



NORTH AMERICAN INVASIVE SPECIES FORUM

Proceedings of the 2025 North American Invasive Species Forum May 13-16, 2025

Note: This report aims to highlight key findings from NAISF 2025 and is not intended to be comprehensive in detail. It also does not reflect advance review by all NAISF presenters and participants. If the Federal Interagency Committee for the Management of Noxious and Exotic Weeds learns of errors or significant omissions, these proceedings will be revised accordingly.

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Background

The North American Invasive Species Forum (NAISF) aims to bring together professionals and organizations involved in invasive species management, research, and regulation across North America. It highlights new policies, emerging information and issues, success stories, and other key cross-cutting aspects of continental collaboration. NAISF strives to advance the formation of partnerships, sharing of knowledge, and coordination of programs that transcend traditional jurisdictional borders. NAISF evolved from the Weeds Across Borders (WAB) conference, which began in 2002 under the leadership of the United States (U.S). Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW). FICMNEW is a formal partnership between 18 federal agencies that coordinates agency management, research, and communications regarding these species. See Table 1 for a list of past WAB and NAISF events.

Canada, Mexico, and the United States rotate responsibility for hosting NAISF. The host country takes the lead for operations and logistics. An International Planning and Program Committee (IPPC), comprised of representatives from all three North American countries, guides development of the NAISF agenda and associated presenter recommendations. A NAISF Terms of Reference document provides a framework for planning the forum, including definition of roles for the IPPC and other organizing committees.

Table 1: History of WAB* and NAISF** events:		
Year	Location	Host
2002 *	Tucson, Arizona, USA	United States
2004 *	Minneapolis, Minnesota, USA	United States
2006 *	Hermosillo, Sonora, Mexico	Mexico
2008 *	Banff, Alberta, Canada	Canada
2010 *	Shepherdstown, West Virginia, USA	United States
2012 *	Cancun, Quintana Roo, Mexico	Mexico
2014 *	Ottawa, Ontario, Canada	Canada
2017 **	Savannah, Georgia, USA	North American Invasive Species Network
2021 **	Virtual	Canada
2025 **	Virtual	United States

Organization of NAISF 2025

With the U.S. next in line to host NAISF, FICMNEW took the lead as the 2025 sponsoring entity. FICMNEW engaged its membership in NAISF planning, both through regular meetings and by establishing logistics, communications, and finance subcommittees. FICMNEW members co-chaired the IPPC, which also included members from Canada and Mexico and held the primary role for developing agenda and speaker recommendations. The U.S. Department of Agriculture Natural Resources Conservation Service (USDA NRCS) provided sponsorship of NAISF including both financial support and the support of agency staff to develop marketing material. This sponsorship was key in leveraging the support of the Weed Science Society of America to assist with NAISF administration, including registration, web-hosting, and other logistical functions. Finally, the Department of Interior Office of Collaborative Action and Dispute Resolution (CADR) and its team of affiliate facilitators provided valuable support in NAISF planning, participant engagement strategies, and small group facilitation.

NAISF 2025 Objectives

The IPPC and FICMNEW chose “Shared Borders, Shared Opportunities” as the theme for the 2025 event. The planning teams adopted overarching goals inherent to the legacy of NAISF events, including enhancement of North American collaboration on invasive species issues and a focus on high-level issues rather than narrow science or management topics specific to a narrow location or taxonomic group.

These additional objectives were set for NAISF 2025:

- Produce actionable ideas that can fuel country-specific and continental level collaborations before the next NAISF occurs;
- Use panel-based sessions and small group discussions to maximize dialogue among participants, rather than a conference-style format that emphasizes formal presentations; and,
- Prominently feature perspectives of indigenous groups and international partners.

NAISF 2025 Agenda and Format

FICMNEW initially planned NAISF 2025 to be an in-person event in the Washington, D.C. area. Uncertainties about U.S. federal employee travel and other factors led to a decision to make NAISF a fully virtual event with no registration fee. The agenda (see Appendix A) featured several keynote speakers and centered around 7 thematic areas:

- Engagement in International Frameworks;

- Cross-border Biosecurity;
- e-Commerce and Organisms in Trade;
- Early Detection and Rapid Response;
- Risk Assessment;
- Citizen and Community Science; and,
- Nexus of Invasive Species and Wildfire.

A diverse panel of experts addressed each theme, and a series of facilitated breakout sessions during NAISF allowed participants to discuss the themes in more depth within small groups. A final plenary discussion session explored connections between the themes and identified priorities for further work before the next NAISF. Several technological tools, including on-line polling, were used to enhance participant engagement and input.

NAISF 2025 Attendance

Over 230 individuals registered to attend NAISF with a total of 150 unique affiliations (see Appendix B). Most participants represented a broad range of governmental and non-governmental organizations working on invasive species in North America, but some registrants were based outside of North America. Over 100 registrants attended each day of NAISF 2025.

Summary of Opening Presentations

Roylene Comes At Night, USDA NRCS, member of the Aamsskáápipikani, Pikuni, The Blackfeet Nation, provided an opening and closing blessing for the forum.

NAISF 2025 featured the following keynote speakers:

1. Laura A.Meyerson - Professor, University of Rhode Island: “Science Has Spoken—But Policy, Practice, and Priorities Lag Behind”. Key points of this presentation included:
 - Despite increased awareness, policy and practice lag behind scientific recommendations, with invasions contributing to 60% of global extinctions and ongoing introductions expected to rise by 36% under current trends. We seem to be better at reacting than preventing.
 - International trade, migration, and tourism are major drivers of biological invasions, overwhelming biosecurity systems. Fragmented regulations allow invasive species, including plants and animals, to be sold across state lines, and both sellers and buyers

often lack awareness of the risks. Monitoring and enforcement of online sales remain difficult. Invasive species lists and databases could benefit from further integration.

- Solutions and Indigenous Leadership: Prevention and preparedness are the most cost-effective strategies, requiring strict import controls, sustained funding, and adaptive management. Indigenous Peoples manage vast lands with significantly fewer alien species, and integrating indigenous knowledge with scientific approaches offers a richer foundation for addressing invasions.
2. Jane Breckinridge - Citizen of the Muscogee (Creek) Nation and Director of the Euchee Butterfly Farm: “Connection, Collaboration and Context: Exploring Indigenous Perspectives on Invasive Species”. Key points of this presentation included:
- Euchee Butterfly Farm located in the Muscogee Creek Nation reservation near Leonard Oklahoma comprises 60 acres within a larger original 160-acre land allotment that was deeded to Neosho Parthenia Brown, a 16-year woman of Euchee and Creek descent by the U.S. Government in 1899 as part of the dissolution of Indian Territory where her people made their home since the forced relocations in the early 1800’s.
 - Today, under the direction of Neosho’s great-granddaughter (Jane), the Euchee Butterfly farm is home to the unique Natives Raising Natives project which trains tribal citizens on how to become butterfly farmers, promoting conservation of the ecosystems that support the native butterflies and other threatened pollinators Focusing on education, outreach, and environmental restoration, including management of invasive plants.
 - Indigenous communities tend to focus on conservation through knowledge sharing instead of relying on a top-down approach; respect and listening are key. Incorporating resilience within the invasive species framework. Considerations include questions like:
 - How do the species relate to the Earth and how do we relate to each other
 - Viewing plants as relatives and responsibilities not resources and rights.
 - How do we come together as people and nations to address environmental concerns and bring nature in balance?

Summary of Panel Sessions

Engagement in International Frameworks

Panel Members:

- Andréanne Léger - Director of National Biodiversity Policy, Canadian Wildlife Service, Environment and Climate Change Canada

- Marianela Araya-Quesada - Secretariat of the Convention on Biological Diversity, United Nations Environment Programme (UNEP)
- Roylene Comes At Night - Member of the Aamsskáápipikani, Pikuni, The Blackfeet Nation and State Conservationist for Washington, U.S. Department of Agriculture Natural Resources Conservation Service
- Stanley “Stas” W. Burgiel - Executive Director, U.S. Department of Interior National Invasive Species Council
- Yolanda Barrios - Head of Department of Invasive Species Assessments, CONABIO (National Commission for the Knowledge and Use of Biodiversity), Government of Mexico

Key points from panel presentations and associated discussion included:

- Invasive species issues are cross-continental and require cooperation and coordination at the international, national, and regional level
- International governance on invasive species is fractured and non-centralized
- Relevant international frameworks include:
 - Convention on Biological Diversity (CBD)
 - International Plant Protection Convention (IPPC)
 - World Organization for Animal Health (WOAH)
 - World Trade Organization (WTO)

Cross-border Biosecurity

Panel Members:

- Andrew Rhyne - Professor of Marine Biology, Roger Williams University
- Gustavo Torres - Subdirector, Phytosanitary Diagnosis, Ministry of Agriculture, Government of Mexico
- Kellyn Montgomery - Assistant Director, Phytosanitary Advanced Analytics Team, Animal and Plant Health Inspection Service, U.S. Department of Agriculture
- Laura Meyerson - Professor, University of Rhode Island
- José Francisco Bernal Stoopen - Director General, Environmental Verification and Inspection in Ports, Federal Attorney for Environmental Protection, Government of Mexico

Key points from panel presentations and associated discussion included:

- Prevention is key to limiting the impact of invasive species.
- It can be difficult to track shipments and associated organisms.
- Even within organizations, data spans across different formats, which can limit using models to understand patterns.

- Robustness of risk assessment models varies by discipline. Many plant risk models are good, but invasive animal models need improvement.
- There can be tension between privacy concerns of commercial entities and biosecurity information needs.
- Invasive species issues are cross-continental and require cooperation and coordination at the international, national, and regional level.

E-Commerce and Organisms in Trade

Panel Members:

- Armando Rosario-Lebron - Editorial Administrator, Southwestern Entomologist
- Bruno Gallant - Senior Legislative Officer, Canadian Food Inspection Agency
- Christine Densmore - Biologist, U.S. Fish and Wildlife Service
- Jacob Maher - Ph.D. candidate, University of Adelaide Invasion Science and Wildlife Ecology lab
- Jane Breckenridge - Citizen of the Muscogee (Creek) Nation and Director, Euchee Butterfly Farm

Key points from panel presentations and associated discussion included:

- E-commerce of non-native plants and animals is widely available and presents a major risk of invasive species introductions with significant compliance and enforcement challenges given the volume of shipments, vague/inaccurate shipping information, and gaps in authorities.
- There is consumer demand for rapid delivery and clearance processes.
- Data on e-commerce of non-native species are limited both in availability and accuracy.
- Automation tools like webscraping can help define the scope of the problem.
- Some consumers are purchasing species without knowing that they're invasive, reflecting a need for greater education.
- Many species sold are not accurately listed with scientific names.

Early Detection and Rapid Response

Panel Members:

- Federico Méndez Sánchez - Executive Director, Grupo de Ecología y Conservación de Islas (Island Ecology and Conservation Group)
- Helen Roy - Professor, University of Exeter and Principal scientist, United Kingdom Centre for Ecology and Hydrology
- Katie Kamelamela - Assistant Professor, Arizona State University
- Mark Frey - EDRR Framework Coordinator, U.S. Department of the Interior
- Michelle Franklin - Research Scientist, Agassiz Research and Development Centre, Agriculture and Agri-Food Canada

Key points from panel presentations and associated discussion included:

- In Great Britain a web portal is deployed to facilitate current information and data sharing on non-native species. The Non-native Species Information Portal (NNSIP) through the GB Non-native Species Secretariat (NNSS) website is a resource for EDRR. This site provides access to current distribution data for over 3,000 non-native species in GB as well as additional information such as place of origin, date of introduction and methods of introduction.
- Horizon Scanning to inform policy and action is utilized by prioritizing species for risk assessment, implementing monitoring and action, and including enhanced biosecurity.
- Indigenous relational frameworks and perspectives, and consideration of local people's use of species and ecological restoration practices, can inform invasive species management.
- Mexico has been implementing EDRR eradication efforts on many of its islands to protect island biodiversity. They have strict biosecurity protocols and have had 29 early detections with successful eradication of 7 mammals, 2 birds and 2 plants.
- The United States Department of Interior (DOI) is developing an EDRR Framework that will better coordinate early detection and rapid response across the United States by collaborating with all levels of invasive species managers, from local municipalities to states, tribes, territories and federal agencies.
- Promote awareness of priority invasives by developing "watch lists" and use community science platforms
- Effective communication and community engagement across all communities is key.
- Environmental DNA sampling for regulated species to promote surveillance activities are important emerging technologies.

Risk Assessment

Panel Members:

- Cheryl Corbett - National Manager, Plant Health Risk Assessment Unit, Science Branch, Canada Food Inspection Agency
- Deah Lieurance - Assistant Professor, Penn State University
- Olaf Booy - Department for Environment, Food and Rural Affairs, Government of the United Kingdom
- Zenia Ruiz-Utrilla - Ph.D. candidate and Fulbright Scholar, University of Kansas

Key points from panel presentations and associated discussion included:

- Effective invasive species risk assessment requires tailored methods, practitioner expertise, and the use of diverse tools and data sources to predict, diagnose, and prioritize threats.

- Standardized training, open-access databases, and cross-regional cooperation are essential for improving assessment quality, minimizing redundancy, and supporting evidence-based decisions.
- Clear communication of assessment rationale, uncertainties, and results enhances stakeholder understanding and intervention, while open access ensures transparency and highlights knowledge gaps.
- The Canadian Food Inspection Agency conducts plant pest risk assessments to inform regulations and policies, focusing on the likelihood of pest entry, establishment, spread, and potential impacts. These assessments are guided by international standards under the International Plant Protection Convention, which promote scientifically justified measures to protect agriculture, trade, and the environment.
- Great Britain uses a non-native species risk assessment process that is cross-taxa, semi-quantitative, and central to national biosecurity, supporting prevention, eradication, and long-term management of invasive species. Over 150 species have been assessed, with risk assessments informing legislation, listing, and eradication actions.
- Integrating spatially explicit data—such as species occurrences, environmental variables, and introduction pathways—into risk assessments is essential for understanding and mapping the likelihood and consequences of biological invasions.
- Risk maps identify susceptible areas, economic and biodiversity impact zones, and emphasize the importance of ports as entry points for alien species.
- Key challenges include gaps in occurrence data, biases in distribution records, and limited knowledge about introduction pathways and biotic interactions, highlighting the need for collaborative solutions.

Citizen and Community Science

Panel Members:

- Beatriz Maruri - Biologist, Cadereyta Regional Botanic Garden, Mexico
- Chuck Barger - Director, Center for Invasive Species and Ecosystem Health, University of Georgia
- Helen Roy - Professor, University of Exeter and Principal Scientist, United Kingdom Centre for Ecology and Hydrology
- Jane Breckenridge - Citizen of the Muscogee (Creek) Nation and Director, Euchee Butterfly Farm
- Rebecca Lord - Executive Director, Invasives Canada

Key points from panel presentations and associated discussion included:

- For creating an indigenous community science initiative in Oklahoma, developing a clear message, call to action, and sense of urgency while sharing technical information in a way that was accessible and respectful and providing hands-on experiences were key.

- Engagement of the general public via citizen science platforms contributes to establishing shared responsibilities for managing biological invasions. Surveillance for detecting invasive alien species through citizen science and social media provide broader security by empowering and engaging the public.

Nexus of Invasive Species and Wildfire.

Panel Members:

- Anibal Pauchard - Professor, University of Concepción, Chile and Director, Institute of Ecology and Biodiversity
- David Clements - Assistant Dean and Professor, Trinity Western University
- Clay Trauernicht - Extension Specialist, University of Hawai'i Mānoa
- Mayra Valdez - External Collaborator, Mexico's National Forestry Commission
- Michele Crist - Acting Program Coordinator, U.S. Geological Survey (USGS)

Key points from panel presentations and associated discussion included:

- The interactions between invasive species and fires can be complex and significant. Invasive species can increase the risk and intensity of fires through biomass accumulation (invasive plants or invasive pests increasing tree mortality) and invasive plant flammability, as well as by altering the fuel structure (allowing for fuel continuity). Furthermore, fuel management generally focuses on timber rather than invasive plants. Finally, invasive species are also more likely to grow and spread following a fire as native vegetation has been removed, and wildfire response can increase the risk of invasive species introduction and spread.
- Sagebrush conversion in the Great Basin creates vulnerability of invasive grass growth and wildfire risk.
- In Mexico, control measures include mechanical removal of invasive plants, as well as integrated pest management, including biological control, of invasive pests. CONAFOR, Mexico's National Forest Commission, coordinates with the National Service of Health, Safety and Agri-food Quality to monitor invasive species, to implement control measures and investigate pathways of invasion.
- In Chile, pine plantations have enabled invasive pines to become widespread in central-southern landscapes, increasing fuel loads and flammability. Climate change, drought, and other ignition sources have further intensified wildfire impacts.
- Invasive plants are altering the timing, frequency, and severity of fires across the United States. Management responsibilities are often split across agencies, creating coordination challenges. Since 2020, the National Invasive Species Council (NISC) and the Wildland Fire Leadership Council representing federal and state fire management programs, Tribal Nations, and local government officials, have formed a partnership to develop solutions for managing invasive plants that have a strong influence on fire regimes.

- In Hawaii, introduced grasses and shrubs drive wildfires by creating novel savannas between communities and upland forests. These landscapes emerged from plantation agriculture and its decline. Risk reduction strategies include fuel breaks, grazing, and ecological restoration. Greater investment is needed given the scale of former plantations.
- Canada has experienced some of its most severe wildfire seasons, with climate change contributing to larger and more frequent fires. In Canada's West Coast, ecosystems are further stressed by invasive species and the loss of Indigenous fire stewardship practices. Reintroducing Indigenous fire management can help reduce wildfire risk and limit invasive plant impacts.

Summary of Breakout Sessions

Day 1 – Engagement in International Frameworks

Data/information sharing

- Data should be collected, validated and shared in an effective way.
- Data platforms and systems should be used to streamline detection at points of entry and address challenges of port agents and individuals.
- Information used in systems should be compatible and efficient. As an example, FWS or APHIS could work with list-makers to help with consistency.
- There still remain many challenges with cross-system applications and comprehension
- High-resolution data, such as eDNA, should be disseminated
- Conservations on emerging technologies should be a focus of conservations (e.g., can data scraping be enhanced using Artificial Intelligence?), and concerns about the use of new technology should be heard.
- Compatibility between definitions and procedures (e.g., risk assessments) across boundaries should be sought.
- List of species should be made accessible and shared.

Institutional knowledge and continuity

- Statutory and/or regulatory authorities to manage and control IAS are key.
- Collaboration between government and non-governmental organizations could help reduce shifting priorities and reach IAS science and management long-term goals.
- Creating an annual list or compendium of activities, accomplishments, success stories from the various committees and subcommittees, including at the North American level, could help identify overlap and gaps.
- Prioritization of efforts to improve the effectiveness of IAS management is key given limited resources.

- List or tools to identify experts and networks could be useful to increase collaboration and reduce overlap. As an example, tools could take the form of North American Invasive Species Management Association (NAISMA)'s "Who does What?"
- Alignment of definition of IAS across institutions can help them move towards the same goals.

International collaboration

- Institutional knowledge would benefit from being shared within and beyond North America.
- The North American Invasive Species Forum is an opportunity to share information; however, given that it takes place every few years, it would benefit from a policy-level committee meeting between forums.
- Working towards common goals can facilitate international collaboration and move from a country-specific approach to a more regional one when necessary.
- Identifying points of contacts in each North American country could also help increase collaboration at the North American level.
- Some programs, such as Play Clean Go, Weed Free Hay, SWAT analysis of programs could be expanded at the regional level

Outreach, education, and learning from successes

- Outreach and education are key to raising awareness, getting the public involved in preventing introduction and spread of IAS and in their management supports IAS measures.
- Non-governmental organizations, botanical gardens, industry, CSR, are all partners in outreach.
- Outreach activities could include webinars, podcasts, training modules, booths at conferences on topics adjacent to IAS.
- Encouraging and supporting student presentations during IAS-related conferences can help ensure that the issue of IAS is important for up-and-coming academics.
- Engaging with adjacent organizations and corporate social responsibility initiatives could help increase the reach of campaigns.
- Adapting to various audiences and providing information in various languages can help increase the reach of campaigns.
- Sharing success stories every year would be useful to encourage action
- Success stories include the North American coordinated approach to spongy moth, which could be used for other species.

Alerts

- Alerts for emerging species should be shared with institutions and the public.
- The role of NGOs should be considered and acknowledged in disseminating alerts.

- The model of the Incident Command System could be used when emerging species are detected.

Financial mechanisms

- As funding is dependent on governmental priorities, innovative financing solutions, such as those developed through the Biodiversity Finance initiative of the UN Development Program could support IAS management financing.
- Import fees could also be used to support IAS management efforts.

Day 2 – Cross-Border Biosecurity; E-Commerce of Invasive Species

Data collection/sharing

- There is a need for a centralized location to share high-curated information (reduce numbers of individual lists).
- Invoice-level data should be captured rather than codes, which can make systems more complicated.
- Technology can be leveraged, such as for web scraping purposes.

Institutional knowledge and relationships

- Funding continues to be dependent on leadership buy-in and varies across government institutions.
- Relationship building across agencies through more frequent gatherings/meetings or working group(s) focusing on specific issues/initiatives.
- A list of contacts for networking and for consultation should be compiled.
- Consideration should be given to how to maintain institutional or organizational relationships when political priorities change.
- Building networks of and with nongovernmental entities is important as NGOs may have more latitude and influence across broader sectors of industry, public, etc. (e.g. botanical gardens, nonprofits, industry councils, etc.).
- Greater relationship-building with Tribes/Indigenous Peoples is required to address the issue of invasive species.
- Cross-agency training should be promoted.

Outreach, education, and learning from successes

- Outreach tools to identify common interests, share success stories, and encourage collaboration and/or voluntary compliance should be developed or enhanced
- Invasive species success stories should be identified and broadly shared, using social media platforms directly or through partners and influencers.

- Initiatives and toolkits to emulate or borrow from should be identified (e.g., FAA regulation of drones, US Climate Resilience Toolkit).
- There could be opportunities to work with major media companies to develop widely-received communication pieces that help address misunderstandings about existing IS-related restrictions.

Regulatory and/or financial mechanisms

- Regulation and voluntary compliance are tools which should be used. Furthermore, identifying shared interests is important to encourage compliance and cooperation.
- Opportunities to increase legal/financial disincentives to introducing and spreading IS should be examined and communicated widely.

Day 3 – Early Detection and Rapid Response; Risk Assessment

Data collection/sharing

- There is a need to share data (in addition to risk assessments) in an identified repository (rather than disbursed)
- Specific considerations of producer and user groups (e.g. researchers analyzing data may seem like a burdensome time lag for field application) should be determined.

Institutional relationships/knowledge

- Creating a clearinghouse to compile and share information and leverage lessons learned could be useful. Such clearinghouse could start with sharing NAISF proceedings.
- Expanding existing networks and tools should be preferred to the proliferation of duplicative or overlapping tools.
- Existing relationships should be leveraged. For example, the NAISF may partner with other organizations to help make resources from forums more broadly accessible.
- Networking list or identification of organizations and their mission/responsibilities to ensure continuity of links through personnel changes would be useful.

Collaboration

- Hosting or participating in virtual events in between NAISF forums would be useful to continue communications and relationship-building
- Staying connected with smaller events, meetings, etc. would be another way to keep momentum and collaboration.

Outreach, education

- Encouraging informal networking and communication as a complement to formal networks could help increase outreach outside of conferences and forums

- Including a wide range of individuals with different backgrounds to facilitate conversation and coordinate actions could lead to broader public knowledge and support

Alerts and response

- Explore and highlight success stories for formal interjurisdictional response structures, such as Incident Command System
- Developing a scaled or triaged system to coordinate responses could support better rapid response on priority species
- Pathways, not just species, should be targeted as they could help manage multiple IS at once or the source of their introduction or spread.

Day 4 - Citizen and Community Science Successes; Nexus of Invasive Species and Wildfire

Data/Information Sharing

- Community science can be leveraged through tools such as iNaturalist, EDDMaps, or Wildspotter, which can facilitate tracking and early detection of invasive species. However, platforms may have data verification issues.
- While platforms can leverage on-the-ground knowledge, issues of data verification, compatibility between platforms, and accessibility due to policy constraints remain.
- Platforms should also be secure financially to protect citizen science outputs and research over time.
- There is a need for more proactive rather than reactive approaches, using innovative technology to improve effectiveness. Benefits of doing so can be identified when thinking of grasses that can serve as both invasive species and wildfire fuel for example.
- Technology, such as Artificial Intelligence and upgraded data protocols, can help enhance accuracy and detection capabilities.

Institutional Knowledge and Continuity

- Institutions can help safeguard information repositories, as well as best practices, to retain collective knowledge through organizational or personnel transitions.

Collaboration

- Institutions with established networks, such as the North American Botanic Garden can facilitate strategic sharing and could host panels on invasive species management.
- International collaborations (e.g., CalFire training in Mexico) and grassroots organizations (NGOs, volunteers) can help create effective partnerships and awareness campaigns.

- Creating connections between adjacent topics are key for co-benefits. As an example, the USGS SPARCS links fire and invasive species management, highlighting benefits of integrated collaboration.

Outreach/Education/Learning from Successes

- Ambassador and Train-the-Trainer Programs can help expand outreach potential by involving non-IS experts and those involved in adjacent fields.
- Field visits, post-fire events, and crisis-related tours can engage policymakers and the public, increasing the visibility of the issue
- Highlighting success stories and effective efforts (e.g., Monarch butterfly monitoring, bird-friendly plant lists that led to labels for beef products.) can support application and recognition of best practices.
- Developing plain, common language coordinating campaigns, as well as leveraging digital media can help the reach of shared information, engaging the public via influencers, graphic designers, and citizen scientists.

Regulatory/Financial Mechanisms

- Direct engagement of policymakers in affected regions, and championing issues through legislative advocates can help drive policy shifts and mobilize resources.
- Crises (e.g., wildfires) can be used as leverage to enhance funding or regulatory support for proactive monitoring and invasives action.

Cross-Cutting Opportunities to Improve Coordination Across North America

Appendix C reflects the product of a facilitated plenary interactive exercise on the final day of NAISF to identify opportunities to build on momentum created by the 2026 event, focused on three main themes: (1) Data collection/sharing; (2) Institutional Relationships/Knowledge; and (3) Communication/Collaboration.

In addition, a review of individual breakout session results reveals the following common observation:

Data/Information Sharing

- Standardized, validated data collection, sharing, and storage are critical to effective invasive species management.
- Streamlined, compatible platforms and repositories are needed; innovative tech (like AI) can enhance detection and sharing.

- Interoperability/compatibility challenges between systems and data verification issues remain.

Institutional Knowledge/Continuity

- Sustained statutory/regulatory authority and alignment of terms/processes underpin long-term success.
- Shared annual reports, clearinghouses, and contact networks can help preserve knowledge, identify gaps, and reduce overlap.
- Strong government and NGO partnerships, as well as relationship-building across shifts in funding or leadership, ensure continuity.

Collaboration

- Cross-border, multi-sector, and inter-agency collaboration is essential; regional forums, working groups, and contact lists increase effectiveness.
- Expanding and building on existing programs, and connecting adjacent fields (e.g., invasive species and wildfire), strengthen outcomes.
- More frequent meetings and involvement of Indigenous Peoples/Tribes, NGOs, industry, and grassroots groups, including on topics adjacent to that of IS, are beneficial.

Outreach/Education

- Outreach should target public, policymakers, and young academics using diverse formats, languages, and partners.
- Success stories and shared tools amplify learning and inspire action.
- Involving broader audiences and leveraging media, influencers, graphic designers, and ambassadors from IS-adjacent fields grows engagement and awareness.

Alerts

- Centralized, accessible lists and alerts for emerging threats are important.
- Timely sharing of alerts and risk assessments (species/pathways) is vital, with incident response structures for coordinated action.
- NGOs play a key role in disseminating alerts and mobilizing responses.

Regulatory/Financial Mechanisms

- Innovative and diversified funding sources (e.g., import fees, BioFin) are needed due to governments shifting priorities.
- Strengthened regulation, voluntary compliance, and legal/financial disincentives can support invasive species management.
- Policy champions and crisis-driven moments can prompt shifts in priorities and increase resources.

NAISF 2025 Evaluation

In response to a brief evaluation request distributed by WSSA after NAISF, 28 participants provided the following feedback:

Attendance and Engagement

Out of 28 respondents:

- 86% attended on May 13, with slightly fewer attending on subsequent days.
- 100% found the event beneficial; 14% expressed a preference for in-person meetings.

Collaboration Capacity

Participants rated their current capacity to collaborate across borders at an average of 7.4 out of 10, indicating a strong foundation for international cooperation.

Key Takeaways

- **Multinational and Cross-Sector Perspectives:** Attendees appreciated hearing from experts across North America and beyond, including government agencies, academia, and NGOs. International viewpoints on topics like e-commerce and invasive species policy enriched the dialogue.
- **Networking and Community Building:** Many respondents emphasized the importance of networking. The forum fostered meaningful connections among professionals with shared interests, creating a sense of community and laying the groundwork for future collaboration.
- **Relevant and Timely Content:** Sessions on climate-resilient crop varieties, aflatoxin mitigation, and fire-invasives interactions were especially well-received. Participants found the content applicable to both national and local contexts, with direct relevance to their work.
- **Inclusion of Indigenous Perspectives:** The presence of Native American speakers and spiritual elements was described as educational and meaningful, adding cultural depth and emphasizing the value of traditional ecological knowledge.
- **Educational Value and Knowledge Sharing:** Respondents noted that the forum provided actionable insights and inspiration. Many planned to share what they learned with colleagues or students, amplifying the forum's impact.
- **Well-Structured Format:** The limited daily schedule, engaging speakers, and breakout sessions were praised for maintaining focus and energy. The balance between presentations and discussions, and the variety of topics, contributed to a dynamic experience.

Suggestions for Improvement

- Improved technical features (e.g., breakout rooms, moderated Q&A)

- Access to recorded sessions
- More interactive breakout sessions
- Greater participant capacity and engagement tools

Future Emphasis

Respondents expressed interest in:

- Long-term invasive species management
- Cross-sector and cross-national collaboration
- Youth and innovation inclusion
- Integration with broader environmental and health disciplines

Post-Forum Engagement

Of the 27 participants who responded to the engagement question:

- 70% wish to join an email network
- 48% are interested in serving on a work group
- 15% would like to help plan the next NAISF
- 15% indicated they are not available
- 19% offered other suggestions, such as local action or information sharing
- 22 individuals provided contact information, representing a diverse array of institutions across North America and beyond, including universities, government agencies, and research organizations.

Acknowledgements

As the host of NAISF 2026, FICMNEW would like to thank the following contributors:

- Everyone who participated in the forum
- Keynote speakers and panel presenters
- Panel moderators and co-moderators
- Breakout session facilitators and notetakers
- NAISF 2025 sponsors: Weed Science Society of America and NRCS
- NAISF International Planning and Program Committee, with representation from NRCS, USGS, U.S. Army Corp of Engineers, CONABIO, Environment and Climate Change Canada, Canadian Food Inspection Agency, and Invasives Canada
- CADR
- U.S. Department of Agriculture Office of the Chief Scientist

Appendix A: NAISF 2026 Agenda

Agenda

12:00 PM EDT IN
OTHER TIME ZONES

6 AM Hawai'i
9 AM Los Angeles
5 PM London

Tuesday, May 13, 2025

12:00 PM EDT	Opening Remarks and Keynote Address: Dr. Laura Meyerson
01:20 PM EDT	Break
01:30 PM EDT	Panel Session 1: Engagement in International Frameworks
03:00 PM EDT	Break
03:10 PM EDT	Day 1 Breakout Session
04:00 PM EDT	Virtual Mixer
05:00 PM EDT	Adjourn

Wednesday, May 14, 2025

12:00 PM EDT	Day 2 Announcements and Keynote Address: Jane Breckinridge
01:00 PM EDT	Panel Session 2: Cross-Border Biosecurity
02:25 PM EDT	Break
02:35 PM EDT	Panel Session 3: E-Commerce/Organisms in Trade
04:00 PM EDT	Break
04:10 PM EDT	Day 2 Breakout Session
05:00 PM EDT	Adjourn

Thursday, May 15, 2025

12:00 PM EDT	Day 3 Announcements and Canada/US/Mexico updates
01:00 PM EDT	Panel Session 4: Early Detection and Rapid Response
02:25 PM EDT	Break
02:35 PM EDT	Panel Session 5: Risk Assessment
04:00 PM EDT	Break
04:10 PM EDT	Day 3 Breakout Session
05:00 PM EDT	Adjourn

Friday, May 16, 2025

12:00 PM EDT	Day 4 Announcements and Panel Session 6: Citizen and Community Science
01:25 PM EDT	Break
01:35 PM EDT	Panel Session 7: Invasive Species and Wildfire Nexus
03:00 PM EDT	Break
03:10 PM EDT	Final Breakout Session
04:20 PM EDT	Closing Remarks

Appendix B: NAISF 2026 registrant affiliations

Agrifood Canada
Air Force Civil Engineer Center
Alberta Environment and Protected Areas
Anne Arundel County Government
Arizona State University
Auburn University
BASF SE
Beaverhead County Weed District
Beyond Attitude Consulting
BIA/BIE/BTFA - Office of Equal Opportunity and Civil Rights Programs
biometrio.earth
Brigham Young University
British Columbia Invasives
British Columbia Ministry of Forests
Cadereyta Regional Botanic Garden
California Department of Food and Agriculture
California Department of Transportation
Canadian Food Inspection Agency
CFIA National Centre for Foreign Animal Diseases
City of Kansas City, Missouri
City of North Vancouver
City of Prince George
Colegio de Postgraduados, Chapingo
Comisión Nacional de Áreas Naturales Protegidas
CONABIO
CONANP
Convention on Biological Diversity
Cornell University
Corteva Agriscience
Council for Scientific and Industrial Research- Savanna Agricultural Research Institute
Ecosur
Environment and Climate Change Canada
Ethiopian Institute of Agricultural Research
Euchee Butterfly Farm
Federal Attorney for Environmental Protection, Mexico
Fisheries and Oceans Canada
Florida Department of Agriculture and Consumer Services
Fundación para el Estudio de Especies Invasivas
Government of Alberta (Canada), Agriculture and Irrigation
Grand Teton National Park
Indian Agricultural Research Institute
INIFAP

Invasive Species Corporation
Invasive Species Council of British Columbia
Invasives Canada
ISLAS
Johnson County Noxious Weed Department
Kuvu Bio Solutions
Laboratorio Nacional de Resiliencia Costera
Michigan State University
Ministry of Natural Resources
Minnesota Department of Agriculture
Mississippi State University
National Forestry Commission
NAVFAC SAN DIEGO
Nebraska Invasive Species Council
Nevada Department of Agriculture
Nez Perce Tribe
NNL
North Carolina Botanical Garden Foundation
North Carolina State University
Okanagan And Similkameen Invasive Species Society
Oregon State University
Pacific Forest Res lab
Parks Canada
Partnership Academy
Pend Oreille County Noxious Weed Board
Penn State University
Petrocco Farms, Inc.
Pioneer Co-operative Association Limited, Canada
Province of British Columbia
Public Health Agency of Canada
Quechan Indian Tribe
Raliscoam Ltd.
Rice Research Institute, Pakistan
Roger Williams University
Rosario Lebron Entomology
Salt Lake City Department of Public Utilities
Santa Barbara County Flood Control
Senasica, Mexico
SePRO
Southeast Alaska Watershed Coalition
Southern Illinois University
Spectrum Brands Inc.
SSI Maxim Of TN LLC

Syngenta
Teton County Weed & Pest
Texas A&M University
Texas Tech University
The Ohio State University
Thompson Nicola Regional District
Trinity Western University
U.S. Bureau of Land Management
U.S. Bureau of Reclamation
U.S. Department of Energy
U.S. Department of Homeland Security
U.S. Department of State
U.S. Department of the Interior
U.S. Department of Transportation
U.S. Fish and Wildlife Service
U.S. Geological Survey
U.S. National Invasive Species Council
U.S. National Park Service
UAM
Udall Foundation
UK Animal and Plant Health Agency
UK Centre for Ecology and Hydrology
United Nations
Universidad Autónoma Chapingo
Universidad Autónoma de Nuevo León
Universidad Autónoma del Estado de Morelos
Universidad Autónoma Metropolitana
Universidad de Concepción
Universidad de Guadalajara
Universidad del Cauca
Universidad del Valle
University of Adelaide
University of Arizona
University of California Agriculture and Natural Resources
University of Florida
University of Georgia
University of Idaho
University of Kansas
University of Massachusetts Boston
University of Minnesota
University of Rhode Island
University of Saskatchewan
University of Wyoming

U.S. Animal and Plant Health Inspection Service - Plant Protection and Quarantine
U.S. Army
U.S. Army Corps of Engineers
U.S. Department of Agriculture
U.S. Department of the Interior
U.S. Fish and Wildlife Service
U.S. Forest Service
U.S. Geological Survey
U.S. Natural Resources Conservation Service
USAF
U.S. Department of Agriculture Office of Pest Management Policy
U.S. National Institute of Food and Agriculture
University of Vermont
Vellore Institute of Technology
Ventura County Agriculture Weights and Measures
Virginia Tech
Virginia Department of Agriculture and Consumer Services
Virginia Department of Conservation and Recreation
Washakie Weed and Pest
Washington State University
Weed Science Society of America
Western Area Power Administration

Appendix C: Results of Plenary Breakout Session

North American Invasive Species Forum 2025 Sustaining Momentum

Data Collection/Sharing

	Share data	Use available tools & technologies	Create central data repository
Coordination within jurisdiction and then networking	FICMNEW to help convene US subcommittee on data-sharing	Explore web-scripting (Australian example as model for pilot)	SIREN or other multi-entity repository
	Share data that informs risk assessments	Tools for updated info/easy application for RAs	Limit or reduce number of lists
	Share invoice-level data	Ensure interoperability of databases	Target pathways, not just individual species
	Specific interests/ timeframes for producers & consumers of data	EDMap/data sovereignty—use existing standards to post on platform	
	Apply FAIR principles to data management		
	Streamline data for ease of use at ports of entry		
	Evaluate & address Use Code errors		

Institutional Relationships/Knowledge

	Create a clearinghouse	Build on Success	Strengthen Formal Networks
Proactive Sharing of proceeding w/ other cross-border orgs	FICMNEW with WSSA shares NAISF proceedings, including with other relevant cross-border groups	NAISM "Who does What?" webinar—repeat & expand	Build on existing relationships (e.g. NAISF institutional partners)
Identify/prioritize events for cross-fertilization	Identify/share model toolkits for adaptation (e.g. FAA drone reg)	Incentivize building up existing resources, not creating new ones	Directory of organizations & missions to ensure continuity through personnel changes
Mine Forum chat to create & share resource list	Compile and share information and leverage lessons learned	More cross-border training	Clarify roles & responsibilities
a participants list that allows participants to edit and enter areas of expertise/assistance—direct to SIRDs?	Identify/share protocols and processes (e.g. outbound inspection)	Leverage lessons learned on other platforms	Explore/expand formal interjurisdictional models (ICS)
Identify/share info on orgs that work on native/local species in disaster recovery		Leverage lessons learned on leadership buy-in	Scaled or triaged system for response
		Stop reinventing the wheel with proliferation of duplicative or overlapping tools	More frequent interagency events to build relationships
		Evaluate accomplishments to identify gaps	Build relationships with indigenous nations
			Remap organizations of who does what

Communication/Collaboration

	Stay Connected	Expand Informal Networks	Sustained Outreach
Within a year select dates/location for NAISF	FICMNEW arranges meeting in next 12 months with Canada and Mexico reps to explore NAISF role beyond forum	Encourage informal networking	Outreach in multiple languages (not just English)
Review NAISF terms of reference (to encourage inclusivity)	Identify a NAISF work program/priority for participating partners	Bring back information to "boots on the ground"	NAISF opportunities in languages of North American partners
	Reach out to peers in indigenous communities	Work with NGOs that have more latitude/influence with public	Use social media more effectively
	Connect peers across agencies	Presence at events of "adjacent" orgs (e.g. Trilateral Committee, garden associations)	Tailor outreach to specific audiences & communities
	Host/publicize smaller events between forums	Co-sponsor event/ gathering with botanical gardens—note Denver mg!	Manage by "interest" to encourage voluntary compliance & cooperation (business, individuals)
	Identify a POC for each country	Remember to train the trainers	Work with influencers who have large social networks
	Create working group of media/ visual info specialists	Bring in communication experts—recruit to develop products	Engage communities in decision-making for buy-in
			Include a wide range of individual from different backgrounds