Avian Knowledge Network

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New Mexico Avian Conservation Partners
• Data-intensive conservation & management

• Regional Nodes
  • How is a Node born?
  • Who creates it and how?
  • The partners, commitments & responsibilities

• Sustainability and relevance
What is Avian Knowledge Network?

- The Avian Knowledge Network (AKN) is a partnership of people, institutions and government agencies supporting the conservation of birds and their habitats based on data, adaptive management, and best available science.

- AKN partners act to improve awareness, purpose, access to, and use of data and tools at multiple scales.
AKN Partnerships

- AKN has over 100 partners including:
  - Cornell Lab of Ornithology
  - American Bird Conservancy
  - Bureau of Land Management
  - National Park Service
  - U.S. Fish and Wildlife Service
  - U.S. Forest Service
  - Bird Conservancy of the Rockies
  - Arizona Game and Fish Department
  - Tucson Audubon
Data-intensive Conservation & Management

- Collect
- Manage
- Adapt
- Analyze
What kinds of data are available?

- **Bird monitoring data**
  - point-count
  - area search
  - distance sampling
  - transect sampling
  - nest success
- **Bird banding data**
- **Broad-scale citizen-based bird surveillance data**
Every record in AKN is assigned a data access level and is governed by a data sharing policy.

Data access levels range from level 1 (most restricted) to level 5 (least restricted).

Additional levels used by some nodes:
- Raw
- Clean
- Approved
- Restricted
How is AKN Organized?

- AKN is comprised of regional nodes
- A partnership of people and institutions
- There are currently 10 AKN nodes.
What is a Node?

- People and Partnerships
- Manage Scientific Data
- Organize Data for Analysis
- Keep Data Secure
- Share Data & Technology
## Working Parts: Managing Scientific Data

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AKN describes protocols and study designs in detail
The shape of the warehouses are driven by the requirements of analyses and visualizations.
Working Parts: Keeping Data Secure

Analysis Database (Data Warehouses)

- Point Count Warehouse
  - Corvus corax Level 3

Your Data in AKN Database

- Visits
- Observations
  - Corvus corax Level 3

User Access Control
Sharing data effectively in closer to real time leads to better conservation decisions.
Working Parts: People & Partnerships

Partners in all areas of this process:

• Collecting data, editing, describing
• Analyzing and understanding data
• Designing visualizations and summaries
• Translating results into conservation decisions
• Implementing decisions, funding
• COORDINATING!
Create/reach out to the partnerships that will coordinate initiatives (e.g., nocturnal bird, shorebird, managers of wetlands/grasslands), and within each...

- Identify leaders to coordinate
- Identify and seek critical datasets to federate
- Develop business plans with management agencies, NGOs, private and tribal landowners
- Design node, get cost estimates
- Secure funds, implement

How is a Node born?
Managing a Node

Commitments:

• One 0.5 FTE or two as Node Leader
• $25,000 average annual expense for an AKN node
• Establish an Advisory Group to oversee and guide node vision and implementation, act as node ambassadors, and increase use
Managing a Node

Responsibilities

- Share knowledge and experiences: workshops, meetings, webinars, video tutorials
- Identify new partnership opportunities, ways to do conservation better
- Seek funding for new developments and offering conservation solutions
- Obtain user feedback to continually enhance your node
Node Example

Rocky Mountain Avian Data Center

a partner of the Avian Knowledge Network
Integrated Monitoring in Bird Conservation Regions
Example: Informing Renewable Energy Decisions Near the Great Lakes
Example: Informing Renewable Energy Decisions Near the Great Lakes

Nearshore Bird Observations
This is a summary of on-land, nearshore bird observations that are housed under the Midwest Avian Data Center, a regional node of the Avian Knowledge Network. Data come from the following data sources: eBird, the U.S. Geological Survey North American Breeding Bird Survey, the Bird Conservation Network, the Western Great Lakes Bird and Bat Observatory, Michigan Natural Features Inventory, Michigan Department of Natural Resources Pelagic Bird Survey, and the U.S. Geological Survey Great Lakes Waterbird Monitoring Project.

Great Lakes Regional Wind Siting Tool Prototype (a.k.a. GLWC SeaSketch)
This Great Lakes Regional Wind Siting GIS Platform prototype is designed to provide the following services for the planning and siting sustainable wind energy development:
Sustainability & Relevance

Projects: 871
Survey Locations: 268,069
Survey Events: 1,026,119
Observation Records: 12,111,901
Bird detections: 129,034,733
Sustainability & Relevance

Logos of various organizations related to bird science and conservation.
Sustainability & Relevance

AKN is primarily funded by:

- NGO/non-profit organizational fundraising and projects
- Government and NGO contracts for data collection and data analysis tool development. Tool development costs help cover the maintenance of AKN nodes.
- Cooperative agreements with partners
Where to Get Help

- AKN Steering Committee:
  http://www.avianknowledge.net/index.php?page=contact
- Other Node Leaders
- AKN partners:
  - Bird Conservancy of the Rockies
  - Joint Ventures
  - New Mexico Avian Conservation Partners
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Questions?