

## Project Updates July 2022

Due to the pandemic, the project had to be postponed for a year since in 2021 the borders between Chile and Peru were closed and we were unable to travel to Peru to record data from the whale mating and breeding season in July- October 2021. Currently the borders are open, and we have been able to travel to Los Órganos (northern Peru) to collect data on the behaviour of humpback whales according to the objectives of the study.

Two members of CIFAMAC in Chile and one student from Peru are currently in Los Órganos collecting data. We are performing boat surveys to obtain skin tissue samples with the use of a crossbow with modified arrow to posterior analyse for stable isotopes  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  in the laboratory at the University of Antofagasta (Chile) (Figure 1). During the first week of sampling, we obtained nine skin tissue samples of adult humpback whales. At the same time, we are obtaining zooplankton samples and other potential prey of the humpback whales in order characterise their isotopic signal (Figure 2). We are performing drone flights to analyse the lactation and nursing behaviour of mother-calf humpback whale pairs (Figure 3). We have been able to register two mother- calf pairs during the first week of sampling (Figure 4).

For the workshops with tour operators in Los Organos and El Ñuro villages we have designed infographic regarding best practices for whale-watching in Peru according to the national and international legislation (Figure 6). This infographic will be delivered to fishermen and tour operators during workshops and boat surveys (Figure 5). Moreover, we have designed t-shirts for project research team during field work (Figure 7).



**Figure 1:** Obtaining skin tissue samplings of two adult humpback whales with the use of a crossbow with modified arrow.



**Figure 2:** Taking samples of zooplankton with the net.



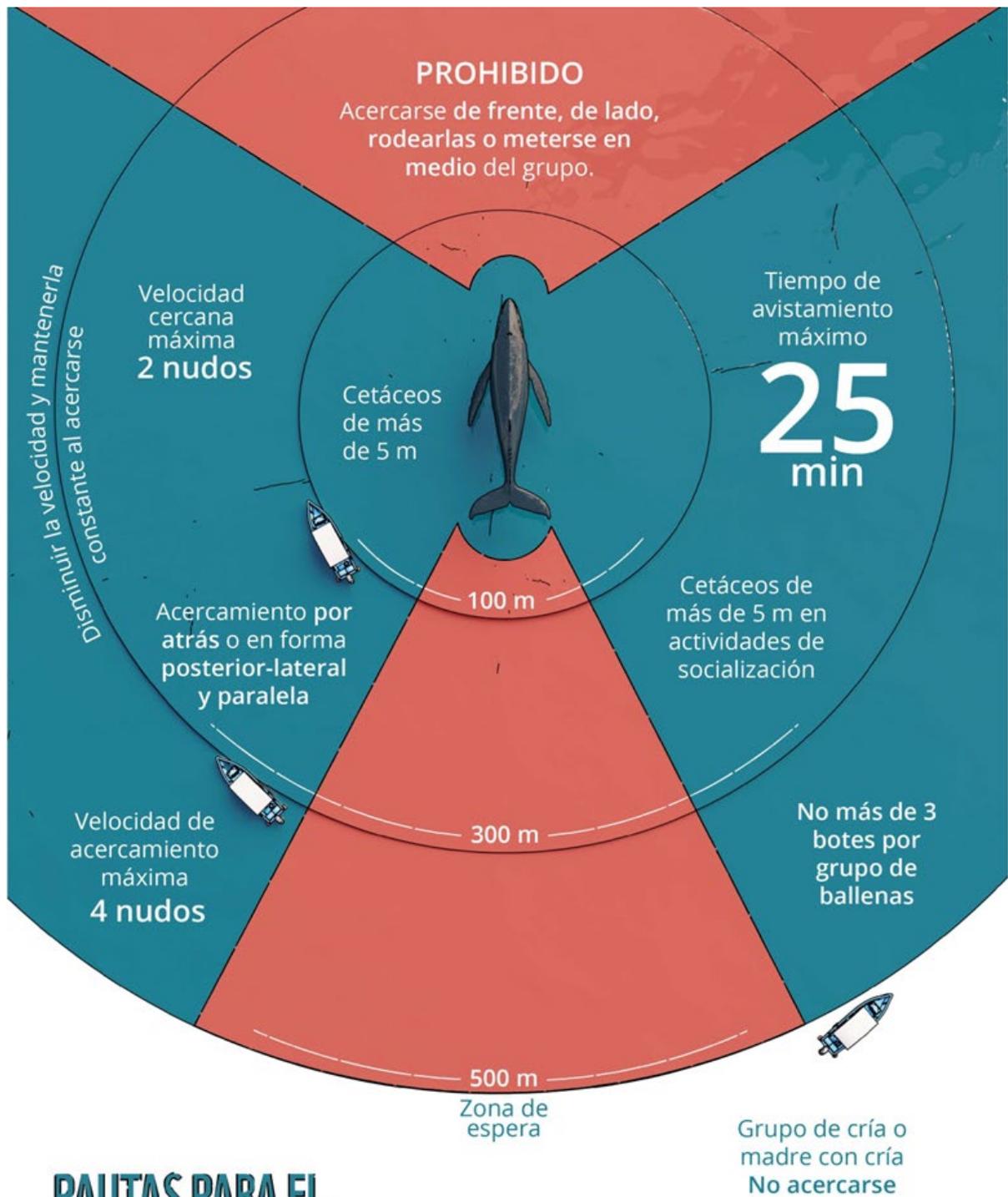
**Figure 3:** Luis A. during drone flights.



**Figure 4:** Drone picture of mother-calf pair of humpback whales nursing in Los Organos.



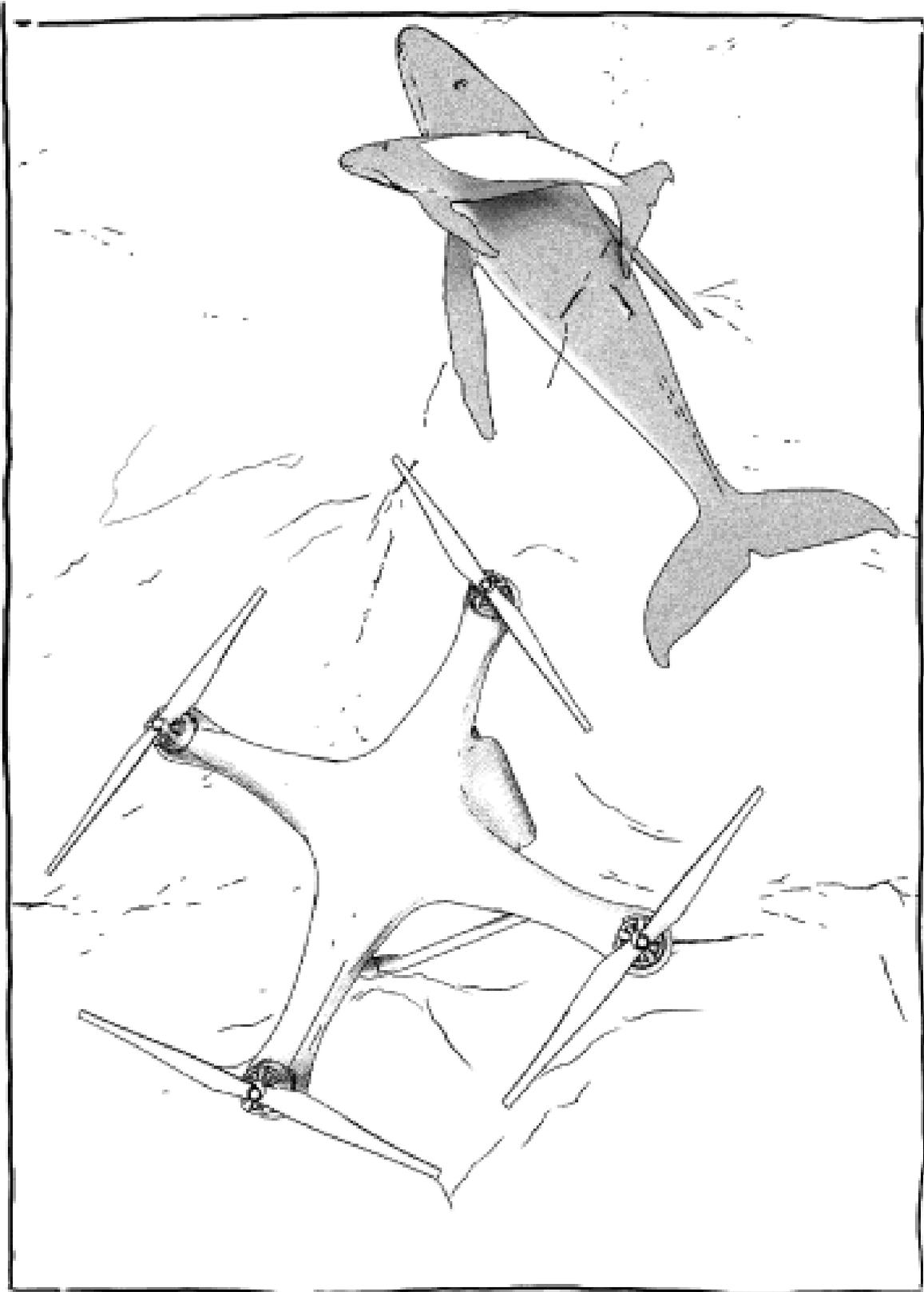
**Figure 5:** Project research team during boat surveys and captain with the whale-watching best practices infographic installed in his boat. From left to right: Victor C., Juan M., Piero U., Luis A.



# PAUTAS PARA EL AVISTAMIENTO DE BALLENAS JOROBADAS



Figure 6: Whale-watching best practices infographic designed for the project



**Figure 7:** T-shirt designed for project research team.