Why do we need an invasive species network in North America?
USA - “The current federal effort is largely a patchwork of laws, regulations, policies, and programs.”

OTA Report, Harmful Non-Indigenous Species in the United States, 1993
Factors that interfere with managing invasive species in North America’s natural areas:

- Lack of federal funds
- Lack of public awareness and outreach
- Inadequate coordination
- Inadequate information, research, and technical assistance
- No single lead federal agency (USA)

“If meetings could kill invasive species, they would all be dead by now.”
Invasive Species

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
USA - State agencies with authorities and organizations (invasive species councils, CISMAS, etc.) with an interest pertaining to invasive and non-native species

50 States ~ 476
California 40
Florida 19
Hawaii 19
Online databases that contain information about invasive species:

• **143 USA** information systems

• **4 U.S.-based general flora** databases with information on invasive plants

• When including global information systems, there are approximately a total of **252**

*Source: National Biological Information Infrastructure USGS (2006)*
Information on invasive species is badly fragmented:

- Scattered about in hundreds of technical newsletters and publications
- Plant invasions - ~189 journals

Source: *Life out of bounds – Bioinvasion in a Borderless World, 1999*
In 2010, there were 11 Regional Centers, Institutes, and Labs plus two networks in North America dealing with Invasive Species
NAISN’s Overall Goal –
Link existing invasive species regional efforts (Centers/Institutes/Labs/Networks) into an overall coordinated network
NAISN is comprised of:

A Board of Directors (Hub Directors)

**Hubs** - Regional or Thematic

**Nodes** - Agencies and other organizational entities with a recognized role in invasive species management and members of a hub

**Affiliates** - Individuals with an interest in invasive species issues.
NAISN Advisory Boards:

Science

Information Technology

Commerce

3 Government Boards
Scope of the Network:

Canada, Mexico, and the United States – and all of their protectorates
Mission Statement:

A consortium that uses a coordinated network to advance science-based understanding and enhance management of non-native invasive species
NAISN HUBS/NODE 2012
NAISN Hubs (8) and Node (1) 2012

- Center for Invasive Plant 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 – Ontario, Canada
- Canadian Aquatic Invasive Species Network – Canada
- Conabio – Mexico
- Geosystems Research Institute – Mississippi
- Invasive Species Centre – Ontario, 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
What will be some of NAISN core services of improving invasive species management in North America?
Define the problem
$\textbf{NAISN will Help Define the Economic Costs}$

- Begin to Track Invasive Species Expenditures by Each State, Province
- Conduct, Fund, Track, and Coordinate Economic Impact Studies in North America
NAISN will help establish a continental Public Awareness Campaign

Amelia Exotica Says "Only you can prevent bioinvasions"
North American Invasive Species Network
Science-based service and collaboration

NEWS AND PUBLICATIONS

NAISN Board Meeting

Android versions of Outsmart Invasives and Missouri River Watershed Invasives Now Available!

Free Webcast: Garlic Mustard and the 2012 Challenge

Press Release: USDA Urges Americans to Prevent Invasive Pests, Protect American Agriculture

Invasive Plant Ecology and Management Short Course

Give us your Oak Caterpillars!!!

Zebra Mussel DNA Found in North Texas Lakes

all news
Help form and maintain cooperative partnerships
Encourage and help form partnerships or CISMAs within states/provinces:

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
Connect the databases
GISIN IS THE BACKBONE OF THE NAISN DATABASE

Stakeholders Input Data Into Multiple Online Data Management Systems Throughout North America

Data Providers
- Conabio
- EDDMaps
- IPAMS
- IBIS
- iMapInvasives
- IPANE
- Others

GISIN Data Integration Via Web Services Across Data Providers

NORTH AMERICAN INVASIVE SPECIES NETWORK WEBSITE
- Species Status
- Occurrence Locations
- Management Status
- Impact Status
- Dispersal Status
Help with early detection & coordinate rapid response
NAISN - Early Detection and Rapid Response

1. Integrate planning - partnerships

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

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!
Help coordinate & disseminate research
• Track research in NA

• Encourage research on IS pathways

• Encourage “proactive research” or developing exclusion technology

• Develop Global Watch List (by region) for NA
NAISN - Help bridge the gap between researchers and resource managers

• Host regional Research Reviews & Short Courses

• Establish electronic regional research newsletters

• Increase and host more webinars aimed at dispersing current research
Climate Shift – a wildcard for invasive species
Climate Shift – Adaptation Strategies

• Many ecosystems will depend on early detection and rapid response to invasive species as the climate warms

• We must reduce, minimize, or eliminate the potential for the introduction

• This will call for more cooperation and coordination that exists today - NAISN
Thanks To...

• Commission on Environmental Cooperation

• Idaho State Department of Agriculture

• Aquatic Ecosystem Restoration Foundation

• Global Invasive Species Information Network