SCIENCE THEME 6

“Impacts of Climate Variability & Change on Cultural Resources”

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North East Climate Science Center
Stakeholder Outreach & Science Planning Meeting
University of Massachusetts, Amherst, MA
January 9, 2013
Presentation Outline

1. Presenter Background
2. Importance to Tribes/ NECSC Region
3. CMN/SDI Overview
4. USFS & CMN Partnership: Center for First Americans Forestlands
5. CMN/ SDI Research and Expertise
6. CMN Climate Change Summit Results
Presenter Background

• Work Experience:
  – MTE Forestry
  – USDA Forest Service – Forest Products Lab
  – MITW Trust Resources
  – CMN/ SDI Director

• Education:
  – A.A. Sustainable Development
  – B.S. Natural Resources
  – Pursuing M.S. Environmental Science & Policy
Climate Change is a major issue for American Indian communities
Menominee History
– Ancestral Territory
– Reservation 1856
– Harvested timber since 1856 – Not part of great cutover
– First Sustainable Forestry in USA
Menominee Reservation is 235,000 acres and 95% forested.
CMN/ SDI Overview

College of Menominee Nation

• 1993 Charted by Menominee People
• Tribal Colleges focus on Tribal Needs
• 1994 Land Grant Institution
• 700+ Students, 11 A.S. Degrees, 2 B.S., numerous certificates
• Sustainable Development & Natural Resources
SDI

- Builds upon 150+ yrs of Sustainable Forest Management and Products
- Research, Education, Outreach
- Indigenous Knowledge
- Cultural and Social Understandings of Environmental and Sustainability issues
- Unique role in American Indian Communities
CMN & US Forest Service –
A Common Mission

• Sustainable Forest Management
• Forest Health
• Diversity of Species
• Forest Products
• Future Generations
SDI Climate Change Summit

- Traditional Ecological Knowledge
- Strengthening Community Partnerships and Networking
- Management, Policy, and Sovereignty
- Adaptive Projects, restoration activities, and monitoring
- Education, training, and workshops
- Planning
- Culture
- Food sovereignty
- Extreme weather, water, and changes in the natural environment
- Available resources, staff, and money
- Energy and green infrastructure
SDI Projects & Activities

- Community Engagement on Climate Change Issues
- Climate Change Monitoring Plots on Menominee Forest
- Research Development
- Personnel Development
  - Internships for Tribal College Students
- Partnership Development
  - NECSC
  - Penn State
  - Smithsonian
Conclusions/Transition

• Climate change is a major concern for American Indian communities
• Changes affect all levels of culture, community, and ecosystems
• American Indians have adapted to change and understand their ecosystems

Now let’s look at a specific example...
Emerald Ash Borer and American Indian Communities: Lessons for Climate Change Research?

January 17, 2013

Mike Dockry
USDA Forest Service
Liaison to College of Menominee Nation
1. Introduction

2. Continued Introduction to American Indian Tribes, Land, and Forest Management

3. American Indian Cultural Uses of Ash Trees and Cultural Impacts of EAB

4. Conclusions and Lessons for Climate Change
Mike Dockry

- Forest Service Liaison to College of Menominee Nation
- Member of Citizen Potawatomi Nation
- BS Forest Science
  MS Natural Resources/Ecology
  PhD Forestry w/ Geog. Minor
- Environmental Planning Intern – Oneida Nation of Wisconsin
- Peace Corps - Bolivia
- Assistant Forest Planner – US Forest Service
  GMFL, NY & VT
- Research: Social, Ecological, Cultural, Historical aspects of Sustainable Forest Management
CMN& USFS Partners

• College of Menominee Nation
• Sustainable Development Institute
• Northern Research Station
• Forest Products Laboratory
• Northeast Area State & Private Forestry
• Eastern Region of National Forest System
Emerald Ash Borer (EAB)
2002 Ash decline in S.E. Michigan
Millions of trees have been killed by EAB in both urban and forested areas.
Where does EAB have the potential to spread?
Black Ash (Fraxinus nigra)
What is the meaning of American Indian Forestland?

- Multiple levels:
  - Sacred or spiritual value
  - Economic
  - Ecological
  - Social and cultural

- Forests provide a complex mix of opportunities:
  - Economic
  - Social
  - Cultural
  - Ecosystem services
  - Exercising tribal sovereignty
Black Ash Importance To Native Americans

- Basket making
- Lacrosse sticks, basket handles
- Economic - baskets, firewood
- Cultural Preservation
- Plant and ecosystem Diversity
- Spiritual
Black Ash Basket Making

- Practiced for thousands of years across eastern US
- Part of the identity and culture
- Tribes have traditional stories about ash trees
- Both utilitarian and art
Tribal Responses to EAB

• Outreach, meetings, workshops, and articles to increase awareness about the cultural and natural resource threat EAB poses.

• Forming Partnerships (Universities, State, Federal, NGOs, Tribes)

• Some tribes and tribal families are making videos of basket making and other cultural practices.

• Some tribes and tribal families are offering youth workshops to try and share the process with the next generations.
Some EAB Conclusions

• EAB is only one invasive species there are more today and in the future
• Invasive species management success depends on communication, inclusion, understanding between many groups
• EAB is not just another invasive species for American Indian communities
• Cultural ramifications of EAB may not be understood by state and federal agencies
• Traditional knowledge is important for understanding ecological ramifications of invasive species from point of origin to the introductions
• Are invasive species impacted by climate change?
Lessons for Climate Change?

- Ecosystem changes can have profound cultural, spiritual, and economic implications for American Indian communities
- There is no separation between community, ecology, or culture
- Research questions and results interpretation can be informed by Indigenous Knowledge
- Climate change research should be interdisciplinary and include community members and social scientists
- Adaptation to climate change requires understanding the relationships between the ecological, social, historical, and cultural
Questions & Discussion
Thank you!

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