“SERVING NATIONAL NEEDS THROUGH REGIONAL ACTION”

MBON ALL HANDS MEETING
Washington, DC

APRIL 27, 2018

Bill Woodward – U.S. ATN Network Coordinator
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Create an alliance among federal and non-federal, state, regional, tribal, and academic partners which will:

- Maximize collaborations/benefit of existing investments
- Maximize access to telemetry data
- Integrate telemetry instruments with existing observing systems
- Improve data standards, sharing capability and establish a cyber-infrastructure for assembling and displaying telemetry data
- Bring permanence to a national baseline telemetry network
THE STAKEHOLDERS

Federal & State Agencies

Fisheries, Marine Mammal, Sea Turtle & Bird Conservation/Management Communities

Tribal Communities

Energy Sector

General Public

Tourism Sector

Private Industry

Educational Institutions
THREE ATN COMPONENTS

✓ BUILD ALLIANCES AND COLLABORATIONS

✓ PROVIDE TELEMETRY DATA MANAGEMENT & DELIVERY

✓ SUPPORT BASELINE ANIMAL TELEMETRY OBSERVATIONS
ATN Phase I - 2016/17

- **Coordination** - Coordinate, support, and enhance planned and funded animal telemetry efforts
- **Governance Structure** - Establish ATN Steering Group
- **Operational Data Assembly Center**
  - Regional Acoustic Nodes linked with ATN DAC (SECOORA, MARACOOS)
- **Asset/Effort Inventory Website** (Who, What, Where)

ATN Phase II – 2017/18/19

- Define & Fund Multi-Agency Baseline Observations & Required Assets / Infrastructure
  - Workshops to ID Assets, efforts, needs, gaps, and priorities

"Help to keep existing efforts going and to add to them as needed and defined through our Workshops and our ATN Steering Group"
ALLIANCES AND COLLABORATIONS

- SECOORA
- ACT-MARACOOS
- AOOS
- SECOORA-FACT

Logos:
- PacIOOS
- Ocean Tracking Network
- WILDLIFE COMPUTERS
- vemco
- IMOS
GOVERNANCE

ATN STEERING GROUP

- ONR
- BOEM
- NOAA/NMFS
- SMITHSONIAN
- MARINE MAMMAL COMMISSION
- NSF
- USGS
- NASA
- COE

- FWC
- U.OF HAWAII
- MASS. MARINE FISHERIES
- CHICAGO ZOOLOGICAL SOC.
DATA MANAGEMENT AND DELIVERY

ATN DATA ASSEMBLY CENTER (DAC)
A CENTRALIZED COMMUNITY RESOURCE

Animal Telemetry Network

- RECEIVES SATELLITE/ACOUSTIC/ARCHIVAL DATA
- ENABLES SHARING AMONG GLOBAL PARTNERS,
- MAXIMIZES ACCESS TO TELEMETRY DATA, AND
- ENHANCES & EXPANDS TELEMETRY DATA PRODUCTS
ATN DAC COMMUNITY BENEFITS

- Tools to manage/analyze/share data (more science time)
- Integrate tag data with other IOOS observations
- Standardized meta data, data formats
- Access to networked datasets (i.e. outside region)
- Data products, i.e. SSM tracks, Analysis tools
- Permanent archiving with NCEI, DataOne
- Asset and tagging inventory w/ web interface
- Potential for ’Big Data’ projects (integrated, cross-species)
- Potential for baseline asset support (i.e. core arrays)
- Increased awareness of PI products
DATA MANAGEMENT AND DELIVERY

ATN DAC

Transitioning to an Operational Environment
Includes a National Data Wrangler (NMFS Funded)
Emphasis on forming alliances/collaborations, creating governance and implementing the ATN data management & delivery vision

Two meetings of the newly formed ATN Steering Group (SG)

Telemetry asset/effort inventory web-tool created; needs to be populated

New Mid-Atlantic Telemetry Observation System (MATOS) web-based acoustic data aggregation tool developed by RPS/ASA is operational and will serve the ACT Region and more

New live tracks displayed on the ATN website from BOEM/ONR PI’s: whales, sharks, turtles……

FY-18+ NMFS ATN funding agreement secured

Annual Report submitted to BOEM

Science on a Sphere (SOS): ATN is working with the NOAA SOS Educational Outreach Coordinator to display marine animal telemetry tracks on the SOS

12 Monthly “From the ATN Wheelhouse” newsletter issues

Some initial candidate High-priority national ATN Program Assets and Infrastructure for Phase II ATN funding have been identified
FY-18: Execute Phase II of the ATN Implementation Plan

✓ Identify, Prioritize and Fund U.S. baseline observations & telemetry infrastructure / assets in sustained operations

• Near-Term
  • Begin Funding as Soon as Possible
  • Earn Community Trust – Build Confidence
  • Candidates Harvested from initial Workshops, Direct Dialog/Community Meetings: REGIONAL NODE DATA WRANGLERS, COASTAL ACOUSTIC ARRAY, FUND ARGOS FEES FOR ATN PI’S , NATIONAL DAC DATA WRANGLER

• Long-Term
  • Implement Guidelines
  • Systematic, Open and Fair Process for how the ATN can make choices on what will be supported by our multi-agency ATN funds
WORKSHOPS TO ID PRIORITY OBS AND ASSETS

Status on April 25, 2018

= COMPLETED

= SCHEDULED

= TBD
• Continued joint efforts with MBON and agencies to define/implement a sustained biological observing component in IOOS: *Ongoing*

• Call for ideas for FY-19 Baseline Obs/Infrastructure funding: *July 2018*

• DAC becomes a valuable operational resource for the telemetry community: *July 2018*

• Asset Inventory Project implemented: *Summer 2018*

• Workshop Reports completed: *First 5 by Fall 2018*

• R/T GTS insertion of QC’d T, S profiles from animal-borne tags; WC collaboration: *Fall 2018*

• Three Region West Coast Workshop – partnered with OTN and MBON: *November 2018*

• NERACOOS ATN Workshop: *Early 2019*
ATN: 2019-2021 Plans

• Increased/aggressive outreach to achieve greater stakeholder interaction and advocacy

• Attract an increasing number of federal agencies participate in ATN, and use of DAC data management capabilities for PARR compliance

• Expand multi-agency collaborative baseline observations & infrastructure support to facilitate long-term, sustained tagging, telemetry and tracking of marine animals

• Expand and promote the use of animals as biological sensors to monitor remote ocean environments to improve ocean-atmosphere modeling and forecasting

• Promote the use of animals as sentinels of climate change

• Innovative analytical and visualization tools & data products
** ATN SEAL OF APPROVAL **

THANK YOU !
IOOS SUSTAINED BIOLOGICAL OBS

PIECES EXIST

SOME ASSEMBLY REQUIRED

BATTERIES NOT INCLUDED

Gabrielle Canonico - MBON
Bill Woodward - ATN
How Will We Define Baseline Monitoring?

REGIONAL WORKSHOPS

IDENTIFY/SEEK INPUT ON:
- EXISTING ASSETS AND CAPABILITIES
- PRIORITY REGIONAL BASELINE NEEDS FOR ATN OBS
ARCHITECTING THE FUTURE ATN DATA ASSEMBLY CENTER

Rob Bochenek - Axiom Data Science
Organize into projects, research campaigns and organizations
Coordinate data exchange across networks, groups, programs
ISO 19110/19115-2 standards metadata editor
Execute server side R and Python numeric workflows (Jupyter) on uploaded data AND any data in IOOS stack (State Space Models and other Analysis)
Archive pathway to DataONE, NCEI & Datacite DOI minting