MONITORING ZTA VIOLATIONS AND PATROL EFFORT IN THE WINTER-SPRING FISHING SEASONS OF 2020-2021 AND 2021-2022

Background: The Zero Tolerance Area (ZTA) is a small sea area (111 square miles) located seven miles offshore its closest point (northwest corner) in the Upper Gulf of California. It is the portion of the Vaquita Protection Refuge where vaquita detections are concentrated (last census, October-November 2021, 7-8 animals including 1 or two calves). Since September 24, 2020 it has been zoned as a no-fishing, no entry zone by the Mexican government. ZTA Watch monitors and records the presence of vessels in the ZTA – pangas (fishing skiffs), enforcement vessels (Mexican Navy- SEMAR) and NGO monitors (Sea Shepherd Conservation Society - SS and Museo de la Ballena y Ciencias del Mar). The entire ZTA can be viewed with powerful binoculars from points north of San Felipe town. Observations are taken from 1-6 times per 24 hour period on a semi-random basis. ZTA Watch is not active in the fall, which has recently been the time of year (early shrimp fishing season) when the largest numbers of pangas with gillnets have been observed in the ZTA, approaching or exceeding 100 (in 2019, 2020 and 2021).

On April 5, 2022 in Mexico City Sea Shepherd Conservation Society announced a new reporting and response protocol with SEMAR had entered into effect January 10, 2022 and has resulted in "a substantial reduction in the number of fishing vessels in the ZTA." The Mexican Navy said, "since that time, there have been no reports of massive numbers of fishing boats." ZTA Watch commends all efforts to achieve zero tolerance of illegal fishing with gillnets in order to save the vaquita from extinction, and presents its data as an independent verification measure.

Pangas estimated in the ZTA since the new SEMAR-SSCS protocol (January – April 2022)

Method: Pangas in the ZTA are estimated from their position relative to horizon, landmarks and ZTA marker buoys to be within the ZTA. The maximum number observed during daytime is graphed on a daily basis in blue. Orange columns mark the days when Sea Shepherd Conservation Society vessels were present at the time the maximum count was made. Days with high winds were excluded from the dataset.
SS Chairman Pritam Singh “said that the first three days Sea Shepherd patrolled the area” [since the new protocol with the Mexican Navy was signed January 10] “they saw 58 fishing boats on the first day, 35 the second and 27 on the third. During their most recent trip, those numbers were down to between one and three boats per day, he said.”

Numbers may vary due to differences in observation times, observation platforms and methods used to estimate or count pangas in the ZTA. For comparison, for the seven days Sea Shepherd was present in the ZTA area after signing the new protocol, ZTA Watch estimated a maximum of 34 pangas in the ZTA January 14; 36 on January 17; 58 on January 18; 6 on January 19; 2 on January 20; 14 on January 21 and 12 on January 24. For the seven days that Sea Shepherd was present before its March 30-31 press conference in San Felipe, ZTA Watch estimated a maximum of 24 pangas in the ZTA on March 13; 20 on March 14; 3 on March 15; 1 on March 16; 1 on March 17; 2 on March 24; and 4 on March 25.

The trendline (black dots) does not show a clear decrease until the end of March 2022. Beginning on March 27, extra Naval vessels were brought in for the Sea Shepherd press conference which took place in San Felipe March 30-31, but after April 5 these vessels left the area.

**Comparison to pangas estimated in the ZTA winter-spring 2020-2021**

![Graph showing pangas estimated in the ZTA winter-spring 2020-2021]

On the same scale (maximum of approximately 60 pangas), the number of pangas in the ZTA during the 2020-2021 observation period trended somewhat lower, despite Sea Shepherd being absent for most of the period. The maximum number of pangas estimated in the ZTA for this period averages 6.7, compared to 10.1 for 2021-2022.

**Pangas outside the ZTA 2020-2021 and 2021-2022**

It is known that while scientific detections of vaquita are concentrated in the ZTA, the animals do not restrict themselves solely to this area and range outside it. The Navy is required to maintain a dissuasive presence both in the ZTA and the surrounding Vaquita Protection Refuge. Pangas using illegal gillnets in the area surrounding the ZTA still pose a grave extinction risk to vaquita. Numbers of fishing pangas outside but in the vicinity of the ZTA were sometimes very high in both 2020-2021 and 2021-2022.
Maximum panga counts inside and outside of ZTA represent 24-hour period maxima for each type of count and are not necessarily simultaneous counts. Night observations are included (hand-held panga lights are counted).

**Navy patrol frequency with Interceptor speedboats**

Interceptors were seen in 8.4% of 214 observations in 2020-2021, and 11.4% of 219 observations from 2021-22. Sea Shepherds were present in 6% of the 2021-22 Interceptor observations. Interceptors were seen in 10.6% of observations before the SEMAR-Sea Shepherd protocol was signed (Dec 8 2021 – Jan 10 2022; 47 observations total) and in 11.6% of observations subsequently (Jan 12 – April 6 2022, 172 observations total). ZTAWatch does not attempt to track the results of Interceptor presence in terms of enforcement outcomes.
Night time observations excluded, as well as March 30-31, two days of Sea Shepherd press conference in San Felipe where there was unusual Interceptor activity. Observations of Interceptors only taken for this analysis at 2 hour intervals (eg – multiple same-day observations of Interceptors up to 1 hours 59 minutes apart counted as a single observation). It should be noted that Interceptors may have been missed when more than 14 miles out because their shape at that distance is indistinguishable from a panga. Only one day (April 4 2022) were there two separate observations in a single day of Interceptors patrolling.