

The Program for Regional and International Shorebird Monitoring

Revisiting Our Role after a Decade of Work

Program for Regional and International Shorebird Monitoring (PRISM). 2012. Revisiting our role after a decade of work. Unpublished report, U.S. Fish and Wildlife Service, Falls Church, Virginia, USA. Available at: <<http://www.shorebirdplan.org>>.

Purpose

The purpose of the Program for Regional and International Shorebird Monitoring (PRISM) Working Group is to provide reliable information on the distribution, abundance, and population trends of shorebirds at local, regional, continental, and international scales derived from a coordinated set of monitoring and assessment programs in support of the goals of the Canadian, United States, and Mexican Shorebird Conservation Plans and other regional or flyway shorebird conservation plans.

Goals

- 1) Identify species at risk (or “over-abundant” species).
- 2) Identify causes of population changes.
- 3) Guide effective shorebird management and conservation actions.

Objectives

- 1) Estimate distribution, abundance, and habitat relationships of North American breeding shorebirds throughout their annual cycle.
- 2) Quantify changes and trends in distribution, abundance, and habitat relationships of North American breeding shorebirds throughout their annual cycle.
- 3) Integrate shorebird monitoring data into a process of iterative learning and adaptive management.

Strategies

- 1) Conduct designed breeding surveys with specific quantitative objectives throughout arctic, boreal and temperate regions of Canada and U.S. (e.g., Arctic PRISM). Funding Need: \$1,000,000 per year (Arctic, Boreal, Temperate).
- 2) Conduct designed surveys with specific quantitative objectives at migration sites throughout the Western Hemisphere (e.g., ISS, ACSS and OSS). Funding Need: \$300,000 per year.
- 3) Conduct designed surveys with specific quantitative objectives of non-breeding populations throughout the Western Hemisphere. Funding Need: \$600,000 per year.
- 4) Identify and track disparate shorebird monitoring programs. Funding Need: \$5,000 per year for coordinator time to maintain database.
- 5) Coordinate disparate shorebird monitoring programs with consistent protocol specification to improve value of programs and increase efficiency of PRISM and provide these protocols to the shorebird monitoring community. Funding Need: \$20,000 per year for coordinator time to facilitate.
- 6) Implement centralized data management for all monitoring programs. Funding Need: \$100,000 per year for data curation and maintenance.
- 7) Monitor potential and actual shorebird habitat across their range using GIS resources. Funding Need: \$50,000/year for half time GIS technician for 2-years to develop the needed framework to track shorebird habitats (e.g. wetlands, water) via remote sensing models and available satellite imagery.
- 8) Develop standardized survey protocols to gather local habitat or other ancillary data (e.g., disturbance, weather, predators) along with counts at survey locations to better understand causes of populations change. Funding Need:
- 9) Partner with local managers and other agency/organization efforts to link monitoring data with habitat management actions. Funding Need:

- 10) Develop framework to analyze bird and habitat data and to iteratively evaluate models that can help achieve our objectives and ultimately our goals. Specifically, evaluating hypotheses developed by the Shorebird Research Group of the Americas about possible causes of shorebird declines both locally and range-wide. Funding Need:

APPENDIX 1: PRISM Matrix. PRISM projects and other efforts that contribute to our understanding of shorebird populations through on-going monitoring and fulfill, at least partially, a strategy of PRISM within the Western Hemisphere (WH).

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APPENDIX II: Annotated list of PRISM Strategies to track progress.

Strategies

- 1) Conduct designed breeding surveys with specific quantitative objectives throughout arctic, boreal and temperate regions of Canada and U.S. (e.g., Arctic PRISM)
 - a. Status: Arctic – first sweep of surveys roughly 50% completed; **commitment to complete the remaining regions needed.**
 - b. Status: Boreal – some pilot work completed, survey development required
 - c. Status: Temperate - surveys completed for LBCU, MOPL and WIPL (?), surveys for remaining priority species remain to be completed.
 - d. Funding Need: \$1,000,000 per year (Arctic, Boreal, Temperate)
- 2) Conduct designed surveys with specific quantitative objectives at migration sites throughout the Western Hemisphere (e.g., ISS, ACSS and OSS)
 - a. Status: ISS and ACSS ongoing, with ongoing development of methodological changes to reduce biases (done but not fully implemented for ISS, in development for ACSS and OSS). Greater integration of key migration surveys still pending; being pursued currently (Bart et al.) on the Atlantic coast.
 - b. Status: Research into the potential use of new technologies in migration monitoring initiated (Bart et al). “Flow” models being used by Drever et al. to determine length of stay from coastal surveys in British Columbia.
 - c. Funding Need: \$300,000 per year
- 3) Conduct designed surveys with specific quantitative objectives of non-breeding populations throughout the Western Hemisphere.
 - a. Status: Active and developing program on the west coast (Pacific Flyway Shorebird Survey / Migratory Shorebird Project) from Canada to Peru
 - b. Status: Expand and review methodology for the Neotropical / Caribbean Waterbird Census and establish permanent capacity to conduct waterbird censuses in Central America and the Caribbean
 - c. Funding Need: \$600,000 per year
- 4) Identify and track disparate shorebird monitoring programs.

- a. Status: Developing a monitoring program tracking database
 - b. Funding Need: \$5,000 per year for coordinator time to maintain database
- 5) Coordinate disparate shorebird monitoring programs with consistent protocol specification to improve value of programs and increase efficiency of PRISM and provide these protocols to the shorebird monitoring community.
 - a. Status: Initial attempts to do this by Reiter et al. on the Pacific coast and Bart et al. on the Atlantic Coast
 - b. Funding Need: \$20,000 per year for coordinator time to facilitate
- 6) Implement centralized data management for all monitoring programs. .
 - a. Status: California Avian Data Center being used for wintering shorebird data from the Pacific Coast. eBird is being used for ISS and Caribbean Waterbird Census. NatureCounts is being used for Canadian Monitoring Programs.
 - b. Status: PRBO as part of the Migratory Shorebird Project is beginning to link these nodes of the Avian Knowledge Network.
 - c. Funding Need: \$100,000 per year for data curation and maintenance
- 7) Monitor potential and actual shorebird habitat across their range using GIS resources.
 - a. Status: No coordinated process of tracking shorebird habitat throughout the range of these species. Need agreement on the types of habitat and what can be derived using remotely sensed data.
 - b. Funding Need: \$50,000/year for half time GIS technician for 2-years to develop the needed framework to track shorebird habitats (e.g. wetlands, water) via remote sensing models and available satellite imagery.
- 8) Develop standardized survey protocols to gather local habitat or other ancillary data (e.g., disturbance, weather, predators) along with counts at survey locations to better understand causes of populations change.
 - a. Status: Pilot data being collected to test protocols as part of Integrated Waterbird Monitoring and Management program and Pacific Flyway Shorebird Survey. Opportunities to collect such data on the Atlantic Coast currently being investigated.
 - b. Funding Need:

- 9) Partner with local managers and other agency/organization efforts to link monitoring data with habitat management actions.
 - a. Status: Initial links developed as part of Integrated Waterbird Monitoring and Management program in the Atlantic and Mississippi Flyways and the Migratory Shorebird Project on the Pacific Coast.
 - b. Funding Need:
- 10) Develop framework to analyze bird and habitat data and to iteratively evaluate models that can help achieve our objectives and ultimately our goals. Specifically, evaluating hypotheses developed by the Shorebird Research Group of the Americas about possible causes of shorebird declines both locally and range-wide.
 - a. Status: Capacity being developed as part of the Pacific Flyway Shorebird Survey on the west coast. Proof of concept developed for the Sacramento National Wildlife Refuge Complex and San Francisco Bay.
 - b. Funding Need: