



Meet the Invasive Species Challenge.

Know the NISC Plan, Manage the Problem.

PREPARE, PREVENT, PROTECT.

Updates on:  
Invasive Species and Climate Change Report  
Pathway Management Guidance  
Hydraulic Fracturing Pathway Guidance

Aquatic Nuisance Species Task Force (ANSTF)

6 November 2014

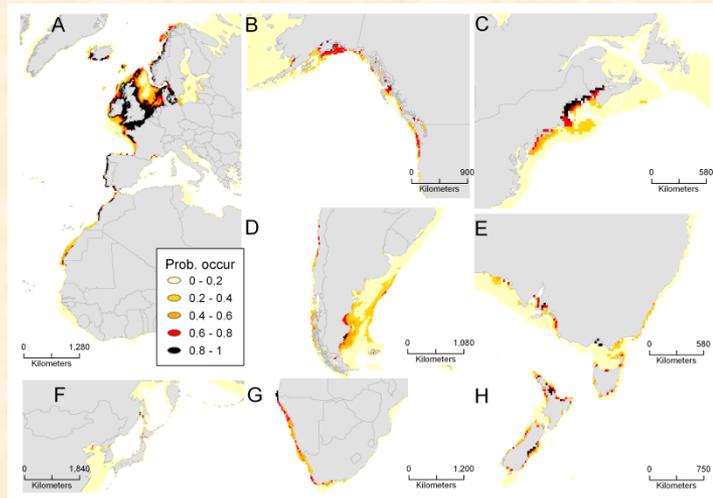
Falls Church, VA

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Prevention and Budgetary Coordination

# Bioinvasions in a Changing World: A Management Resource on Invasive Species-Climate Change Interactions

## ANSTF (2012)

- Identify knowledge gaps and provide recommendations for future research needs.
- Identify and provide a platform for disseminating existing management strategies, tools and resources.



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# IS/CC: Finalization

- Review
  - ANSTF/NISC Ad Hoc Working Group
  - ANS Regional Panels & Member Agencies, NISC Members Agencies & Other Experts
- Final Version
  - I. Overview
    - A. Basic Interactions
  - II. Context for Management
    - A. Climate Adaptation and Conservation Planning
    - B. Framework of Invasive Species Management
  - III. Tools and Methods
    - A. Prevention and Risk Management
    - B. Early Detection and Rapid Response (EDRR)
    - C. Management and Control
  - IV. Institutional Coordination and Outreach
  - V. Recommendations and Resources
  - VI. Glossary of Key Terms, References

# IS/CC: Recommendations

Two main messages

1. Target invasive species that increase vulnerability to climate change.
2. Prioritize adaptation options that decrease the risk and impact of invasion.

Overlapping themes

- Risk analysis and modeling
- Pathways and range shift
- Hot spots and vulnerable resources
- Efficacy of management measures
- Risks/benefits of adaptation and mitigation measures

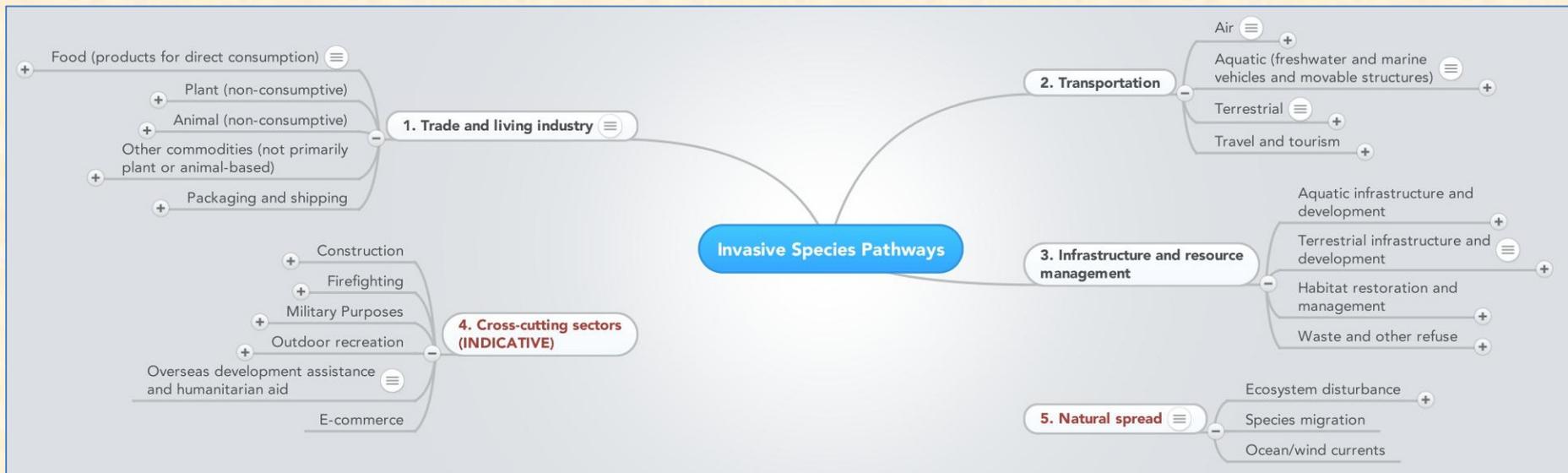
# IS/CC: Next Steps

- Circulate report
  - ANSTF and NISC communities
  - Climate change adaptation community
  - State governments
  - Academic circles
- Platform for disseminating management strategies, tools and resources
  - NISC website migration and redesign to include page on climate change and invasive species
  - USGS climatedata.gov initiative to include invasive species as a topical node
  - Other opportunities
- Possible future discussion by ANSTF or NISC on research gaps and next steps

# Pathway Management

ANSTF request (2012)

- Provide guidance for pathway management plans
- Develop a list of pathways to be considered for plan development



# Pathway Diagrams

- Circulated for comment revised pathway diagrams to ANSTF and NISC communities
  - Trade and living industry
  - Transportation
  - Infrastructure and resource management
  - Cross-cutting sectors
  - Natural Spread
- General support
- Next steps
  - Post diagrams on migrated NISC website
  - Include/link to available pathway guidance
  - Review and revise on an ongoing basis

# Pathway Prioritization

- Limited tools for quantitative across-the-board comparison of pathway risk
- Input requested from ANS regional panels on pathway priorities (qualitative, expert-based approach)
- Limited response
- Possible next steps
  - Revisit request to regional panels
  - Continue with current “on demand” approach

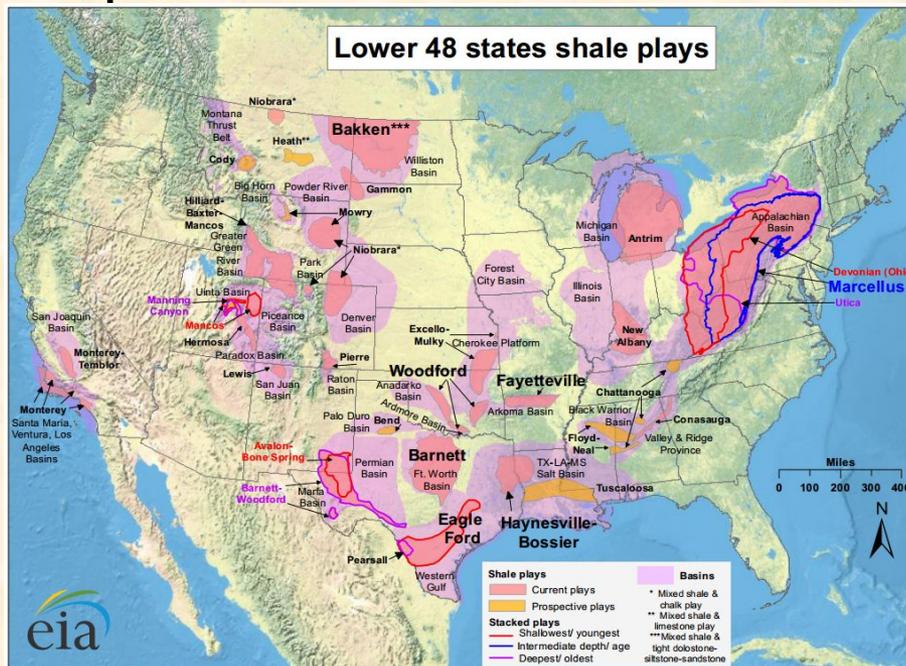
# Pathway Management Plans

- Draft guidance for development of pathway management plans (2013)
- Tabled temporarily with revision of pathway diagrams
- Next steps
  - Revise draft based on input received from prevention working group
  - Circulate to ANSTF and NISC for comment

# Hydraulic Fracturing

ANSTF (Spring 2014)

- Consider the development of best management practices or other guidance to prevent the spread of invasive species (both aquatic and terrestrial) through hydraulic fracturing (“fracking”) operations.



Source: Energy Information Administration based on data from various published studies. Updated: May 9, 2011

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# Fracking: Update

- Consulted with Spring 2014 ANSTF meeting presenters and others to identify experts to serve on a task team to consider the issue.
- Initiated outreach to industry/natural gas development sector, but little response to date.
- Researched coverage of offshore fracking operations with initial recommendation that they not be included in the scope of this effort.
- Drafted concept paper for initial consideration.

# Fracking: Next Steps

## Next steps

- Revisit approach to industry.
- Convene interested experts to review the concept paper and initiate discussions on the development of guidance for the fracking as a pathway of introduction and spread.