The North American Invasive Species Network (NAISN): Needed infrastructure in a multi-jurisdictional environment
The U.S. Federal World – No lead agency!

USA - Federal agencies/institutions with entities that have authority, and/or have divisions or programs pertaining to non-native & invasive species ~ 176

Federal Agencies:

U.S. Department of Agriculture (82)
U.S. Department of the Interior (53)
U.S. Department of Commerce (10)
U.S. Department of Defense (5)
U.S. Department of Health and Human Services (2)
U.S. Department of Homeland Security (4)
U.S. Department of State (1)
U.S. Department of Transportation (2)
U.S. Environmental Protection Agency (10)
NASA (3)
NSF (2)
Smithsonian Institution (2)  

Source: NISC
In 2010, there were numerous Regional Centers, Institutes, and Labs plus two networks in North America dealing with Invasive Species on public conservation lands and waterways.
March 9-11, 2010 – West Palm Beach, Florida
NAISN’s Overall Goal –
Link existing invasive species regional efforts (Centers/Institutes/Labs/Networks) into an overall coordinated network
Mission Statement:

A consortium that uses a coordinated network to advance science-based understanding and enhance management of non-native invasive species.
NAISN Hubs (7) and Nodes (4) 2015

- California Invasive Plant Council - California
- Center for Invasive Species Management – Montana
- Center for Aquatic and Invasive Plants - Florida
- National Institute of Invasive Species Science – Colorado
- Center for Invasive Species and Ecosystem Health – Georgia
- Invasive Species Research Institute – Canada
- Canadian Aquatic Invasive Species Network – Canada
- Conabio – Mexico
- Texas Invasive Species Institute - Texas
- Invasive Species Centre – Ontario, Canada
- Invasive Species Council of British Columbia - Canada
NAISN HUBS/NODE
Existing Services

• Information Technology
• Research and Mapping
• Plant and Animal Data
• Regional Databases
• Hosts >32 websites
• EDD MAPS, Apps
• Education and Extension
• On-line courses and webinars
• Coordination and collaboration
CDC-like Website
The Florida Experience: Translating successful IPM programs nationwide
Water Hyacinth, a native from South America
Water hyacinth populations in Florida over time

Lead Coord. Agency

Maintenance Control Implemented

Year

Acres (thousands)

Australian melaleuca trees showing seedling/sapling spread after a fire
Successful Florida IPM (1.8 million acres)
Ten lessons (or components) for a successful Invasive Plant Management Program

1. Designate a lead coordinator entity
2. Define the problem
3. Prioritize species for management
4. Have an overall goal
5. Establish funding guidelines
6. Rapid response and prevention
7. Local participation - critical to success
8. Research
9. You must adapt to a changing environment
10. Outreach efforts has to be generational
1. NAISN could be the lead coordinating entity for invasive species on PCLs in the USA

(With adequate funding, essentially the CDC for invasive species)
2. Define the Problem

• Track Invasive Species Expenditures by Each State on Public Conservation Lands

• Define Invasive Species ranges and what do they actually threaten (surveys, impacts)

• Conduct, Fund, Track, and Coordinate Economic Impact Studies in North America
The Ten Most Important Invasive Species or Invasive Species Assemblages in North America in 2015

Asian Carp Assemblage:
- Grass carp (*Ctenopharyngodon idella*)
- Silver carp (*Hypophthalmichthys molitrix*)
- Bighead carp (*H. nobilis*)
- Black carp (*Mylopharyngodon piceus*)

Asian gypsy moth (*Lymantria dispar*)
- Burmese python (*Python bivittatus*)
- Emerald Ash borer (*Agrilus planipennis*)
- Eurasian wild pig (*Sus scrofa*)
- Lionfish (*Pterois spp.*)
- Hydrilla (*Hydrilla verticillata*)

Mussel Assemblage:
- Quagga Mussels (*Dreissena bugensis*)
- Zebra mussels (*Dreissena polymorpha*)

Purple loosestrife (*Lythrum salicaria*)
- Salt cedar (*Tamarix spp.*)
3. Prioritize Invasive Species for Management

• Make CDC-like recommendations based on science (not all invasive species are equal)

• Collect and interpret scientific and technical information regarding invasive species risks

• Through risk and pathway analyses, identify, assess, and prioritize new threats

• Identify gaps in knowledge to guide establishment of research priorities.
4. Develop realistic management goals for each species

- Develop recommendations if quarantine, eradication, or maintenance control can be achieved

- Develop protocols for emergency quarantine especially around ports-of-entry
5. Help with Early Detection and Rapid Response

1. Emergency Management Coordination

2. Coordinate funding and help develop response priorities at the local level - CISMAAs

3. Provide technical assistance and other resources

4. Provide guidance and training on effective response measures

5. Work with the public & develop easy web based ID tools & pathway to ID new arrivals, phone apps!
Smart phone apps
6. Local Participation - help form and nurture partnerships or CISMAs within all the states

Example: **Florida CISMAs**
(Cooperative Invasive Species Management Areas)

17 CISMAs –
Ownership of the issue
Private landowners
CISMA workdays
Distribution maps
Early warning system
Species information
Tools, BMPs
Public awareness
7. Help coordinate, disseminate research

- Track research in U.S.
- Encourage research on IS pathways, dev. exclusion technology
- Increase and host more webinars aimed at dispersing current research
- Develop IS Watch List for each state
Climate Shift – a wildcard for invasive species
8. Climate Shift – Strategies

- Many ecosystems will depend on early detection and rapid response to invasive species as the climate warms
- Help with identification and diagnostics
- This will call for more cooperation and coordination that exists today
9. NAISN could help establish a national public awareness campaign along with education
North American Invasive Species Forum Conference

• Will use the existing International Steering Committee (from the Weeds Across the Border team) to develop the conference agenda

• Conference topics will include jurisdictional issues, international policy issues, planning, and big picture matters such as prevention, etc.

• Conference focus invasive plants but will include invasive animal species too.
North American Invasive Species Forum Conference

• Sessions on invasive species tracking, mapping, prevention, and international jurisdictional matters and others along with panel discussions

• Looking at February or October 2017

• Conference location – South Florida, field trips to the Everglades, likely 100-150 participants