MMC Annual Meeting 2019

Session Summary - Spinner Dolphin Session

Spinner dolphins in Hawaii are distributed into one, largely unstudied pelagic population and four, island-associated populations, with a minimum population estimate of 665 animals based on recent abundance surveys off the Kona coast. However, much still remains unknown about the parameters of the island-associated stocks around the Hawaiian Islands, including abundance estimates for nearly all the populations, and most of the available data are outdated. Of the direct threats to spinner dolphins in Hawaii, several cases of marine debris entanglements and strandings without a known cause of death have occurred since the mid-2000s. Morbillivirus and toxoplasmosis have also been documented in spinner dolphins around the Main Hawaiian Islands (MHI).

Tourism centered around spinner dolphin watching in Hawaii generates approximately $100 million annually, yet interactions between people and resting spinner dolphins may be impacting the health of individual animals as well as the overall populations. In 2005, growing concerns over harassment of spinner dolphins by swimmers and vessel operators prompted the National Marine Fisheries Service (NMFS) to publish an Advanced Notice of Proposed Rulemaking that sought to implement time-area closures in bays critical to spinner dolphin resting behavior. To better inform its management decisions, NMFS funded SAPPHIRE[1] to help quantify dolphin daily behaviors, the importance of resting bays, and the effects of exposure of human activities along the Kona coast of Hawai'i Island from 2010-2012. The study consisted of systematic photo-identification surveys and behavioral focal follows that also collected data on human activities. Among the key findings of SAPPHIRE was confirmation of earlier findings that sheltered bays were essential resting areas for spinner dolphins, and that the rates of dolphin exposure to people within these bays were the highest of any recorded cetacean species. Propagation of vessel noise was also thought to be compromising communication between animals.

Based on the research of SAPPHIRE and public comments, NMFS released and sought additional input on a Proposed Rule in 2016 that offered several recommendations to reduce harassment of spinner dolphins, with the preferred option to prohibit (1) vessel or swimmer approach of a dolphin closer than 50 yds and (2) interception by a vessel or swimmer in the path of a dolphin. The rule would apply within the Maui Nui region and 2 nmi of the other MHIs. NMFS intends to finalize the rule and its associated Environmental Impact Statement by the end of 2019.

Since the release of the Proposed Rule, NMFS has increased its engagement with the MHI community to promote voluntary measures that reduce harassment of spinner dolphins. One such approach includes the Dolphin SMART[2] program, through which vessel operators are expected to voluntarily follow a set of criteria to support of dolphin conservation. NMFS hopes to continue raising awareness of the program and promoting responsible dolphin viewing by building partnerships with the tourism industry. NMFS has also taken steps to work with local organizations such as the Friends of Ho'okena Beach Park to help them develop dolphin viewing signage and conduct outreach with tourists. Additionally, NMFS has increased enforcement activities related to spinner dolphin harassment by managing reports, many of which are submitted via social media, of potential take incidents of dolphins, and supporting state

[1] Spinner dolphin Acoustics, Population Parameters and Human Impacts REsearch Project.

[2] Stay back 50 yds from dolphins, Move away cautiously if dolphins shows signs of disturbance, Always put your engine in neutral when dolphins are near, Refrain from feeding, touching, or swimming with wild dolphins, Teach others to be dolphin smart. This program was created by the NMFS SERO, which no longer promotes its use.

enforcement efforts. It has also issued three penalties to commercial vessel operators during 2014-2016, and three to recreational swimmers in 2017, as well as multiple verbal and written warnings to other offenders.

Finally, to address data gaps and assess the effects of direct and indirect threats on the stocks, NMFS Pacific Islands Fisheries Science Center has proposed to undertake four priority projects beginning in 2020, which include: (1) conducting line-transect abundance surveys around Hawai‘i Island, O‘ahu, and Maui Nui; (2) examining occurrence and resting behavior before and after the implementation of a final rule to protect spinner dolphins; (3) providing new mark-recapture abundance estimates for the Kona coast; and (4) using UAS-based photogrammetry to assess population age structure. NMFS will also continue to support passive acoustic monitoring around the MHI for a pre- and post-rule comparison of spinner dolphin occurrence and resting patterns.

During the panel discussion, there was a general consensus among panelists and members of the public, including state and federal managers, researchers, native Hawaiians, vessel operators, and concerned citizens, that action was needed to protect resting spinner dolphins from human approaches and interactions. Many felt that a well-crafted, final rule from NMFS was still the best approach to take and that time-area closures of resting bays should be included under a final rule. Differences between islands concerning tour operator “swim-with-dolphin” policies were also discussed, and some suggested that a meeting between vessel operators of different islands to share their various policies was perhaps needed. From a research perspective, it was generally agreed that locally-based research into alternative management approaches, perhaps using different bays to test different approaches would be worthwhile. For example the Kama’aina United to Protect the ‘Aina organization offered Ho’okena Bay as a pilot study site.