies of any letters that are signed by the Chair and sent to the Departments on their recommendation. It was requested that the EDRR team make a response with suggestions within two weeks after the administration plan is made public and NISC staff forwards it to the team. Marshall Meyers and John Randall asked to be included in this EDRR team. Tom Stohlgren challenged the agencies to designate a data sharer person in each agency, and also challenged the agencies that have researchers to reward the scientists that share data. Ms. Diaz-Soltero said that she could sit down later with Ms. Cooper and divide the action items from the requests for information. Chair Bright suggested that she do this.

Ms. Metcalf suggested that they not merge all the action items into one list, for fear of losing track of those items that are specific to ISAC. Ms. Cooper reminded the committee members that she had requested at the beginning of the meeting that they say "action item" whenever they make an action item request. Mr. Dickerson said that he didn't see how they could classify something as an action item if they hadn't either voted on it or otherwise decided that they had reached a unanimous or nearly unanimous agreement on the matter.

Ms. Cangelosi suggested that the EDRR group analyze the AI report and respond with relevant recommendations that ISAC could make.

## **PUBLIC COMMENT**

Bill Gregg said that he thought that clarifying the definitions was a very valuable exercise. In terms of the weed example, he cautioned that everyone has a different definition of weeds. Thus, using the example in defining invasive species might cause people to confuse the definition of invasive species with their own definitions of weeds. He would also like to see some reference in the definitions to the iterative nature of what is considered to be harmful. He agreed that data sharing needs to take place. Finally, he expressed his feeling that more attention needs to be paid

to species that are of only minor concern in one region, but could be potentially devastating in another, such as the cactus moth.

Mr. Grodowitz said that the Global Invasive Species Network has been trying to put together distributable databases with Meditax, and that some agencies have already been successful in tying some of their databases together. He suggested that the Committee contact this organization about data sharing.

NATIONAL INVASIVE SPECIES COUNCIL

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INVASIVE SPECIES ADVISORY COMMITTEE

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MEETING

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WEDNESDAY,  
OCTOBER 12, 2005

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SUMMARY

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The Committee met in the New Hampshire Ballroom at the City Center Hotel, 1143 New Hampshire Avenue, NW, Washington, DC, E. Shippen Bright, Acting Chair, presiding.

ISAC MEMBERS PRESENT:

E. SHIPPEN BRIGHT	Maine Lakes Conservancy Institute
K. GEORGE BECK	Colorado State University
GARY M. BEIL	Minnesota Crop Improvement Association
DAVID BRUNNER	National Fish and Wildlife Foundation
ALLEGRA A. CANGELOSI	Northeast Midwest Institute
DIANE COOPER	Taylor Shellfish Farms
JOSEPH CORN	University of Georgia
MICHELE DIAS	California Forestry Association
WILLARD "BILL" DICKERSON	North Carolina Department of Agriculture and Consumer Services
STEVE HENSON	Southern Appalachian Multiple-Use Council
JEROME A. JACKSON	Florida Gulf Coast University
NELROY E. JACKSON	Monsanto Company
MARILYN B. LELAND	Prince William Sound Regional Citizens' Advisory Council
RONALD LUKENS	Gulf States Marine Fisheries Commission
KATHY J. METCALF	Chamber of Shipping of America
N. MARSHALL MEYERS	Pet Industry Joint Advisory Council
CHARLES R. O'NEILL	New York Sea Grant Program
CRAIG REGELBRUGGE	American Nursery and Landscape Association
JOHN RANDALL	The Nature Conservancy

SARAH REICHARD  
JEFFREY D. SCHARDT  
DUANE SHROUFE  
JEFFREY STONE  
JOHN PETER THOMPSON  
KEN ZIMMERMAN

Center for Urban Horticulture  
Florida Department of Environmental Protection  
Arizona Game and Fish Department  
Oregon State University  
The Behnke Nurseries Company  
Lone Tree Cattle Company

**NISC STAFF PRESENT:**

KELSEY BRANTLEY  
GORDON BROWN  
ANNA CHERRY  
HILDA DIAZ-SOLTERO  
DEAN WILKINSON  
LORI WILLIAMS

Program Assistant  
DOI Policy Liaison  
Public Affairs Coordinator  
USDA Policy Liaison  
DOC Policy Liaison  
NISC Executive Director

**REVIEW OF DAY 1**

Dr. Nelroy Jackson commented that he missed having all of the Principals present on Day 1. Ms. Williams said that they could plan to attend before the end of the meeting. Mr. Zimmerman asked for clarification on how the Committee had decided to handle action items. Ms. Williams said that, when a proposal is being discussed, someone should suggest that it be made an official action item. Then ISAC can either agree to make it an action item or not. At the end of the day, they will compile a list of all the approved action items. As for all of the proposals that do not become action items, it will be the staff's responsibility to go through the minutes and compile a separate list of other requests and recommendations that came out of the meeting. Dr. Randall proposed, as an action item, that they later discuss Tom Stohlgren's suggestion that they designate data sharers for each agency. Chair Bright said that he would add this to the agenda.

**INVASIVE SPECIES DEFINITIONS: GEORGE BECK**

Picking up where they left off on the previous day, Dr. Beck began to go over the Introduction of the document. He initiated a discussion on whether the phrase "alien species" or "non-native species" would be a less confusing term for their audience. Mr. Thompson supported "non-native species" since "alien" is a pejorative word. People around the table nodded their heads in agreement. Dr. Randall asked what phrase had been used in the original definition. Mr. Wilkinson replied that "alien species" had been used in the Executive Order, since this is the international usage. However, he would prefer either of the terms "non-native" or "non-indigenous" over "alien." Mr. Lukens and Dr. Jerry Jackson agreed that the term "non-native" is more clear. Dr. Randall suggested that they use the term "non-native," but add a footnote explaining that "non-native" is being used as a synonym for "alien" as it is used in the Executive Order. Mr. O'Neill suggested that they include the sections from both the Executive Order and the Management Plan that give the definitions of alien and non-native species in the appendix to the Definitions. He also suggested that they make a strong case in the appendix for why they are

not using “alien.” Dr. Nelroy Jackson suggested that, the first time they use the term “alien,” they explain, within the text, that “non-native” is the current usage. Then, for the rest of the text, they can simply use “non-native.” Mr. O’Neill and Mr. Thompson agreed that this explanation should be made within the text.

They next discussed the statement made in the introduction to the White Paper that, “In a technical sense, invasive denotes an uncontrolled or unintended spread of an organism outside of the organism’s native range,” with no specific reference to the economic or environmental consequences of that invasion or the potential societal benefits. Mr. Lukens took issue with the use of the terms “uncontrolled” and “unintended,” since the release of certain invasive species is intentional. Dr. Jerry Jackson pointed out that “uncontrolled” and “unintended” modify “spread” rather than “release.” Dr. Beck asked if the Committee was comfortable with this wording. Ms. Cangelosi said that the wording is clear as it is, since, if the actual spread of a species is controlled or intentional, then the species is not invasive. Dr. Beck asked if the addition of the phrase “often mediated by humans outside its native range” to the end of the sentence in question would help in terms of clarification. Ms. Cangelosi suggested that they instead insert the phrase “following intentional or unintentional release.” Mr. Brown said that nothing needed to be added to the sentence, since human involvement in releasing a species into a foreign environment is not relevant to the definition of an invasive species. Ms. Diaz-Soltero agreed with Ms. Cangelosi’s suggestion, since the human responsibility dimension of invasive species is an important point to emphasize to the public. Dr. Jerry Jackson took issue with the use of the term “spread” in the sentence in question, since spread does not necessarily imply establishment, as in the case of plants used in landscaping. Mr. Zimmerman supported the current wording of the sentence, since spread implies introduction, either by humans or by nature.

Moving on, they next discussed the portion of the Introduction that talks about the regulatory context of policy. Mr. Wilkinson commented that, in a strict sense, what they are doing is not regulatory in nature.

With regard to the “Perception to Cause Harm” section of the document, Dr. Randall strongly advised that they do away with the domestic cat example, since they do not have room to explain that they are only talking about feral cats, and not housecats. Mr. Thompson suggested that they go ahead and include this explanation.

Mr. Brunner took issue with the statement that “the majority of non-native introductions are beneficial,” since it is unsubstantiated. He suggested that they use the word “many” rather than “majority.” Dr. Beck said that this could be easily done. Mr. Meyers suggested that they take this one step further, and just say “some.”

Dr. Corn suggested replacing the domestic cat example with food and fiber. He also asked how they planned to determine whether or not the benefits of a non-native species outweigh the harm that they cause. If they are not able to do this, then they should not state that the harmful effects of an invasive species must outweigh the beneficial effects. Ms. Cangelosi replied that, although it is often difficult to determine whether a species is doing more harm or good, for the purposes of policy-making, they will focus only on those species that are clearly problematic. Ms. Diaz-Soltero suggested that they simply remove the word “must” from the statement in question. Mr.

Thompson agreed. Dr. Reichard also suggested that the word “any” be removed from the phrase “outweighs any beneficial effects.” Dr. Beck said that he would make this change. The reworded sentence will then read, “For a particular non-native organism to be considered an invasive species, the negative effects that the organism causes or is likely to cause outweigh beneficial effects.”

Dr. Reichard supported the suggestion to replace the example of cats with food and fiber. Dr. Randall suggested the example of honeybees. Mr. Meyers commented that the giant salvinia has not been a popular mainstay in the aquarium industry, and so should not be used as an example of one. Mr. Schardt suggested that water hyacinth or purple loosestrife might be a better example, saying that they could use the word “devastated” with water hyacinth, but not with giant salvinia. Ms. Cangelosi advocated for retaining the word “any” before “beneficial effects,” since an organism may or may not cause beneficial effects.

Dr. Stone said that the food and fiber example is better than an example of any particular organism, because the sentence in question calls for a direct example of a societal benefit. The Committee agreed to use the food and fiber example. Mr. Thompson, however, pointed out that some people do not necessarily associate food with living organisms, and said that a specific example might help to clarify this. Dr. Randall objected to the food and fiber example on the basis that not all organisms introduced for the purposes of providing food and fiber are ultimately beneficial. Dr. Beck suggested that they return to this issue later on.

Dr. Jerry Jackson suggested that, in the phrase “outweigh beneficial effects,” the word “effects” be replaced by “impacts.” Dr. Beck suggested that they do the wordsmithing as the paper is circulated.

Ms. Cangelosi suggested that they insert some wording to clarify that perception to cause harm is subjective. In particular, she suggested that the sentence in question be changed to read, “For a particular non-native organism to be considered an invasive species in the policy context, the negative effects that the organism causes or is likely to cause are deemed to outweigh any beneficial effects.”

Moving on to the definition of harm, the statement is made that “Invasive species constitute a small fraction of non-native organisms, but the spread from their native range can be disastrous for the natural environment and the associated economies.” Dr. Randall suggested that “potential harm to public health” be added to this statement. Further on in the explanation, the term “forbs” is used. Dr. Stone suggested that they replace this with another term that might be better understood by the general public.

Mr. O’Neill suggested that they include in their definition of harm the impacts that invasive species can have on beneficial non-native species. Dr. Beck pointed out that they need to address the issue of whether they are targeting only natural environments, or non-natural environments, as well. Mr. O’Neill commented that some invasive species have a serious impact on non-native crop species. Dr. Jerry Jackson replied that this type of concern is already covered in their definition of harm, since an impact to crops constitutes an impact to economy. Dr. Beck suggested that they focus on whether or not adding language to specifically include harm caused

to non-natural environments would clarify or confuse the issue. Mr. O'Neill said that they need to make it clear to their readers that they are not only interested in the effects of invasive species on natural environments. Dr. Beck proposed that they deal with this issue in the examples.

Moving on, they began to discuss the paragraph dealing with the difference between invasive species and nuisances. In particular, they discussed the examples of Canada geese and whitetail deer. Although whitetail deer cause societal problems, they are a native species, and so are not invasive. Canada geese, however, are invasive in some areas. These are, however, controversial examples, and so might be a source of confusion rather than of clarification in the White Paper.

Ms. Dias suggested that, instead of giving examples, they simply say that species that are a nuisance within their natural range are not invasive. Dr. Beck expressed his concern that, if they do not use examples, they will lose the opportunity for clarification. Instead, he suggested that they come up with examples that are less controversial. Mr. Lukens objected to the use of the word "nuisance," saying that he would prefer the phrase "cause significant problems" or "have significant negative impacts." Dr. Corn commented that whitetail deer are not a nuisance in some areas of the country, except possibly in the context of private property. He also noted that the increase in deer populations is not related to a decrease in predators, but to improved habitat management practices. Mr. Brown reminded everyone that the definition of non-native in the Executive Order is with respect to a particular ecosystem. Also, domesticated animals that are under effective control or management are exempt. They had decided to focus on the non-native species that are causing problems before focusing on the native species that are causing problems. For the purposes of clarity, Ms. Cangelosi suggested removing the words "gray area" from this section of the paper, and simply saying what they mean and what they don't mean. Ms. Cherry commented that, if they cannot come up with a single example of what they don't mean, then this definition may not be very useful. Mr. Lukens suggested using native termites and Formosan termites as examples. Both of them cause economic damage, but only one is invasive.

Dr. Randall said that the Canada geese and whitetail deer examples would not be so problematic if they provided a precise geographic context for these examples. Ms. Diaz-Soltero agreed that they should keep the Canada geese example, since it will be familiar even to urban populations.

The Committee agreed to keep the original examples, but provide more context to them. Ms. Cangelosi commented that they still needed to address the gray area, in which it is unclear whether organisms are invasive or not. Dr. Beck suggested that they make the statement that there is a gray area, and reserve any examples for the example section. Ms. Cangelosi recommended that the statement dealing with the gray area follow the definition of what they mean and what they don't mean.

The next paragraph deals with the issue of controlled versus feral populations. In this section, they say that if a population is under control, then it is not an invasive species. As examples of feral populations, they came up with feral rye in Colorado and feral goats. Dr. Stone asked why the feral rye is a problem, and Dr. Beck replied that it is displacing other species. Dr. Reichard suggested that they refer readers to other documents if they want more information on why these populations are problematic. The Committee then listed several areas where feral goats are a problem, and agreed to include this information in a citation. Dr. Beck expressed his concern that

if they begin referencing, then they will have to reference everything, which could become very time consuming. Mr. Schardt suggested that they simply include brief examples of why the populations are problematic within the text of the paper.

The last paragraph in the section on “what they mean and what they do not mean” deals with how an organism can be invasive in one part of the country and not in another. Ms. Cangelosi said that the example of lake trout is good in that it shows that there are geographic differences within the country. She suggested, however, that they use the wording “a species might be invasive in one part of the country and not in another,” rather than “an invasive species is harmful in one part of the country and not in another.” Mr. O’Neill commented that lake trout are not invasive to the Great Lakes because they are native to it, but that Ms. Cangelosi’s wordsmithing takes care of this issue. Dr. Nelroy Jackson suggested that they re-introduce the term ecosystem, and say that “Furthermore, an invasive species may be invasive in one ecosystem in one part of a country but not in another.” Mr. Thompson said that the English ivy and Kentucky bluegrass examples work, since they are considered to be invasive in some ecosystems, while they are desirable in others. However, he said that they should work on the wording. Ms. Cangelosi pointed out that the English ivy example is different from the rest, since it is not native to any part of the country, but is more valued in some parts than in others. She suggested that some language be added to clarify this. Dr. Beck said that they needed more examples, representative of as many taxa, habitats, and impacts as possible. Ms. Diaz-Soltero suggested that they use avian influenza as one of their examples. Dr. Randall objected for technical reasons, since viruses are not species. Ms. Cangelosi replied that, for purposes of the legislation, the term “species” includes biological material of all kinds. With respect to impacts, Ms. Cangelosi suggested that they include the impact of nutritional degradation of forage. Mr. Wilkinson commented that “increased costs” applies not only to food and fiber, but also to areas of industrial production. Definitions discussion was scheduled to continue on October 13, 2005 at 10:15 am.

## **LEGISLATIVE UPDATE: ALLEGRA CANGELOSI**

Ms. Cangelosi said that they should quit thinking of the National Aquatic Invasive Species Act and the Ballast Water Management Act as competing pieces of legislation, and begin thinking about the provisions that are of value in both bills, as well as of ways to put them together in order to get legislation as statute.

The National Invasive Species Act was originally The Non-Indigenous Aquatic Nuisance Prevention and Control Act, which was first passed in 1990. It regulated ships entering the Great Lakes, and it set up the Aquatic Nuisance Species Task Force. In 1996, the bill was reauthorized, and became the National Invasive Species Act. It is once again up for reauthorization. Historically, the whole bill went to the Environment and Public Works Committee on the Senate side. On the House side, the ship provisions have historically gone to the Transportation and Infrastructure Coast Guard Subcommittees, as well as to the Water Resources Subcommittee. The non-ship provisions have been referred to the Resources Committee, the Transportation and Infrastructure Committee, and the Science Committee. Thus, there is much more jurisdictional complexity on the House side.

In 2003 and again in 2005, the National Aquatic Invasive Species Act was introduced to reauthorize the underlying law. It is comprehensive in that it recognizes that the ship vector is not the only vector. It includes a rapid response fund and a monitoring system. It also organizes the research and information effort. The National Aquatic Invasive Species Act, which has House counterparts, sets a floor for ballast treatment, which exceeds the expectations for ballast water exchange. It then directs agencies to set a high bar as the standard for environmental protection of ballast discharge. Every three years, the agencies will do a review to see what the best-performing treatments are, and the floor will increase. By 2011, only the best ballast water treatments will be acceptable under the bill. However, any ship that installs a treatment is guaranteed to be allowed to use this system for 10 years without interference, unless the system fails. The bill will also regulate all relevant ship modes, and call on the agencies to use a similar structure to regulate those modes of transfer. The bill does not attempt to preempt state laws, since if the states opt to limit commerce to their ports by having discrepant programs, then they do so at their own economic peril. The formulation of the House bills is essentially the same. Treatment or ballast water exchange can be done to a treatment standard or better before 2011. After 2011, the best-performing treatment standard must be used.

The Ballast Water Management Act takes a different approach to making the switch from ballast water exchange to treatment. It focuses only on the ballast water mode of transmission within ships. There are two reasons for this. One is that the bill is being introduced by the Commerce Committee, whose jurisdiction goes to ship management. The second reason is that it may be easier to make progress on ships if they concentrate only on them. Unlike the other bill, this bill sets the environmentally protective standard in statute, rather than leaving this up to the agencies. Thus, the major difference between this bill and the other one is that this bill doesn't allow treatment to take place on a broad scale until a treatment is available that can meet the environmentally-protected standard. It also preempts the state authorities and the Clean Water Act.

The Senate EPW Committee is poised to develop their comprehensive version of the bill. Meanwhile, the House Transportation and Infrastructure subcommittees are preparing their version of the Ballast Water Management Act. They have shied away from the comprehensive program in large part because they have no control over the Resources Committee, and are concerned that the Resources Committee will hold some of the other provisions hostage. They hope that this Committee can be convinced of the value of these other provisions, in order that the House may move forward with the comprehensive program.

Finally, Ms. Cangelosi reported that there is Asian carp language in the bill, as well as language to codify the National Invasive Species Council. Ms. Cooper asked what the timeframe is for getting IMO ratified. Ms. Cangelosi replied that it usually takes from one to two years.

Ms. Williams reported that the SAFETEA-LU bill, which had invasive species language in the Senate version, had passed. Dr. Nelroy Jackson asked if the invasive species language had been removed from the bill. Ms. Williams replied that the references to invasive species had been very limited to begin with, and that they had been replaced with noxious weed language.

Mr. Meyers pointed out that 72 bills on non-native species had been introduced this year in 20 different states, and that many of them had passed. He then said that, if a recap of what's going on at the state level would be helpful, he would assist in providing this information. Ms. Williams said that this was a great idea.

Ms. Williams said that a bill had been introduced in the Senate by Senators Akaka and Wyden to provide grants to states to work on invasive species issues. It mentions both the Invasive Species Council and the cross-cut budget. She will try to get this bill out to people so that they can see it. Mr. Wilkinson reported that the Department of Commerce has been asked to provide technical comments on a bill dealing with No Ballast On Board, which is an issue in the Great Lakes. The Coast Guard has issued voluntary guidelines, and some of the Great Lakes representatives are looking to make these mandatory.

Dr. Nelroy Jackson said that he had heard that the invasive species language had been pulled from the Endangered Species Act. He also asked if they had any new information on the Domenici Pearse Salt Cedar bills. Ms. Williams replied that the Salt Cedar legislation had not yet passed, but that progress is being made on it. With regard to the Endangered Species Act, she said that the invasive species language that had originally been included was very limited, in that it defined invasive species as having no societal benefit. Thus, it was not a serious provision for dealing with invasive species.

## **NISC PUBLIC AFFAIRS AND OUTREACH UPDATE: ANNA CHERRY**

Ms. Cherry reported that she had not received any information demonstrating how the National Geographic television special, Strange Days on Planet Earth, had been inaccurate. The related program that they worked on is called the Strange Days on Planet Earth Impact Campaign. They also worked on a program called Alien Invaders, a pilot of which was done at the Sonoran Desert

Museum. She said that it is a good education tool and a good culture change tool, as well as being helpful on an operational level.

They also had an interesting meeting with Allan Burdick, whose book, *Out of Eden*, came out over the summer. This book offers both a philosophy of science and a historical perspective, and deals with how we make judgements on what is an ecosystem and what is not. He came to NISC because he decided that he needed to learn about invasive species policy.

The website has grown so large that they are considering splitting it into two sites. One site will be used as a site about Federal policy and NISC, while the other will contain library-type resources. This will avoid confusion, and allow the library site to remain free and open. In the spring, they will be working on a conference on forest health.

Mr. Dickerson asked if the decision to separate the two websites had been made by staff, or if it had been made through the subcommittee. Ms. Cherry replied that the decision had been made jointly. Mr. O'Neill said that the split would facilitate the development of two very good connected websites.

Chair Bright brought up two recommendations that had been made earlier. The first recommendation is that ISAC offer Bill Dickerson to interact with APHIS-PPQ on the revised procedures on the importation of biocontrol agents for research, evaluation, and possible release. Chair Bright then asked if this needed to be made into a motion. **Dr. Nelroy Jackson moved that this be made a formal recommendation. Mr. Lukens seconded, and the motion passed unanimously.** In order to implement this recommendation, Ms. Diaz-Soltero said that she would include Bill Dickerson in all meetings that will be held between the agencies to move this forward.

The second recommendation is that ISAC II members' terms be extended for 18 months, to April, 2008, for the following reasons: One, ISAC II members will have served their full terms by going to April, 2008, which is six years or less, in compliance with the ISAC charter item 4.2.C., Officers and Membership section, and Two, NISC will have the benefit of continuity of the collection of knowledge that has been invested in ISAC II, and will get their full service. Ms. Metcalf pointed out that the reason ISAC II members have served 18 months fewer than they should have is not because of shortened terms, but because there was a lapse between the end of the first term and the beginning of the second. Dr. Nelroy Jackson pointed out that there had also been a lapse between the end of the second term and the beginning of the third. Mr. O'Neill said that the proposed recommendation seemed like a good solution. Mr. Lukens said that he would also support the recommendation, for the sake of maintaining continuity. Mr. Dickerson said that decisions on how to interpret the charter ought to be made by the staff. Thus, if the staff wants to implement this particular recommendation, then he supports it. Ms. Williams said that the recommendation is not from staff, but from ISAC. **Dr. Beck moved that they proceed with this recommendation. Bill Dickerson seconded.** Ms. Metcalf again pointed out that there has been a break in service. Mr. Thompson asked what would happen to the officers in October, 2006. Ms. Williams reminded everyone that they renew the charter every two years. She then suggested that they offer each new class of ISAC members the options of either continuing with the remaining officers, or recommending a new slate. Mr. Brown pointed out that the ultimate power

of reappointment lies with the Secretary. **The motion passed unanimously.**

## **MEMBERS FORUM**

Mr. Meyers reported that Habitattitude had come in week after week as the number one environmental message on the PBS poll. He then gave some information from a study that was done by Minnesota Sea Grant in four cities prior to roll-out. This data shows that many people understand the problems associated with releasing aquatic pets into local ecosystems. Also, people find the Habitattitude logo to be easy to understand, attractive, positive, and clear. There will also be some surveys done post roll-out. Also, one of their member retail chains will be having a web-based survey that people can access from anywhere in the country to answer the same questionnaire. They will encourage members of their Affinity Program to come in and take the survey. The starter kits will be sent out to independent retailers. Public aquariums have joined the program. They have been asked to expand the program to cover terrestrials, as well. In the Everglades, they are working with the National Park Service on how to deal with the python issue. They are working on some MOUs with the Fish and Wildlife Service and CDC.

Mr. Regelbrugge reported that he gave a talk on Habitattitude to the International Water Lily and Water Gardening Society. They are very interested. They are doing a lot relating to this issue in the research funding area. For example, they are currently funding a project called DNA fingerprinting of *Berberis thunbergii* and *Euonymus alatus* to determine the origin of invasive populations. They are also determining relative invasiveness of *Buddleia davidii* cultivars and developing management strategies to prevent their spread. They are developing sterile forms of potentially invasive nursery crops. At the end of October, they will be convening a technical working group to take a look at nursery management practices. They will begin by focusing on *Phytophthora ramorum* and related diseases.

Mr. Shroufe reported that he had been able to participate in the North American Natural Resource Wildlife Conference in November. He made a presentation on the role of state agencies in addressing invasive species problems. The Arizona Invasive Species Council has been established, and the first meeting will be held next week. They also convinced the Executive Committee that they ought to have a standing Invasive Species Committee. They want someone from ISAC to chair this committee.

Ms. Dias reported that she had switched from the California Farm Bureau to the California Forestry Association. One of the things these two organizations have in common is that they are not well educated on invasive species, and do not necessarily want to be educated on invasive species. They are, however, working to get some legislation on invasive species passed in California.

Mr. Lukens reported that, in August, their regional panel had sponsored a risk assessment training workshop, at which Richard Orr and Ann Sergeant were presenters. The event was well attended and well received. The Mississippi River Basin Regional Panel is planning to do another workshop early next year. Their perspective is that the need to conduct risk assessments is going to increase. In the Gulf of Mexico region, all states are either working on or have a state

plan. Hopefully they will be able to encourage Georgia and South Carolina to do likewise. Mr. Lukens expressed his regret that they still do not have the resources to address the Gambian pouched rat issue. In their regional panel meeting in late November, they plan to discuss what invasive species populations may have been affected by the hurricane, and what the potential impact might be. A recommendation has been made that they need to establish a taxonomic expert's database or databases. They are currently trying to generate interest on the part of the federal agencies to provide the funding to get this done.

Mr. Schardt reported that the Bureau of Invasive Plant Management has a \$250,000, two year project funded with the University of Florida to train Florida state park biologists and rangers on invasive plant issues, as well as to develop brochures and kiosks within the parks to reach visitors. They are currently collaborating with science teachers in Florida, who are writing lesson plans related to invasive plant management. They will also be paying for the training of about 200 science teachers in Florida, with the stipulation that they go back and train three to four other teachers. This should allow them to reach 125,000 to 150,000 students per year.

Ken Zimmerman reported that he had started a new cooperative resource stewardship project with the BLM, the Forest Service, and the Department of Water and Power in L.A. They are also doing research which will hopefully generate a decision-making tool that can be used by multiple agencies.

Dr. Corn reported that they are working on a series of manuals for USDA, APHIS, and Veterinary Services emergency programs, which will be for use in the animal emergency response organizations. One of the manuals is on wildlife management, another is on vector control, and a third is on vector-borne strategies. They continue to do training sessions for Wildlife Services and Veterinary Services personnel on emergency preparedness and sampling of wildlife and disease responses. They are doing a surveillance project for exotic arthropods, including ticks, in the southeast United States and Puerto Rico. Finally, they are continuing their work with mapping the distribution of feral swine, and are looking at how and where the spread of feral swine is increasing the risk of disease transmission from feral to domestic swine.

## **REVIEW OF DAY 2 ACTION ITEMS**

Ms. Cooper reported that there were no action items for Day 2.

## **NOMINEES FOR ISAC CHAIR: RON LUKENS AND NELROY JACKSON**

Ron Lukens is the Assistant Director of the Gulf States Marine Fisheries Commission, which is an interstate compact. The Commission influences and helps to shape federal policy. Marine fisheries and coastal issues are Mr. Lukens' primary focus. He has been working as a marine biologist for 30 years. He began working on invasive species issues in 1999 through the Commission, and by being involved in the Aquatic Nuisance Species Taskforce processes. He currently administers the Gulf and South Atlantic Regional Panel of the Taskforce. He has participated in ISAC since its inception. He has spent a good deal of time working on invasive species issues, and enjoys it.

Nelroy Jackson got his Ph.D. from Ohio State University, and worked in the sugar industry in South America before joining Monsanto to begin a 23 year career involving product development, technical management, team leadership, and meeting organization. He has experience with a variety of crops, as well as non-crops. He is primarily working on the development of Roundup and Rodeo herbicides. They have used this chemistry for habitat restoration and the control of brush. They have also supervised international programs using Roundup. Dr. Jackson is the cofounder of the California Invasive Plant Council, and served as director for five years. He also served as president of the California Weed Science Society. He was a director of the Western Society of Weed Science for four years, and was on the board of the National Weed Science Society of American for three years. He co-chaired the IPINAMS Conference in 2003, and helped to develop the Executive Order and the Management Plan for ISAC.

NATIONAL INVASIVE SPECIES COUNCIL

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INVASIVE SPECIES ADVISORY COMMITTEE

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MEETING

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THURSDAY,  
OCTOBER 13, 2005

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SUMMARY

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The Committee met in the New Hampshire Ballroom at the City Center Hotel, 1143 New Hampshire Avenue, NW, Washington, DC, E. Shippen Bright, Chair, presiding.

COMMITTEE MEMBERS PRESENT:

E. SHIPPEN BRIGHT	Maine Lakes Conservancy Institute
K. GEORGE BECK	Colorado State University
GARY M. BEIL	Minnesota Crop Improvement Association
DAVID BRUNNER	National Fish and Wildlife Foundation
ALLEGRA A. CANGELOSI	Northeast Midwest Institute
DIANE COOPER	Taylor Shellfish Farms
JOSEPH CORN	University of Georgia
MICHELE DIAS	California Forestry Association
WILLARD "BILL" DICKERSON	North Carolina Department of Agriculture and Consumer Services
PATRICIA DOERR	National Governors Association
STEVE HENSON	Southern Appalachian Multiple-Use Council
JEROME A. JACKSON	Florida Gulf Coast University
NELROY E. JACKSON	Monsanto Company
MARILYN B. LELAND	Prince William Sound Regional Citizens' Advisory Council
RONALD LUKENS	Gulf States Marine Fisheries Commission
KATHY J. METCALF	Chamber of Shipping of America
N. MARSHALL MEYERS	Pet Industry Joint Advisory Council

CHARLES R. O'NEILL  
JOHN RANDALL  
CRAIG REGELBRUGGE  
SARAH REICHARD  
JEFFREY D. SCHARDT  
DUANE SHROUFE  
JEFFREY STONE  
JOHN PETER THOMPSON  
KEN ZIMMERMAN

New York Sea Grant Program  
The Nature Conservancy  
American Nursery and Landscape Association  
Center for Urban Horticulture  
Florida Department of Environmental Protection  
Arizona Game and Fish Department  
Oregon State University  
The Behnke Nurseries Company  
Lone Tree Cattle Company

NISC STAFF PRESENT:

KELSEY BRANTLEY  
GORDON BROWN  
ANNA CHERRY  
HILDA DIAZ-SOLTERO  
RICHARD ORR  
DEAN WILKINSON  
LORI WILLIAMS

Program Analyst  
DOI Policy Liaison  
Public Affairs Coordinator  
USDA Policy Liaison  
Assistant Director (International)  
DOC Policy Liaison  
Executive Director

SPEAKERS:

MICHAEL GRODOWITZ  
ANN SERGEANT  
BERNIE TERSHEY

USACE  
USEPA  
Island Conservancy

**REVIEW OF DAY 2**

Mr. Schardt asked what their final decision was with regard to the importation of biocontrol agents. Ms. Cooper replied that they had made the recommendation that Mr. Dickerson work with PPQ on this issue. Mr. Schardt then asked if they would be working towards a solution to this problem. Chair Bright replied that they would ask for a report back at the April meeting. Mr. Dickerson added that PPQ expects this process to be completed by December.

**PROPERTY RIGHTS PERSPECTIVE ON INVASIVE SPECIES: STEVE HENSON AND MICHELE DIAS**

Ms. Dias began by saying that many landowners feel that the definition of invasive species is too broad. They would prefer to use voluntary measures in dealing with invasive species, but are afraid that these measures could then be used as a baseline for regulations. Landowners are also very concerned about mapping and reporting requirements.

Mr. Lukens asked if the White Paper would ease the concerns of landowners with regard to the definition of invasive species. Ms. Dias replied that the members of the Farm Bureau would prefer to see the definition changed, rather than clarified. Mr. Henson agreed, saying that they

are bothered by terms such as “environmental harm,” which can be interpreted in ways both favorable and unfavorable to them. Dr. N. Jackson asked what sort of definition the landowners would be comfortable with. Ms. Dias replied that she doesn’t know what would make them comfortable, although she does know what makes them uncomfortable. Mr. Henson said that he believed that just dropping “environmental harm” from the definition would satisfy many people. Ms. Dias listed the main threats to private property rights that had been articulated to her by members: the taking of private property for public use, prohibitions on landowners’ ability to use and manage their property, and prescriptive and costly regulations that discourage landowners from implementing control measures for harmful invasive species.

Mr. Zimmerman commented that, since “environmental harm” is in both the Executive Order and the Management Plan, it will be difficult to take it out. Mr. O’Neill said that removing “environmental harm” would weaken the definition by making it too broad. He suggested that the best way to deal with the problem would be to clarify the term “environmental harm” in such a way that people know why it is there. Mr. Henson pointed out that the reason people are concerned about the definition of “environmental harm” is because they are afraid that this use of the term in a regulation could limit their options in terms of how they use their land. Ms. Dias added that regulations can also create landowner disincentives, since regulations are not customized to meet the needs of every landowner. Mr. Zimmerman commented on how it is difficult for private landowners to manage their property when adjacent public property is not being managed. Ms. Dias said that they believed regulatory action should only be pursued when other approaches are inadequate. Mr. Henson said that, if properly educated, landowners will be very interested in using their land to improve the environment, and will do everything they can to cooperate. Ms. Dias said that, because of the Endangered Species Act, landowners are now afraid that there will be an Invasive Species Act.

Their recommendations are: Whenever a government action affects the private rights of landowners, these landowners should be compensated at fair market value for the taking of those property rights. Private landowners should not be expected to assume the entire cost of control measures. When crops and livestock are quarantined, landowners should be compensated for their losses. Landowners should be viewed as partners in the control of harmful species, while regulatory action inhibiting private efforts should be pursued only in extreme circumstances. The legal abatement of a species should only be pursued when the pest threatens the health and viability of important resources. Any consideration of endangered or threatened species should have a component recognizing and addressing the role of harmful invasives. ESA reform should permit an exemption policy for invasive species.

Dr. Beck suggested that a tax incentive be used to encourage the cooperation of private landowners. Ms. Dias commented that there are many programs and regulations to which invasive species control measures could be added. Mr. Henson said that they needed to concentrate on education, because, if landowners understood how invasive species can impact their lands, they would be much more willing to work with agencies that would help them make their land better.

Mr. Zimmerman recommended that a control component be included in every grant process. Dr. Reichard suggested that, to clarify the meaning of “environmental harm,” they should use

definitions of the term from peer reviewed literature, and then translate them into language can be understood by non-scientists. Mr. Henson commented that people are afraid not so much of how the scientific community will interpret “environmental harm,” but of how the courts will interpret it.

Ms. Cherry asked what kind of educational opportunities they were suggesting. Mr. Henson replied that they should focus on working through the states on educational programs.

Mr. Brown pointed out that the Executive Order had been established in response to the concerns of private landowners that the authorities were uncoordinated in their invasive species efforts. He also pointed out that there is a great general desire to cooperate before regulating or litigating. He then emphasized the need to work together with all the Federal agencies. He concluded by saying that the local efforts that are taking place in various parts of the country have the potential to change the behavior of agencies working with people at the local level.

Dr. Beck proposed, as an action item, that the committee recommend to NISC that Cooperative Extension create a nationwide program on invasive species education. Mr. O’Neill replied that they are trying to do this at the state level in New York. In New York, people are looking for help in reducing the environmental impacts of invasive species on their properties. He then suggested that they work together to define “environmental harm” in such a way that it will not be open to interpretation by the courts. On the other hand, if they were to remove “environmental harm” and other terms from the definition, then the definition would be left open to almost any interpretation. He concluded by saying that he supports Dr. Beck’s proposal.

Mr. Lukens reported that The State of Louisiana had just recently finished its state aquatic invasive species plan. The top priority in this plan is education, while regulation and legislation is the lowest priority. He then suggested that anyone who is involved in developing a state plan make regulation a last resort. This may encourage people to voluntarily involve themselves and their property in cooperative programs.

Dr. N. Jackson said that he would still like to get a response to his earlier question of what definition of invasive species would satisfy the landowners. He also commented that the discussion they had been having went against his personal experience, which is that private landowners are at the forefront in dealing with invasive species. He then said that he would like to see this issue addressed in smaller discussions in the interim between their meetings.

Mr. Thompson proposed, as an action item, that the committee form a working group to consider the definition of harm, while keeping in mind this presentation on property rights.

With regard to Dr. Beck’s recommendation to NISC, Ms. Williams said that they would bring it forward to the agency. Chair Bright suggested that this recommendation be made into a motion. **The motion to recommend to NISC that Cooperative Extension create a nationwide program on invasive species education was made and seconded.** Mr. Schardt asked what group this education program would be targeted at. Ms. Diaz-Soltero replied that it would be focused on landowners and land managers. Mr. Schardt suggested that they clarify the recommendation to include this information. Ms. Diaz-Soltero said that the recommendation is

clear enough as it is. Mr. O'Neill said that a national program created by Cooperative Extension would be the broadest way to reach the most people with an educational program based on science and research. **The motion passed unanimously.**

With regard to Mr. Thompson's proposal that the committee form a working group to consider the definition of harm, Dr. Beck said that he thought they had already decided to do this within the White Paper. Mr. Thompson replied that, if the definition of harm has still not been clarified after the completion of the White Paper, they should continue to look at it. Dr. Randall agreed that they should be quite clear in their definition of harm, even if this calls for a second White Paper. Chair Bright suggested that they create a small task team to look at the issue of harm and report back at the April meeting. Mr. Thompson said that he would support this formulation of his action item. Mr. Zimmerman suggested that they review the harm section of the White Paper, and possibly expand on the definition of harm.

Dr. Randall proposed, as an action item, that the Definitions Task Team consider the definition of harm in light of the presentation on property rights, and that the Definitions Task Team be opened up to others who would like to join it for the sake of this discussion. Chair Bright added that the work that is being done on the White Paper should not be held up by this activity. Mr. Thompson said that they would like their feedback on harm to be made a part of the White Paper. Ms. Diaz-Soltero agreed that the clarification of harm should be included in the White Paper. Chair Bright said that, in order to accept this, the committee would have to be comfortable with holding off on the completion of the White Paper until 2006. Mr. Wilkinson said that his principal had asked to have a final draft of the White Paper after this meeting. Dr. Beil said that the industries he is associated with are also desperately in need of this White Paper. Ms. Williams suggested that they go ahead and approve the White Paper, with the understanding that they will be having further discussions on harm, and will add an addendum dealing with it. Mr. Lukens said that defining harm and defining invasive species are separable issues, and that he did not want the completion of the White Paper to be held up.

Chair Bright suggested that, if they do approve the Definitions, they approve them with the qualification that ISAC will create an addendum after the 2006 meeting that further clarifies the definition of harm. Ms. Diaz-Soltero commented that some agencies will not be willing to accept the White Paper recommendation before seeing the addendum. Ms. Cooper said that they should be able to clarify harm within the Definitions White Paper without holding it up. Mr. Dickerson suggested that, if the harm group comes up with a definition soon enough, it be included in the White Paper. If they do not come up with one soon enough, it will be added as an addendum. Chair Bright suggested that they table Mr. Thompson's action item, and simply move forward with the discussion of the White Paper.

## **PRIORITIZATION OF INVASIVE SPECIES ERADICATION EFFORTS ON U.S. ISLANDS: DAVID BRUNNER AND BERNIE TERSHEY**

Mr. Brunner began by saying that they would be giving examples in their presentation of instances in which the eradication of non-native vertebrates on U.S. islands has assisted in recoveries of endangered species. Eradications on islands are more permanent than on

continents, since islands pose greater barriers to reintroduction. They have funded a number of these island eradications, some of which have succeeded, while others have failed. These eradications constitute a scalable effort. They are also efficacious. Mr. Tershey's presentation would be on how Island Conservation has prioritized and systematized a tool for eradication on U.S. islands. If ISAC thinks that this scheme is reasonable, then Mr. Brunner would suggest that ISAC consider recommending to NISC that they undertake a similarly structured initiative.

Mr. Tershey began by saying that his presentation would have three parts. First, he would demonstrate why islands are important for the conservation of biodiversity. He would then show how threatened island ecosystems are, and talk about the model that has been applied in southern California and western Mexico. Finally, he would talk about how these successes can be used as a model for the entire country through a U.S. Islands Initiative. In the process, he would tell the stories of three islands: Clipperton Atoll, Anacapa Island, and Guadalupe Island.

Islands are important in the conservation of biodiversity for two reasons. First, they have about 15-20 percent of all species, even though they only cover 3 percent of the earth's surface. Second, islands are critical habitat for sea birds, sea turtles, seals and sea lions.

Islands are also very vulnerable to human impacts. 53 percent of all extinctions in the United States have been of island species. 43 percent of all federally listed species live on islands, while only 1.3 percent of the U.S. surface area is composed of islands. The main cause of extinctions on islands is invasive species. This creates an incredible conservation opportunity, since invasive animals can be permanently eradicated from islands. After eradication, remarkable ecosystem recoveries can take place.

Mr. Tershey then told the story of Clipperton Atoll, a small, French owned island off of Central America. It has no management plan. When it was first discovered in the mid-1800s, it was heavily populated by birds and land crabs. However, when settlers in the late 1800s introduced pigs, these numbers dropped dramatically. Ken Stagger restored these populations by visiting the island in 1958 and shooting all of the pigs. Mr. Tershey said that there are two reasons why this type of conservation hasn't taken place on all of the other U.S. islands. One is lack of knowledge about eradications. As a result, there are too few eradications in the U.S. When eradications do occur, they are too slow and too expensive. The other reason is that there is too much emphasis on control, rather than eradication. The solution is a systematic program that focuses on the development of best practices to take advantage of economies of scale. He then gave an example of how this had been done for California and Western Mexico. Through mapping, they compared the combinations of invasive animals and endemic species on each of the 296 islands in this area to determine which islands were at greatest risk of having extinctions. Then they looked at whether or not they would be able to do eradications on these islands.

Mr. Tershey then told the story of Anacapa Island, where they had worked with several other agencies to do a rat eradication. They chose to do this eradication because invasive rats were preying 90 to 100 percent of all Xantus murrelet nests on the island. They did this eradication by using a rodenticide toxin. The application of the rodenticide resulted in a drop in nest predation from 90 to 20 percent. They also did similar eradication projects on 14 of the 17 breeding colonies for Xantus murrelet, taking it off the list of endangered species.

Mr. Tershey next told the story of the goat eradication on Guadalupe Island. He told how they had convinced the Mexican government that they should do this eradication by enclosing an area on the island so that the goats could not get to it. After a year, the enclosure was filled with seedlings of Guadalupe pine, an endangered species. After the eradication, they discovered the presence of six species of plants that had been thought to be extinct. In a few years, the Island Junco will be able to move into the new habitat created by the mature trees.

All in all, 38 populations of invasive animals have been eradicated from 27 different islands, protecting 202 different colonies of sea birds and 90 endemic species and subspecies. In the next ten years, they plan to save the remaining 298 endemic species and subspecies in this region. Mr. Tershey stressed that their success is due to the implementation of standardized techniques. Thus, this model has tremendous potential for being applied to all U.S. islands.

The U.S. Islands Initiative, as they envision it, will have two stages. The first is research and prioritization, which will have three parts. The first is to develop a series of best practices, the second is to conduct a needs assessment, and the third is to put together a systematic prioritization. The second stage is implementation.

In conclusion, Mr. Tershey said that islands are biodiverse, and are threatened in their biodiversity by invasive species. Invasive species can be removed, and they believe that the U.S. Islands Initiative can resurrect and restore island biodiversity at scale across the United States. Mr. Brunner reminded everyone that the funding for the Anacapa eradication had been provided entirely by private donors.

Dr. J. Jackson asked if PETA had objected to how they had caught and held endemic species captive during the Anacapa eradication. Mr. Tershey replied that another animal rights group had objected, and said that they need to develop a strategy for dealing with animal rights opposition at a national level.

## **INTERNATIONAL UPDATE: RICHARD ORR**

Mr. Orr requested that John Randall's name be added to the list of ISAC International Committee members. A number of Federal and non-Federal contacts will be helping them to rewrite the Management Plan.

In the international arena, they are trying to move into areas in which no action is currently taking place, but which have great potential. An APEC meeting was recently held on invasive aquatic organisms in China, and was attended by a number of people.

One of the top three things that they have been spending time on is the Convention on Biological Diversity. The SBSTTA, which is the scientific arm of the CBD, will be having a meeting from November 28th through December 2nd in Montreal. Mr. Orr's staff has been tasked with putting together the invasive species issues that will be discussed at this meeting. A paper has been put together by CBD on the gaps and inconsistencies in international regulatory framework. CBD has also put together a paper on the cooperation with other conventions, which shows their

willingness to cooperate with other bodies on invasive species issues. Other papers mentioning invasive species will also be presented at the Convention.

They have also been doing a great deal of work with the North American Plant Protection Organization. NAPPO has agreed to take on issues of weeds and plant pests that are invasive species. NAPPO has also agreed to create a Cactus Moth Panel, which will work on stopping the spread of cactus moths. NAPPO's annual meeting will be held next week in Canada. NAPPO's goals are being linked to the White House's Tri-national Initiative for Security and Prosperity Partnership.

Invasive species have been put underneath the Trade and Environmental pillar of the NAFTA CEC, which is being run out of USTR and EPA. Mexico, Canada and the United States have agreed upon a draft risk assessment to be used as the basis for testing three issues. Two of these issues are armored catfish and snakeheads. Jeff Fisher, from the U.S. Department of State, will be leading the U.S. delegation in putting this together.

Ann Sergeant reported that the Risk Analysis Working Group is currently revising the risk analysis review process. They plan to make the language more generic, and to add sections discussing data quality. They will also talk about modeling, and concepts like propagule pressure and spatial-temporal extent in the concept of a biological package.

#### **DISCUSSION/VOTE ON DRAFT OF DEFINITIONS WHITE PAPER: GEORGE BECK**

Dr. Beck began by suggesting several examples, for inclusion in the White Paper, demonstrating how invasive species cause harm. Cheatgrass is a classic example, because it decreases the intervals between fires, thus not allowing ecosystems the time that they need to recover between fires. Russian knapweed is an example of an invasive plant that causes both environmental and economic harm by suppressing the growth of other plants.

Dr. Beck then moved on to the summary of the White Paper. It begins with a reiteration of the Executive Order definition, and explains how they have clarified this definition. It is also stated in the summary that the determination of what species are invasive is subject to the human value system. It is also stated that the actions that benefit one individual's use of resources may negatively impact another person's use of resources. They point out in the summary that the public domain is clearly represented in the regulatory and legal authorities associated with invasive species. They also say that the National Invasive Species Management Plan should include protection of private property rights. However, with these rights come responsibilities to the environment. They end the paper by saying that effective invasive species management is one way of conserving and protecting our nation's natural resources, the economies that it supports, and the high quality of life that Americans enjoy.

Dr. Stone asked for clarification on the bullet point dealing with increased costs of food and fiber production. In particular, he asked if this bullet point would be staying in, and if an example will go along with it. Dr. Beck replied that the Committee would have to make this decision. Dr. Stone said that he would like this bullet to be included.

Mr. O'Neill suggested that they go over Dr. Beck's list of examples of species that have

economic, environmental or ecological impacts. Dr. Beck listed zebra mussels, Chestnut blight, *Haplosporidium nelsonii*, Eurasian water milfoil, hydrilla, leafy spurge, sea lamprey, round goby, and the Australian spotted jellyfish, briefly describing the impacts of each. Chair Bright added that the Coqui frog is devaluing properties in Hawaii, which is an example of an impact on private property rights.

Dr. Beck then suggested that they recommend that NISC adopt the White Paper. Mr. Lukens took issue with the bullet that says, “one of the goals of the plan should be to protect the right of self-determination by property owners.” Although any management strategy on invasive species should take private property rights into consideration, protection of private property rights in and of itself should not be a goal. Dr. Beck suggested that “outcomes,” rather than “goals,” might be a better word choice in this sentence. Ms. Cangelosi agreed.

In terms of what they mean and what they don’t mean, Dr. Randall said that they need to come up with examples demonstrating clear economic, environmental, and public health harm. They should also include examples of species that fall into the “gray area.” He also said that they go too far in saying that the determination of what is and what is not an invasive species is entirely subjective, since many species are clearly invasive. He suggested that they make this clearer in the definition. Dr. Beck agreed that they needed to come up with more examples for the “gray area,” and suggested poison ivy and grasshoppers.

Ms. Cangelosi said that changes needed to be made to the summary to conform to the changes they had made earlier in the document. For instance, instead of saying that the negative impacts of an invasive species “must outweigh” the benefits, they should say that, “for policy purposes, they will be deemed to outweigh” the benefits. The phrase “for policy purposes” will help to clarify that they are talking about policy applications rather than technical definitions. She also made the point that the definition of invasive species has no bearing on the rights of property owners, and accordingly suggested that the word “rights” be replaced with “options” in the preamble. Mr. Zimmerman commented that they needed to be sure to include private property recognition in the National Invasive Species Management Plan, even if they do not list the protection of private property rights as a “goal.”

Chair Bright suggested, as a course of action, that the Definitions Team work on determining what constitutes harm, and that they vote on the final draft of the Definitions White Paper at the meeting in April. If people have other concerns about the Definitions, they can bring them up in the interim between the two meetings. Ms. Cangelosi said that this seemed to be the only option available to them. Dr. N. Jackson also agreed to this proposal. Dr. Randall asked if it would be possible to send the draft out to the whole of the Committee so that everyone will have a chance to look at it before the Puerto Rico meeting. Dr. Beck said that they would do this. Ken Zimmerman suggested that they take a few minutes to go over the modifications that had been made to the Paper thus far, so that they know which version they are working on. Dr. Beck replied that, in the future, they would make the changes to each iteration of the document. Ms. Williams proposed that the staff put together a draft timeline to be submitted to the Committee members in a couple of hours. She also said that they needed to determine a deadline, after which comments on the Paper would no longer be accepted. Dr. Reichard said that it would be helpful if the Committee members sent their comments only to one designated person, to prevent

multiple drafts from being circulated simultaneously. Dr. Beck said that this was a good idea. Mr. Schardt asked Ms. Williams if the draft would first be revised to include the modifications made at this meeting before being sent out for further comments. Ms. Williams replied that these modifications would be incorporated. Dr. Beil suggested that only a small portion of the Committee, for example, five or six people, continue working on the draft, since it would very difficult to field suggestions from the entire Committee. Dr. Beck then admitted that, out of the 23 Committee members, only five or six had consistently submitted comments on the Draft.

Thus, he suggested that they continue to allow all 23 members to submit comments, since it is unlikely that they will all submit comments at once. Ms. Metcalf said that, if they decided to only allow a small group to work on the Draft, then they would need to get a vote on the Draft from the whole Committee sometime before the Puerto Rico meeting. **Chair Bright suggested that, instead of putting the Draft to a vote, they simply determine that it is approved by general consent of the Committee. The Committee agreed, by a show of thumbs, to go forward with the proposed course of action.**

### **U.S. ARMY CORPS OF ENGINEERS INFORMATION SYSTEMS:** **MICHAEL GRODOWITZ**

Mr. Grodowitz began by saying that the Army Corps of Engineers has developed four information systems on invasive species, and that he would be talking about three of these in his presentation. The four systems are the Noxious and Nuisance Plant Management Information System, the Aquatic Plant Management or Aquatic Information System (APIS), the Zebra Mussel Information System (ZMIS), and the Ecosystem Management and Restoration Information System (EMRIS), which is a primer on ecosystem management and restoration topics. These systems are all PC based, and operate under Windows. They allow for efficient and rapid access to information on invasive species, and are highly interactive. They are also simple enough to be used by both researchers and the general public. They use a variety of different formats to get information out, including text and photos, identification programming, and video. Mr. Grodowitz then explained that the information in these systems is stored on CDs rather than on the Web, because one does not always have access to the Internet. He then said that they will be moving towards a true CD-Web hybrid, so that information can be found in both places. The CDs are easy to distribute, and are good advertising.

PMIS is currently in Version 5.3. They have 110 terrestrial, aquatic, and wetland plant species. Over 20,000 copies of this system have been distributed since the first version came out. The system is used by a variety of federal and state agencies, and includes both biological and ecological information. The Noxious Plant and Pesticide Law Information System allows access to 40 states. They also have highly interactive Web links.

APIS is currently in version 2.99, and will be ready for the Aquatic Plant Management Society in July. Over 15,000 copies of APIS have been distributed. This system includes not only invasive and nuisance plant species of the aquatic and wetland environments, but also native plants that become nuisances.

They are working on Version 6 of PMIS. They will add over 40 to 50 plant species. APIS should

go to Version 3 shortly. They have some updated graphics in the biocontrol sections, and will hopefully have a completed version by December of 2005. They are requesting funding from the Aquatic Plant Control Research Program, an organization within the Corps of Engineers, for Version 4. They expect to complete this by September, 2006.

In their systems, they use videos for biocontrol agents, and stills for plant species. However, Mr. Grodowitz wanted to use video for the plants, as well, since videos can present more information than stills. Mr. Grodowitz then showed several plant videos made by Rob Nelson, a student with biology background who used to work for the Corps. They are planning to make small pieces of the video available directly on the CD, while larger portions will be available on a Website. About 15,000 copies of ZMIS have been distributed. They are now working to convert ZMIS to what will be called the Aquatic Nuisance Species Information System, which will be a revised and updated version of ZMIS, including other aquatic nuisance species and identification profiles. They expect this project to be completed by December of 2005.

Mr. Grodowitz then gave a short demonstration of how the systems work, highlighting identification routes and species profiles. The systems are easy to use and very powerful. Chair Bright asked if they have a disclaimer about aquatic herbicides, since certain states require you to have a special permit to order them. Mr. Grodowitz said that they include this information on the systems, and recommend that people consult experts before attempting to use or acquire aquatic herbicides.

They are currently working on an online identification system shell, which will allow anyone to use simple text based programming to develop their own identification routes and publish them on the Web. They are also in the process of developing a handheld ID system, which will allow people to do identifications of plants or animals in the field. They received funding from Legacy to develop an online invasive species inventory system, which will be called ISIS. This will allow military bases to start taking inventory of their invasive species through a shared database. They are beginning to develop decision support systems, particularly with regard to revegetation site selection. Hopefully, this system will be included in both PMIS and APIS when the new versions come out.

## **NATIONAL ENVIRONMENTAL OBSERVATION NETWORK (NEON):** **DAVID KIRSCHTEL**

Mr. Kirschtel reported that the NEON project has been up and running for a little over a year, and was formerly funded by the National Science Foundation. It was initiated as a way to cope with large scale ecological problems. The publications, "Grand Challenges in Environmental Sciences" and "NEON: Assessing the Nation's Environmental Challenges," set the stage for the current version of NEON. A series of workshops held in 2004 also began to build the NEON concept. From the beginning, a concern about invasive species research has been an integral part of NEON development. Once funding was made available through the National Science Foundation, they began a more intensive design process, which consisted of a series of meetings and workshops. The January meeting in L.A. was broken into groups based on subject areas, land use, invasive species, biodiversity, and geochemical cycling, with the goal of determining

the major questions within these areas of research. The focus of the March meeting was determining what data they need to answer the questions, and then what instruments and infrastructure they need to generate this data. In June, they integrated the science and education components to create a coherent model for what NEON will look like. This meeting resulted in two draft documents which have been submitted to the National Science Foundation: The Integrated Science and Education Plan (ISEP), and The Network Informatics and Baseline Design (NIBD). ISEP deals with the science and education component of NEON, while NIBD deals with the cyber infrastructure, data collection, data storage, and data transmission issues associated with building the NEON network. The other issue that was part of the NEON design process was how they would be able to sample environmental variability across the country. Thus, as part of the design process, they initiated a program to look at objective methods of identifying climate domains and climate regions, so that they can have sampling occurring across that variation, but without different amounts of regional variations. This goal of identifying coherent climate units with equal variance required a combination of GIS and multi-variate analysis. In the end, they identified 20 climatic domains for NEON.

Once funding is allocated, they will begin the buildout phase for NEON. After this, they will go into an approximately 30 year operations and research phase, after which they will begin looking for NEON II funding. Parallel to the NEON initiative, the scientific community also formed the Consortia of Regional Ecological Observatories, which provided intellectual support for the NEON project.

NEON is a common set of tools that's available to the environmental community to support ecological research on continental scales. It is organized around a core set of questions. The first question investigates how ecological systems are affected by land use, climate and biogeography, looking out across a range of spatio-temporal scales. Question two looks at how the aquatic environment, water use, and water distribution, allocation, interface and transfers affect environmental processes. Question three looks at core biological issues, movement and patterns of genes and organisms affecting biodiversity, ecosystem function, effects, disease, and invasive species. NEON will span two environmental gradients: an urban to rural gradient, and a watershed gradient. At the core of each of the NEON sites will be a BioMesoNet tower, which will have a variety of atmospheric, biogeochemical, biotic and physical sensors. Associated with these core towers will be a variety of terrestrial and aquatic instruments. They will also be looking at soil ecology and environment through a series of soil SensoMicroNets that will be collecting various biological, chemical and physical parameters of the soil environments. Small organism tracking will also be a key component of the NEON system. Additionally, a mobile presence will be established within each of the domains. This will give them the opportunity to sample interstitial spaces and extend beyond the range of their fixed systems. It will also allow them to respond to environmental events such as forest fires, hurricanes, tornadoes, and invasions. They will also be using field portable communications and data storage devices. Other facilities that will be part of NEON will be a genomics center for genetic analysis, as well as stable isotopes and biocollection facilities. Additionally, there will be various levels of remote sensing. Underlying all of this will be a data management system that will allow individuals to have access to NEON data on their desktops. They also hope to make NEON data available through a variety of sources, such as kiosks, radio, television, games, and signage.

Mr. Wilkinson asked if they would be looking at the interface between the various things that they are documenting, such as climate change and ecosystem vulnerability. He also asked if NEON will be coordinating with data recording efforts that are being made on the federal and international levels. In answer to the second question, Mr. Kirschtel said that they will be dealing with issues of coordination as part of fine tuning and scaling the project. In response to the first question, he said that, once the data is in the system, people will be able to compare the different variables.

Mr. Lukens emphasized the need to follow watershed issues all the way to the coasts. Mr. Kirschtel replied that part of the motivation behind GEOS will be to develop specialized observatory systems and link their data together. Dr. Reichard asked who would be funding the science for the NEON initiative. Mr. Kirschtel replied that there are three funding pathways: one for building the infrastructure, one for maintenance and operations, and one for research. Funding for research will be provided by individual directorates.

## **ISAC ADMINISTRATIVE ISSUES: HILDA DIAZ-SOLTERO**

Ms. Diaz-Soltero reported that ISAC members will be staying at El Convento Hotel in old San Juan for the April, 2006 meeting. The overflow will be staying at the Sheraton, which is also in old San Juan. The meeting will take place the week of the 24th of April. One day of the meeting will be spent as a field day, organized under the leadership of the Puerto Rico Forest Service and a non-governmental organization. Monday and Friday will be travel days, while Tuesday through Thursday will be working days. The dress code for the meeting will be business casual. The following ISAC meeting will be held in September of 2006, on either the week of the 11th, or the week of the 25th, in Washington, D.C.

## **REPORTS FROM ISAC SUBCOMMITTEES**

### ***LEADERSHIP AND COORDINATION GROUP: RON LUKENS***

The Leadership and Coordination Subcommittee requested that NISC policy liaisons provide a list of needs to the Subcommittee, both in terms of what the policy liaisons perceive as a charge for the Leadership and Coordination Subcommittee, as well as their charges for ISAC as a whole. Mr. Lukens then asked if there were any objections to moving forward and formally making this request. There were no objections.

The Subcommittee also recommended that ISAC request that the minutes of the policy liaison meetings be made available to ISAC members. He then asked if there was any discussion on this matter, or objections to its being made into a formal request. Ms. Leland added that they wished to receive not only the minutes to the policy liaisons meetings, but also to the full Council meetings. Mr. Wilkinson commented that, once the minutes have been forwarded, they will become a public document, and so will be subject to FOIA. There were no objections.

The Subcommittee suggested that ISAC recommend that NISC staff explore the possibility of working cooperatively with the National Governors Association and others to develop a strategy

for outreach to states and tribes to develop a more cooperative relationship with the program. There were no objections.

The Subcommittee recommended that a section on funding and resources be made a part of the revised Management Plan. Ms. Cangelosi reminded ISAC that they had an hour and a half session on alternative means of raising revenue associated with invasive species programs. She then suggested that they take the opportunity to feed this information into more analysis and recommendations. Mr. Wilkinson remarked that this recommendation could delay final administration approval of the Management Plan. Ms. Cangelosi and Ms. Metcalf spoke in favor of the recommendation. Ms. Diaz-Soltero said that she didn't see that there would be any problem with including an appendix to the Management Plan that would include information on funding. There were no objections.

Finally, the Subcommittee recommended that ISAC create a task team consisting of ISAC members, policy liaisons and other relevant personnel to explore the possibility of developing a National Invasive Species Center. If this recommendation is accepted, the task team will give a preliminary report at the April 2006 meeting, and will have an analysis and proposal ready for discussion by September of 2006. Chair Bright called for volunteers to move forward with this effort. Chair Bright determined that they would revisit this matter at a later time, since no one currently has the time or the energy to committee to this project.

#### ***RESEARCH AND INFORMATION MANAGEMENT SUBCOMMITTEE: GEORGE BECK***

Dr. Beck said that the Research Committee has a report in from NOAA. ARS provided a comprehensive compilation of the projects that they are doing, although research by the Federal Government on invasive species goes well beyond this.

Because they are having such difficulties compiling research, they decided that they should instead say what they think needs to be done. They will do this by determining how much money is being spent on how many different projects. They will ask the Aquatic Nuisance Species Task Force, ITAP, and the weed interagency committee for their research priorities. What they need are better evaluation methods. Their experimental methods need to improve, particularly with regard to detection. They need to come up with a modeling effort that will help them to better understand the systems that are being affected, as well as the new relationships for invasive species that have entered those systems. They want to predict the susceptibility of habitats to particular invasive species. They also need to determine the utility, diversity and effectiveness of the various methodologies that are being employed to see if they are transferable amongst the different taxa. They also have some specific needs with regard to each one of the taxa. They need to understand the basic biology of pathogens in order to better understand what resources are at risk. They need improved control methods for invasive species that exist in aquatic environments, as well as to know more about the biology of these species. They need to know more about the movement and spread of animal species, as well as how they can be controlled and managed, and about their basic biology. In terms of invasive weeds, they still have a large gap in their understanding of how the control and suppression effort can be coupled with restoration or reclamation. They also need better experiments to assess how independent variables are linked to available data.

***PREVENTION SUBCOMMITTEE: RICHARD ORR***

Mr. Brunner spoke on behalf of Mr. Orr. The Subcommittee made recommendations to reorganize the three objectives, P-1, P-2, and P-3, in the “Draft Management Revision Plan.” They recommended that objective P-3, “improve the Federal, state, and tribal safeguarding systems to protect the United States from invasive species,” be moved to P-1. They recommend the addition of the following language to the strategic prevention goals: “The Interior Department, U.S. Department of Agriculture, Department of Health and Human Services, and the Department of Homeland Security will conduct a review of their responsibilities for preventing the introduction and establishment of invasive animals and injurious wildlife under the Lacey Act, the Animal Protection Act, and other existing Acts, including an assessment of action alternatives available under these Acts, alternative agency policies that could be pursued under the Acts, and gaps in existing authorities necessary to prevent the introduction and establishment of invasive animals under the Lacey Act, the Animal Health Protection Act, and other existing authorities.” They added this because terrestrial animals had not previously been included in the objectives. The following disease prevention language will be moved to P-2: “Clarifies authority and develops goals for a fair and usable process to evaluate the risks of unintentional introductions of disease agents through trade in terrestrial and aquatic animals.” The language on ballast water and ship fouling will be moved to the end of the preamble.

***COMMUNICATIONS AND OUTREACH SUBCOMMITTEE: CHARLES R. O’NEILL***

Mr. O’Neill reported that most of the Subcommittee’s meeting had been spent looking at revisions to the Management Plan. They recommended that all of the website oriented wording that is currently under Information Management be moved into the Education and Outreach section of the plan. They also recommended that action item 57 and all of its subparts be moved from Education and Outreach to the International section, since most of it deals with codes of conduct. They will give this to the staff within the next two weeks. They are making a recommendation to ISAC that Information Management be informally merged into both the CEO Subcommittee and the Research Subcommittee.

In terms of the recommendation to move action item 57 to the International section, Dr. Reichard commented that many of the codes of conduct do not work with the government, but rather with various industries on educational and management practices. Mr. O’Neill replied that the wording in the Management Plan refers only to developing materials to guide organizations in the development of international codes of conduct.

Dr. Beil said that he would appreciate it if the drafts could be sent to his committee. Mr. O’Neill said that, historically, anything to do with web development fell under Information Management. Over the last several years, however, this has all been done on an ad hoc basis. They recommended that the CEO Committee assume web oversight functions.

They recommended two action items to be formally acted on by ISAC and then sent up to NISC. The first action item is ISAC recommend that NISC direct all Federal agencies to develop a

catalog of those agencies' invasive species programs/activities, and that the catalog be provided to ISAC at the Committee's April 2006 meeting. Ms. Williams commented that Appendix 2 to the Management Plan summarizes what the invasive species responsibilities are for every Federal agency. Appendix 3 summarizes all the major authorities. She then asked if this should be updated, and how long it should be. Mr. O'Neill replied that the list should probably be updated. He said that a list of the status of various projects would also be helpful. Mr. Schardt said that it would be easier to start organizing a task team once they receive the progress reports. Ms. Williams said that they are completed, and will be sent out next week. Ms. Diaz-Soltero asked Mr. O'Neill if USDA would be in compliance with his request if they submitted a report on the progress they are making on the Management Plan, as well as the Do No Harm Report. Mr. O'Neill replied that USDA is already in compliance. Mr. Wilkinson asked Mr. O'Neill for guidance as to the level of detail that should be provided in the reports. Mr. O'Neill replied that they are looking for a general overview of what the agencies are doing, rather than information on every research project. Mr. Wilkinson suggested that they also request that the interagency groups prepare rapid response documents. Ms. Metcalf said that she would like to see more information provided by the other departments in NISC. Chair Bright agreed, saying that they should put more pressure on these agencies to submit updates.

**The second action item is that more resources need to be dedicated to the linking of the two websites, [invasivespecies.gov](http://invasivespecies.gov) and [invasivespeciesinfo.gov](http://invasivespeciesinfo.gov). There were no objections.**

#### ***CONTROL AND MANAGEMENT SUBCOMMITTEE: NELROY JACKSON***

Dr. Jackson reported that the Subcommittee had decided in February that restoration should not be included in control and management, since it is not always clear as to what condition an area should be restored.

Like the Leadership and Coordination Subcommittee, the Control and Management Subcommittee recommended that a separate section be written on funding and resources in the revision of the Management Plan. They also recommend that alternative methods be used to either raise or use funds that are already allocated. Ms. Diaz-Soltero commented that they can get funding through the Endangered Species Act, Section 6.

#### ***EARLY DETECTION AND RAPID RESPONSE SUBCOMMITTEE: DAVID BRUNNER***

Mr. Brunner gave ISAC the latest revisions to a recommended letter to NISC. In the first sentence of the first paragraph, the word "increase" should be replaced with "increases." In the second sentence, the words "coordinated approaches to" should be added in front of "early detection." The "of" in the phrase "rapid responses of invasive species" should be changed to "to." They are now seeking approval from ISAC to send this letter to NISC. **Chair Bright said that a motion should be made to approve the letter. The motion was made, seconded, and passed unanimously.**

## ***INTERNATIONAL SUBCOMMITTEE: GARY BEIL***

Dr. Beil reported that the primary focus of the Subcommittee meeting had been to work on a draft of the proposed International section of the Management Plan. Hopefully, they will have a draft circulating by the end of the month. Dr. Beil concluded by requesting more help on this Committee, now that they have a specific task ahead of them.

With regard to the recommendation to develop a National Invasive Species Center, Mr. Schardt asked if this idea had been tabled because it would require too much work, or because it is not a good idea. Ms. Diaz-Soltero suggested that it might be helpful to gather some information on how agencies currently deal with this issue. Mr. Thompson said that the National Invasive Species Center recommendation would be a good idea for the future. Dr. Randall agreed, and also said that it would be a good idea to follow Ms. Diaz-Soltero's suggestion of finding out what work has already been done in this area. Ms. Cangelosi disagreed, saying that reorganization is not necessarily the right next step. Mr. Meyers agreed with Ms. Cangelosi. Mr. Zimmerman encouraged everyone to read the section about the definitions in the draft five-year review, since it might help to clarify and speed things up in the future.

## **MEMBERS FORUM**

Mr. O'Neill reported on the status of the New York Invasive Species Task Force. A series of statewide meetings were held in August for people to comment on the draft plan. The final review of comments that have been received and final wording will be done on the 25th of October, and their final report will go to the Governor and the legislature in November. One of the recommendations is that the State of New York should create a permanent body to coordinate invasive species efforts. This permanent body should coordinate the preparation and implementation of a comprehensive invasive species management plan. The state should dedicate staffing and funding for this body. A stable source of state funding should be dedicated to the operation of this body. The body should establish an advisory committee. It is also recommended that New York state policy and practices on invasive species be formalized. A comprehensive education and outreach effort should be established, and New York should try as a state to move forward Federal activities on invasive species. A multi-institution Center for Invasive Species Research should be established, which will be housed at Cornell, the state's land grant university.

The Zebra Mussel Economic Impact Study has been completed. The report is being written, and will be presented at the 14th International Aquatic Invasive Species Conference. The Northeast Sea Grant Network is conducting an outreach project addressing vectors of marine invasive species called "Interrupting the Flow: An Education and Outreach Collaborative." Last month, NOAA held an Aquatic Invasive Species Database Summit at the Stone Marine Lab in the middle of Lake Erie. The New York Sea Grant Program was there to look at areas of possible overlap of NOAA funded database projects with an eye toward saving as much money as possible, as well as to coordinate and distribute these databases.

Dr. Beil reported that the American Seed Trade Association has an invasive species working

group that has been in place for the last three or four years. Unfortunately, it was put together for the wrong reasons. Dr. Beil has been working on making this group more productive and generally involved in invasive species issues. Several times a year, he addresses the group and brings them up to date on what is happening within ISAC. He believes that they are making some progress in terms of addressing the issues. Secondly, he reported on the Asian soybean rust. USDA reported yesterday that this year's soybean crop in the U.S. is about the same as it has been for the last several years, and no incidents of soybean rust have been identified in the upper Midwest. There is a Minnesota Invasive Species Council that is jointly organized and co-chaired by the Department of Natural Resources and the Department of Agriculture. A planning conference will be held for this group on the 25th of October, which will be sponsored by the Minnesota Invasive Species Council.

Dr. Randall reported that his program at the Nature Conservancy had a retreat over the summer to do strategic planning. Their objectives at this point are to work on prevention, which includes early detection and rapid response, at the national and international levels. They will also be working on helping the state and country programs build capacity. His program now has two policy positions posted. He hopes to be interviewing for them within the next month and a half. One of these positions will focus on U.S. policy, while the other will focus internationally. They are also exploring the possibility of doing more work on aquatic invaders, which will involve doing a series of workshops for people who have aquatic species problems. Faith Campbell, amongst others, is doing work for the Conservancy on forest pests and pathogens. Last week, Dr. Randall attended Brazil's first National Symposium on Invasive Species, which was very well attended.

Ms. Cangelosi reported on an initiative that the Institute is helping to facilitate for the Great Lakes region called The Great Ships Initiative. They are working closely with the ports on this, as well as with the carriers, the shippers of goods, and those that receive the steel products. They are also hoping to work with the National Fish and Wildlife Foundation on this effort. The initiative will involve setting up a system of incubators to solve problems specifically associated with seaway-size ships. The R&D incubator will be a three-tiered testing arrangement involving a bench scale, pilot scale, and shipboard testing capacities. They will be working to develop protocols that are well vetted, and they hope to work closely with Federal agencies every step of the way. They are building a team of scientists that understand a variety of taxonomic levels and analytic approaches, and are expecting delivery of their barge in the spring of 2006. The actual testing will take place in the Duluth/Superior area.

### **ISAC ADMINISTRATIVE ISSUES: CRAIG REGELBRUGGE AND MARILYN LELAND**

Mr. Regelbrugge announced that Ron Lukens had been selected to serve as ISAC's new Chair. The Vice Chair will be George Beck; the Secretary will be John Peter Thompson; the Steering Committee members will be Gary Beil, Joe Corn, Lou Eldridge, Jerry Jackson, Ken Zimmerman, Sarah Reichard, and Marilyn Leland.

### **REVIEW OF RECOMMENDATIONS AND ACTION ITEMS: DIANE COOPER**

Ms. Cooper began by listing the recommendations that had come out of that day's portion of the meeting. ISAC recommends that the Environmental Protection Agency and the Department of Homeland Security present their respective invasive species efforts and activities at the next ISAC meeting in Puerto Rico, 2006. ISAC recommends that ISAC II members' terms be extended for 18 months to April 1, 2008, for the following reasons: (1) ISAC II members will have served their full terms by going to April 1, 2008, six years or less, as in compliance with ISAC charter IV.2.C, Officers and Membership section, and (2) NISC will have the benefit of continuity of the collection of knowledge that has been invested in ISAC II, and will get their full service. With reference to the importation of biocontrol agents for research, evaluation and possible release, given that APHIS-PPQ is currently reviewing their procedures, ISAC offers Bill Dickerson to interact with USDA Invasive Species Coordinator and the appropriate entities on the revised procedures. ISAC recommends to NISC that USDA-CSREES create a nationwide educational program on invasive species. ISAC recommends that NISC policy liaisons provide a list of their needs to ISAC. Mr. Lukens said that a portion of this recommendation had been left out, and said that he would write this section out so that Ms. Cooper could insert it. ISAC recommends that a section on funding and resources be part of the revised NISC Management Plan, which would include how to get the money and identify sources of revenue. ISAC requests of the Federal committees, the ANS Task Force, ITAP, and FICMNEW, that a priority listing of research needs be provided to ISAC. ISAC recommends to NISC that appropriate resources be provided for the development of the two major Federal invasive species websites, [invasivespecies.gov](http://invasivespecies.gov) and [invasivespeciesinfo.gov](http://invasivespeciesinfo.gov). ISAC submits to NISC the memorandum entitled "Framework and Funding for Early Detection and Rapid Response to New Invasive Species Entering the U.S." dated October 13, 2005 as a follow-up to its memorandum dated October 15, 2004.

Ms. Cooper then listed the action items. The ISAC Definitions Task Team is tasked with modifying the white paper based on meeting discussion. Some of the modifications include addressing the issue of the definition of harm, providing additional examples to clarify what they mean and what they don't mean, and revising the summary section with respect to property rights. ISAC requests copies of the private property rights presentation. ISAC requests that a summary of decisions from the policy liaison meetings be sent out to ISAC members. ISAC should explore using the National Governors Association, NISC staff and others to coordinate and reach out to state and tribes, as well as to encourage the formation of state invasive species councils.

### **REVIEW OF AGENDA ITEMS: GEORGE BECK**

ISAC requests that Homeland Security make a presentation on the biocontrol transport issue. ISAC requests that a legislative update be given on Federal and State legislation and regulations. ISAC requests a presentation by APHIS on centralized invasive species.

### **CONCLUSION: SHIP BRIGHT**

Chair Bright called for a motion to adjourn. The motion was made, and passed unanimously.