



## **MARINE SPATIAL ANALYSIS CONSULTANT (National Audubon Society – Audubon Americas Program)**

### **Background**

In its second century, Audubon, which is based in the United States, is dedicated to protecting birds and other wildlife and the places that supports them. Audubon’s mission is engaging people in bird conservation on a hemispheric scale through science, policy, education, and on-the-ground conservation action.

Bird populations are experiencing large-scale declines across the globe that can be attributed to a variety of human-caused factors. Seabird populations experienced a 70% reduction since the 1970’s and between 1974 and 2019, we lost 17 million North American shorebirds (37% of total population, n = 44 species, Rosenberg et al. 2019). Both sea and shorebirds are vulnerable to habitat loss and degradation, associated human disturbance and the impacts of climate change, including sea-level rise. There are important opportunities to protect critical coastal and marine habitat in Latin America to support naturally regulated sea and shorebird populations. Conservation efforts have not been able to keep pace with rapid economic growth and intensifying pressure on natural coastal and marine resources. Worryingly, sea and shorebird are relatively absent from conservation decision-making: they are often overlooked by conservation organizations and government agencies in the establishment of Marine Protected Areas. We urgently need to address this gap on bird conservation by using the latest scientific information and resources.

Audubon has played a critical leadership role along the Pacific Americas Flyway to reduce the loss of shorebird habitat and build the local conservation and monitoring capacity necessary to better understand and mitigate threats.

Chile is the second country in the world with more seabirds under one of the International Union for the Conservation of Nature (IUCN), excepting least concern. The Chilean government has recently officialized the Bird Conservation Plan (MMA-ONU Medio Ambiente, 2022), which has settled a set of strategic actions aimed at reducing the most important threats for seabirds in the country. To successfully implement these actions, Audubon will support the development of the Seabird Action Plan and identify key areas for seabird conservation.

To align these hemispheric and in-country efforts and advance coastal and marine bird conservation, Audubon Americas will perform a marine spatial planning analysis to identify the conservation needs for these bird species and advice the governments on new protections or expansion of current coastal and marine protected areas.

The scope of this work will be on some countries within the Pacific Americas Flyway from Mexico to Chile. As a first phase of the study, this consultancy will be focused on Chile and Colombia as two of

Audubon Americas core countries, and where we are planning to implement our protected areas strategy, Conserva Aves, an innovative partnership among Audubon, BirdLife International, American Bird Conservancy, and the Network of Latin American and Caribbean Environmental Funds (RedLAC), that will allow to put under protection more than 2 million hectares and improve management of an additional 2 million hectares of priority areas for migratory birds that overlaps with Key Biodiversity Areas (KBAs) and are climate strongholds. Through this analysis, we seek to address protection gaps of seabird by integrating coastal and marine areas in Conserva Aves.

On the other hand, Chile represents almost the whole south temperate region for the pacific flyway of shorebird species, and Colombia is immersed in its Neotropical region where the knowledge about seabird important areas has still important gaps.

Audubon Americas is looking for a consultant that will identify the most important areas for sea and shorebirds in Chile and Colombia, as representatives of both regions South Temperate and Neotropical in Latin America. The objectives of the consultancy are to:

1. Create a data base of information from both national and global scale data sets.
2. Detect the main areas of conflict for sea and shorebirds in Chile and Colombia.
3. Identify key sites for sea and shorebird conservation in Chile and Colombia, such as breeding and feeding areas.
4. Create a map of priority areas for sea and shorebird conservation, that will inform Conserva Aves.
5. Detect and inform Marine KBAs in Chile and Colombia.

## **Consultant**

### Summary:

The Marine Spatial Analysis Consultant will be responsible to carry out a marine spatial planning analysis to achieve the objectives previously mentioned and identify gaps on sea and shorebird conservation in 2 countries in the LAC Region.

### Expected products<sup>1</sup>:

1. Standardized database with compiled information on selected sea and shorebird species, that will help identify priority conservation areas, conflicts, and threats.
2. Spatial database that contains the results of key areas for the conservation of seabirds and shorebirds, threats, and conflicts in the countries of Chile and Colombia, with the associated maps for visualization.
3. A report of the marine spatial analysis for Chile and Colombia, which must contain the following items at least:
  - a. Give a comprehensive and precise framework.
  - b. Explain in detail the methodology used to carry out the analysis.
  - c. Key results.
  - d. Give specific and general recommendations, informing KBAs in Chile and Colombia.
4. Brief for donors, authorities, and outreach national and internationally (one-page each).

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<sup>1</sup> All deliverables must be written in Spanish, and some of them translated to English.

5. A PowerPoint presentation to disseminate key results to Audubon Americas partners, government, donors, and other Conservation Initiatives.

Essential Functions:

- Gather and assess coastal and marine spatial information.
- Reporting to Audubon Americas' Chile Country Director and Science Director.
- Work alongside the Science and Coastal Resilience team, as well as the national team from Chile and Colombia.
- Communicate and coordinate with Audubon staff, partners, and experts regarding data collection, verification, and analysis.

Qualifications and Experience:

<b>REQUIREMENTS</b>	<b>KNOWLEDGE/SKILLS/ATTRIBUTES</b>
<b>Minimum General Education</b>	Educated to Degree level in a relevant subject.
<b>Job Specific Education/Qualification</b>	MSc and/or PhD degree in relevant marine science field, ornithology, or equivalent experience.
<b>Job Specific Knowledge</b>	Specialist knowledge of advanced spatial analysis including relevant statistical techniques. Proficient in R-Software and in ArcGIS. Excellent understanding of remote tracking techniques and data types. Skills in critically assessing and synthesizing information and writing accurately and concisely. Good knowledge of sea, shorebird, and marine conservation issues. Familiarity with the marine policy context.
<b>Experience</b>	Extensive experience working in seabird/marine conservation. Proven track record in advanced analysis of spatial datasets and seabird tracking data. Strong track record and experience of project management, line-management, as well as extensive experience in advanced analysis of spatial datasets. Strong track record in undertaking and publishing research.
<b>Management &amp; organisational skills</b>	Ability to work to deadlines, work independently to a high standard and learn new skills rapidly, but also able to work as part of a team. Excellent organizational skills and careful attention to detail. Able to manage a varied and workload, meeting tight deadlines.
<b>Communications skills</b>	Excellent communication skills, particularly in writing reports relating to analytical methods and outputs. Proficiency with public speaking and presentation to a range of audiences. Track record of report writing and peer-reviewed scientific publications.
<b>Creativity &amp; Initiative</b>	Ability to solve problems, develop new technical ideas and innovative analysis techniques. Able to use mapping tools to convey results in a clear and concise manner.

<b>Computer Literacy</b>	Experience writing programming scripts to automate analyses. Experience with excel tables and data formatting. ArcGIS 10.x or superior. R-software. Microsoft Office.
<b>Languages</b>	Excellent written and spoken English and Spanish.
<b>OTHER DESIRED/HELPFUL KNOWLEDGE/SKILLS/ATTRIBUTES</b>	
<ul style="list-style-type: none"> <li>• Experience working with and an understanding of marine oceanographic processes and seabird ecology.</li> <li>• Experience developing habitat models using spatial data.</li> <li>• Experience in databases and SQL language.</li> </ul>	

Questions about this Consultancy:

Tomás A. Altamirano - [tomas.altamirano@audubon.org](mailto:tomas.altamirano@audubon.org)

Timeline

- **August 1<sup>st</sup>, 2022:** Applicants must send their CV (including the whole team) and a 3-pages proposal of the methods to successfully achieve the goals to the following email: [tomas.altamirano@audubon.org](mailto:tomas.altamirano@audubon.org).
- **August 16<sup>th</sup>, 2022:** The results will be announced.
- **August 22<sup>nd</sup>, 2022:** Starting date.
- **November 30<sup>th</sup>, 2022:** The deadline to receive all the expected products associated with this consultancy.