

 <p>Agreement on the Conservation of Albatrosses and Petrels</p>	<p><b>Sixth Meeting of the Population and Conservation Status Working Group</b></p> <p><i>Virtual meeting, 24 – 25 August 2021 (UTC+10)</i></p> <p><b>Tourism at Long-term Monitoring Site of the Critically Endangered Waved Albatross</b></p> <p><b><i>Kathryn P. Huyvaert and David J. Anderson (USA)</i></b></p> <p><b><i>Sebastian Cruz and Gustavo Jiménez-Uzcategui (Ecuador)</i></b></p>
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### SUMMARY

The Critically Endangered Waved (or Galápagos) Albatross (*Phoebastria irrorata*) is the only 'tropical' albatross, with its principal breeding colonies at Punta Cevallos, Punta Suárez, and along the southern coastline of the island of Española, Galápagos, Ecuador. A Binational Plan of Action was developed by the governments of Ecuador and Perú in collaboration with ACAP, to outline the species status, threats, and actions to address conservation issues at sea and on land.

The Plan of Action does not address tourism on Española Island despite heavy visits at Punta Suárez since the inception of the Galápagos National Park in 1959. Until recently, tourism has never been permitted at Punta Cevallos, the principal colony being monitored for changes to population size, survival, reproductive effort, and other vital rates of the Waved Albatross. This information document outlines the status of the Waved Albatross, that tourism has been initiated at Punta Cevallos, and makes note of the fact that continued tourist visits at Punta Cevallos will make it difficult to attribute future changes in the species' population status or vital rates to novel threats in the colony (i.e., impacts of tourism) or to changes in some other factor at sea or on land.

## RESUMEN

El Albatros de Onda o Galápagos (*Phoebastria irrorata*) es el único albatros “tropical”, el cual se encuentra en Peligro Crítico de Extinción. Sus principales colonias de reproducción se encuentran en Punta Cevallos, Punta Suárez y a lo largo de la costa sur de la Isla Española, del Archipiélago de Galápagos, Ecuador. El Plan de Acción Binacional se desarrolló con los Gobiernos de Ecuador y Perú con apoyo del Acuerdo de Conservación de Albatros y Petreles (ACAP), con el objetivo de delinear el estado de la especie, sus amenazas y las acciones de conservación de la especie en mar y tierra.

El actual Plan de Acción no incluye al turismo en la Isla Española. A pesar que existe un volumen alto de visitantes en Punta Suárez, sitio de visita que existe desde la creación del Parque Nacional Galápagos en 1959. En Punta Cevallos el turismo nunca había sido permitido, hasta que la autoridad ambiental, la Dirección del Parque Nacional Galápagos (DPNG), otorgó licencias de operación a los operadores de Pesca Vivencial en dicho lugar en el 2020. Cabe mencionar, que Punta Cevallos es la principal colonia de monitoreo del Albatros de Galápagos, dónde se ha podido detectar cambios en el tamaño poblacional, supervivencia, esfuerzo reproductivo y otras tasas vitales de esta especie marina. Este documento de información traza el estado del Albatros de Galápagos, menciona la apertura al turismo en Punta Cevallos; e indica que la presencia de turismo en Punta Cevallos, dificultará atribuir cambios del estado poblacional de la especie frente a nuevas amenazas en la colonia (ej. impactos del turismo), o a cambios en otros factores de su hábitat marino o terrestre.

## 1. BACKGROUND

The Waved (or Galápagos) Albatross (*Phoebastria irrorata*) is the only ‘tropical’ albatross, with its principal breeding colonies at Punta Cevallos, Punta Suárez, and along the southern coastline of the island of Española, Galápagos, Ecuador (Figure 1). Regulated tourist visits have been permitted at Punta Suárez since the creation of the Galápagos National Park (GNP) in 1959 but tourism at other sites, including the large colony at Punta Cevallos, has been prohibited until very recently. Small numbers of birds (<1% of the global population) nest on Isla de La Plata, just off the coast of Ecuador, and this site has permitted tourist visits since it was declared a protected area in 1979 as part of Machalilla National Park.

Until relatively recently, the Waved Albatross was thought to be safe from extrinsic threats like mortality fisheries and invasive species, prominent contributors to population declines for other albatrosses (Dias et al. 2019). The species was listed as ‘Critically Endangered’ by the IUCN in 2008 based on observations of mortality in artisanal fisheries (Awkerman et al. 2006) and declines in population size and annual survival documented at the well-studied Punta Cevallos colony (Awkerman et al. 2006; Anderson et al. 2008; PaCSWG3 Doc 04).

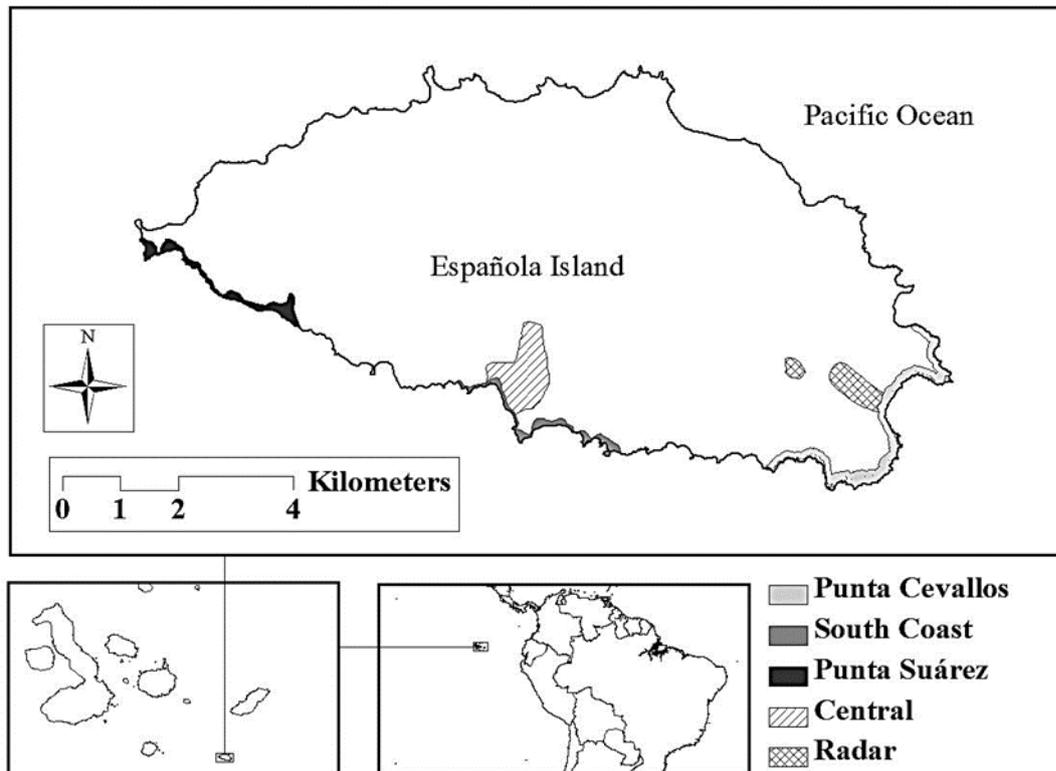


Figure 1. Major Waved Albatross breeding colonies on Española Island, Galápagos Archipelago, Ecuador. Approximate range of the long-term monitoring sites at Punta Cevallos (eastern tip) and Punta Suárez (western tip) are marked. Adapted from Street 2013.

## 2. WAVED ALBATROSS BINATIONAL PLAN OF ACTION (POA)

### 2.1. Recommended Actions

A Binational Plan of Action (POA) was developed by the governments of Ecuador and Perú, in collaboration with ACAP, in 2007 and 2008 to provide managers, scientists, and stakeholders with a summary of the species' status, threats, and conservation actions needed to sustain or improve the status of the Waved Albatross. This POA was adopted formally by ACAP at the 4<sup>th</sup> Advisory Committee meeting in Cape Town, South Africa, in 2008 (AC4 Doc 50 rev. 4).

The POA outlines recommended conservation actions along four main themes: (a) fisheries interactions to improve knowledge of interactions at sea; (b) interactions on land to address current known terrestrial threats including invasive species, disease, and tourism among others; (c) population monitoring to track whether conservation actions are linked to changes in population size; and (d) research on the species' biology to fill knowledge gaps to better target management actions. Notably, the original POA addressed tourism only at Isla de la Plata: "2.2.5 *Re-examine tourist activity on Isla de La Plata, including whether routes of paths might be better designed, whether guides might benefit from [sic] further training and whether current number of tourists is excessive*" (AC4 Doc 50 rev. 4).

## 2.2 Reports on Implementation

Reports on implementation of the plan were presented to the ACAP Advisory Committee (AC) in 2010 (AC5 Doc 20) and 2011 (AC6 Doc 29), and the latter noted that (a) a large number of organizations were involved and (b) many actions were listed as ‘high priority’ such that it would be difficult to identify the most critical actions to take when resources are limited. The AC has since recommended a comprehensive review of the POA to assess whether the Plan’s actions best meet current conservation needs and to identify any needs to promote implementation of the POA. A 2-day workshop to review the POA was held in Guayaquil, Ecuador in 2018 during which the group reviewed the Plan’s original tables of actions, drafted several key strategies, and identified several new avenues for work, mostly with respect to at-sea threats (Project Report to the AC: Project 2018-04). A final version of a fully revised Plan incorporating the workshop findings has not yet been presented to the AC.

## 3. WAVED ALBATROSS PRIORITY POPULATION ASSESSMENT

The Populations and Conservation Status Working Group (PaCSWG) considered the proposal for Priority Population Status for the Española populations at Punta Cevallos and Punta Suárez in 2016 (PaCSWG3 Doc 04) and the Priority Population Status was endorsed by ACAP (AC9 Doc 09 Rev 1). Long-term monitoring of ringed birds at these sites reflects a continuing deterioration in metrics of population health, including population size (Figure 2) and trends in apparent survival at Punta Cevallos (Figure 3), and trends in reproductive success at each site (Figure 4). Based on the proposal and these data, the populations at Punta Cevallos and Punta Suárez were classified as Priority Populations by ACAP (AC9 Doc 09 Rev 1), thereby recognizing the importance of these long-term monitoring sites in serving as a bellwether for future changes to the species’ status.

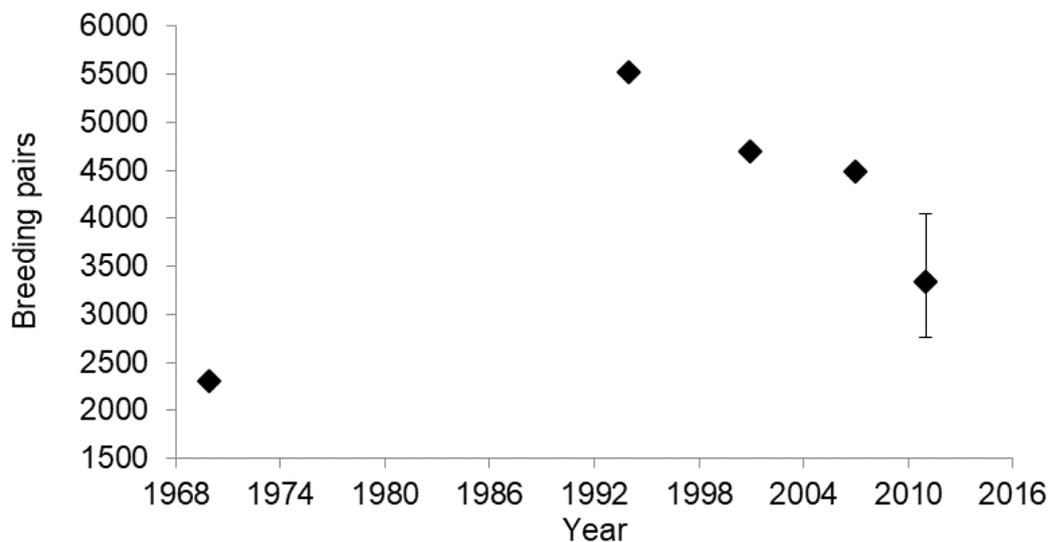


Figure 2. Estimated number of incubating pairs of Waved Albatross at the greater Punta Cevallos breeding colony for the years 1970 (Harris 1973), 1994 (Douglas 1998), 2001 (Anderson et al. 2003), 2007 (Anderson et al. 2008), and 2011 (Street 2013). The error bars represent the 95% confidence interval around the 2011 estimate. No estimates of variance were available for other years. Adapted from Street 2013 and as shown in PaCSWG3 Doc 04.

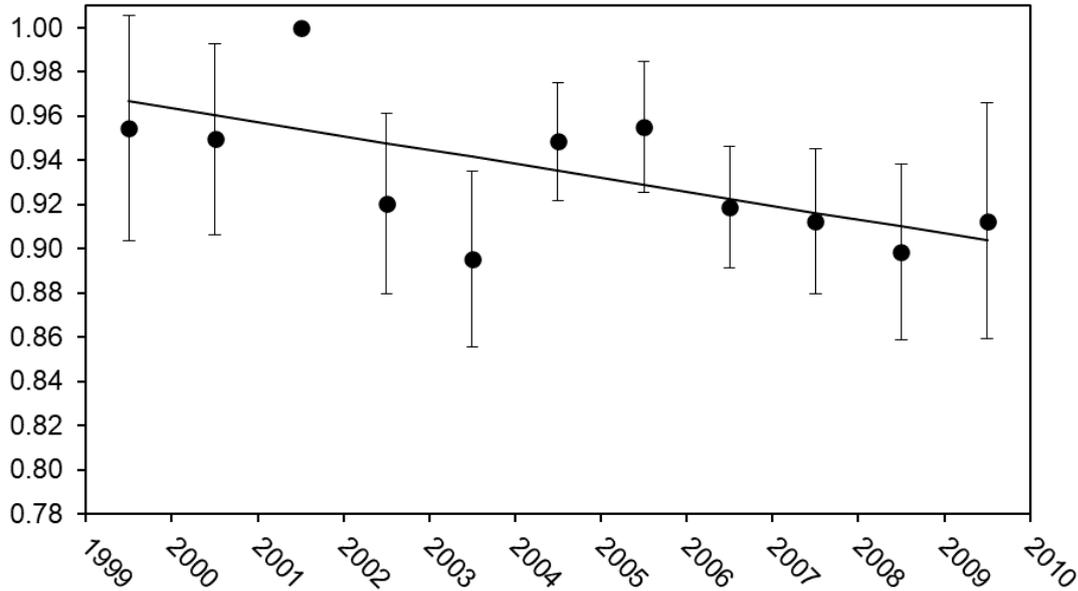


Figure 3. Estimates and 95% confidence intervals of annual apparent adult survival of breeding Waved Albatrosses at Punta Cevallos, Española Island, Galápagos Archipelago, between the years 1999 and 2011 from a random effects model. Note the negative trend in survival over time (solid line). Adapted from Street 2013 and as shown in PaCSWG3 Doc 04.

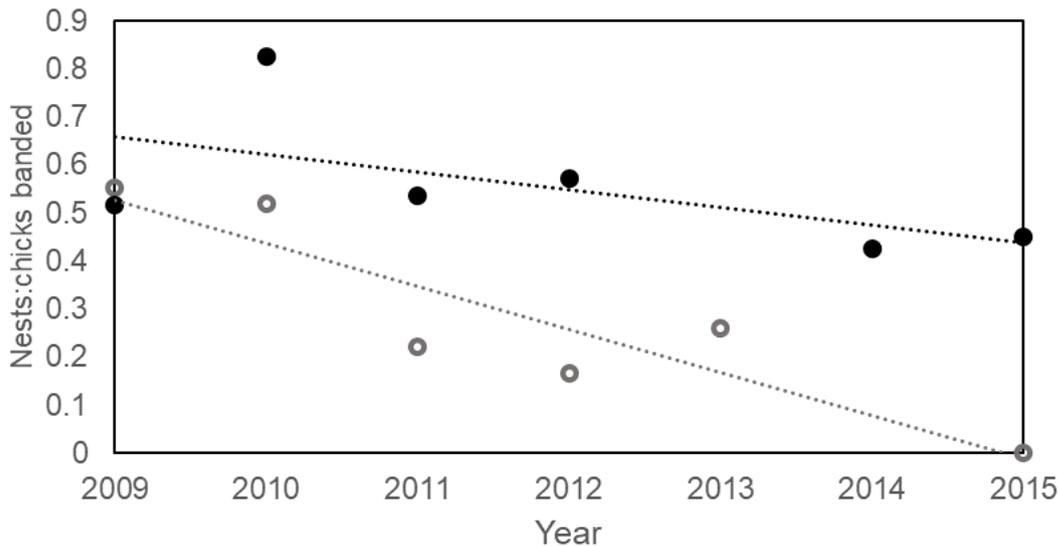


Figure 4. Ratio of the raw number of Waved Albatross nests counted during the breeding season and the number of young banded before fledging as a simple index of reproductive success. Estimates for Punta Cevallos are in black and estimates for Punta Suárez are in grey. Linear trend lines are dotted. (K.P. Huyvaert and G. Jiménez-Uzcátegui, unpub. data; as shown in PaCSWG3 Doc 04).

#### 4. TOURISM OPENING AT PUNTA CEVALLOS

In October 2020, a handful of stakeholders were notified that the Galápagos National Park Directorate (GNPD) had opened Punta Cevallos to small-scale tourism operations run by the

sport fishing operators (Tour de Pesca Vivencial) from nearby San Cristóbal Island. This is a relatively new type of tourism in the Galápagos National Park, whereby fishermen were given the opportunity to participate in the tourism business. Though originally a wholly ocean-based activity, visits to sites on land have been incorporated as “rest sites” complementary to the fishing experience. The Charles Darwin Foundation, with a group of experts from diverse fields involved in research on Española, developed and presented to the GNPD a comprehensive prospectus on the potential impacts of this new tourism on the suite of organisms found on Española, including the Critically Endangered waved albatross.

In response to the prospectus, GNPD reported that a recent, non-peer-reviewed survey of the entire island revealed many albatrosses that had not been counted before and that very few birds would come into contact with tourists given placement of the tourism trail. The GNPD response did not acknowledge a principal warning in the impacts prospectus: that the estimates of population processes (e.g., survival, reproduction) underlie the listed status of the species, that the population processes are studied only at Punta Cevallos and Punta Suárez, and that the new presence of tourists at Punta Cevallos will have unknown effects on the monitoring information collected there. One example of the effect on monitoring is clear: scientists cannot work in essentially any of the Punta Cevallos monitoring area when tourists are present under GNPD rules, biasing times/days of data collection compared to the long-term established protocols. Another example is that the placement of the trail keeps the tourists from physical contact with most monitored birds, but the sudden appearance of a large group of people in the monitoring area, easily visible to perhaps 50% of the monitored birds, will be a completely novel phenomenon. Other risks identified in the prospectus, such as the introduction of non-native species, were largely dismissed. Tour de Pesca Vivencial trips to Punta Cevallos continue to be permitted. Punta Cevallos is the single site providing long-term data on trends in population size (Figure 1) and survival (Figure 2) in the absence of tourism.

## 5. REFERENCES

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